



SUPER SOURCEBOOK

**LIST PRICE & TECHNICAL
INFORMATION CATALOG**

**PLASTIC FITTINGS,
VALVES, PIPE & CEMENT**



Visit our web site:
www.spearsmfg.com



**ALL PRODUCTS MADE BY
SPEARS® MANUFACTURING COMPANY IN THE U.S.A.
FOR ALL YOUR PLASTIC PIPING NEEDS**

SSB-1-0812



Spears® Super Sourcebook

Your One-Stop Source For Plastic Fittings, Valves, Pipe & Cement

Welcome to...

Spears® **SUPER SOURCEBOOK List Price & Technical Information Catalog** for Plastic Fittings, Valves, Pipe & Cement - a comprehensive pricing and technical information listing of all Spears® Plastic Fittings, Valves, Pipe & Cement catalogued product for all your plastic piping needs. This catalog is divided into two (2) Parts:

Part I: List Prices

This part groups common categories of product and related accessories for convenient use and versatility in finding the products you need. As a result, certain products may appear in multiple categories. For example, various PVC Valves grouped with Schedule 80 PVC Fittings, CPVC Valves grouped with Schedule 80 CPVC Fittings, and both PVC and CPVC Valves being separately listed under Thermoplastic Valves. Take a few minutes to peruse the Table of Contents for an overview of organization and content. Applicable Discounts are available to Spears® qualified stocking wholesale distributors. Products are sold only through authorized distributors. Appendix G provides applicable Discount Codes in numerical order for product included in this catalog. A blank space is provided after each for recording applicable discounts. Contact your servicing Spears® Regional Distribution Center for applicable discounts.

Part I "Tab Locator" page lets you quickly thumb to each category by matching shaded tabs in the outer margin of each page.

Spears® Part Number Index allows quick page number location for pricing of Spears® standard catalogued parts. Simply look up known part number in the numerical index to find designated page on which the part can be found. Please note, certain special and custom parts are not catalogued.

See also Spears® On-line Catalog that is updated daily and can be accessed to verify pricing and check for any changes or adjustments that may occur between catalog publications. Spears® On-line Catalog can be downloaded to your personal computer for added convenience at www.spearsmfg.com

PART II: Technical Information

This part provides essential Weights & Dimensions and other Technical Information on a host of Spears® product lines. Products are grouped according to common types, such as Schedule 40 Fittings, Barbed Inserts, Schedule 80 Fittings, Flanges, Valves, plus various Specialty Product Lines and more.

Part II "Tab Locator" page lets you quickly thumb to each information section by matching shaded tabs in the outer margin of each page.

Additional Spears® Service Features

9 Regional Distribution Centers for Immediate Shipment

In by Noon - Out Same Day • Highest Complete Shipping Percentage • Customized Inventory and Shipping for Specific Customer Needs

Customer-Friendly Freight Policies

No Broken Box Charge • Low Freight Charge on Total Invoice • Combine Products for Optimum Prepaid Freight Levels

EDI Service (Electronic Data Interchange)

Automated Order Transmission • Advanced Shipping Notice • Electronic Invoicing

VMI Service (Vendor Managed Inventory)

Automated Direct Computer Inventory Replenish System

In-House Technical Service Department

Professional Problem Solving Assistance for Product Use and Application

Product Seminars

Conveniently Arranged for Distributors • Contractors • Engineers

Specification Aids

Product Data Sheets • Engineering Specifications • Dimensional Data

Piping System Layout Software

Autocad Program for System Layout and Product Selection

Individual Barcoded Fittings and Valves

Including Box and Pallet Labeling for Rapid Electronic Inventory Control

Private Labeling/Packaging/Barcoding

For Qualified, Volume Resellers & O.E.M.'s

E-Commerce Internet Access

Convenient Order and Account Management To Registered Customers

Visit our website at: www.spearsmfg.com

All Products in this Catalog are Made by Spears® Manufacturing Company in the U.S.A.

Spears® Regional Distribution Centers

SPEARS® MANUFACTURING COMPANY • CORPORATE OFFICE
15853 Olden St., Sylmar, CA 91342 • PO Box 9203, Sylmar, CA 91392
(818) 364-1611 • www.spearsmfg.com

TAB LOCATOR - PART I LIST PRICE CATALOG

Convenient "Tab Locator" page lets you quickly thumb to each category matching shaded tabs in the outer margin of each page.

Schedule 40 Fittings & Accessories	1-84
Turf & Irrigation	85-157
Barbed Insert Fittings	158-163
Nipples	164-179
Schedule 80 PVC Industrial Products & Accessories	180-272
Schedule 80 CPVC Industrial Products & Accessories	273-347
Transition Fittings & Adapters	348-365
Polypropylene Fittings & Accessories	366-374
Thermoplastic Valves	375-466
Actuated Valves	467-507
Strainers & Filters	508-527
Expansion Joints	528-534
DWV	535-559
CTS CPVC Hot & Cold Water Distribution System	560-564
High Purity PVC System	565-572
LabWaste™ CPVC Corrosive Waste Drainage System	573-588
Lab Specialty Products	589-596
Fume & Air Duct	597-605
Double Containment	606-629
Fabricated Fittings	630-686
Metric Fittings & Valves	687-711
Pipe	712-722
Solvent Cements & Thread Sealants	723-736
FlameGuard® CPVC Fire Sprinkler Products	737-744
Part Number Index	745-809



Understanding Column Header & Configuration Information

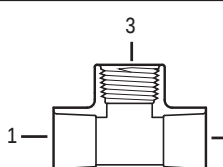
A variety of Column Header layouts are used to list product part numbers, options, discount codes, and list price. The following are the most typical used:

Typical Fitting Column Header label identifies the following product particulars:

Part Number	The number used to order the part.
Size	Nominal diameter of pipe with which the fitting is to be used. NOTE: Fittings may be same size (only one size designation) or reducing (multiple sizes designated).
Standard Pack (Std Pk)	The quantity of parts packaged in an individual box or bag.
Master Carton (Mstr Ctn)	The total quantity of parts contained in individual boxes or bags which are packaged together.
Discount Code (Disc Code)	Identification code for applicable discount to the list price of the product. NOTE: This is a Product Group code and is not a calculation of discount. Discount codes are not the same for all products contained in this price schedule.
Price Each	The designated list price of the product.

Fitting Configuration Drawings are accompanied by the product's name and an abbreviated configuration description of the fitting outlet connections. Line drawing illustrations are general representations of the fittings in the group, but may not be an exact depiction of all configurations listed. Line drawings are correlated to the configuration description. The drawing is read left to right for Elbow and Adapter configurations. Tees have an additional outlet branch and are read left to right (run) then top (branch). Drawings for Wyes and Crosses are read top to bottom then left to right and bushings drawings are read as outside x inside configuration. The configuration description also correlates to the size designation. As with the nominal size designations, only one description is given when all outlets are the same. Reducing sizes list run configuration x branch configuration.

Example

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
					
In this example, outlet description is "Soc x Fipt" which indicates: 1. Socket x 2. Socket x 3. Female Iron Pipe Thread					
402-003	3/8	50	200	040	.97
402-005	1/2	50	300	040	1.01
402-007	3/4	50	0	040	1.58

Typical Valve Column Header label identifies the following product particulars. Headers are generally preceded by identification of material type and configuration descriptions. Again, variations exist according to product type and configurations.

Size	The nominal diameter of the pipe with which the valve is to be used.
Seal Type	Designated elastomer seal (O-ring, Seat, Diaphragm, etc.)
(i.e., EPDM, FKM)	NOTE: Part Number and List Price are typically specified under the seal type columns. Certain products may have other column header designations under which part number and pricing are specified in a similar manner.
Standard Pack (Std Pk)	The quantity of parts packaged in an individual box or bag.
Master Pack (Mstr Pk)	The total quantity of parts contained in a single packaging of multiple Standard Packs.
Discount Code (Disc Code)	Identification code for applicable discount to the list price of the product. NOTE: This is a Product Group code and is not a calculation of discount. Discount codes are not the same for all products contained in this price schedule.

Valve Illustrations may be as photos or line drawings. Illustrations are general representations of the valve or product specified, but may not depict all configurations listed.

Example

True Union 2000 Industrial Ball Valves

Material — **PVC Industrial**

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
End Connector — Socket Ends					
1/2	1829-005 XX.XX	1829-005 XX.XX	1	18	101
Price					

Product Type
(Page Heading)

Typical Presentation Photo



Socket Style

Pressure Rating @ 73°F (23°C) Water

1/2" - 4"	235 psi
6" - 8"	150 psi
Flanged	150 psi

Maximum Service Temperature
PVC=140°F (60°C)
CPVC=200°F (93°C)

Temperature/Pressure De-ratings Apply



Schedule 40 Fittings & Accessories	1
PVC White Schedule 40 Pipe	1
PVC White Schedule 40 Pipe	1
Low VOC Solvent Cements & Primers for PVC	2
PVC Low VOC Cements	2
Low VOC Solvent Primers & Cleaners	5
PVC Schedule 40 Fittings	6
Tees	6
90° Ells	8
Non 90° Ells	10
Wyes	12
Crosses	13
Couplings	14
Adapters	16
Riser Extension	18
Reducer Bushings	18
Caps	19
Plugs	20
Unions	20
Glue-on Saddles	21
Clamp-On & Hot-Tap Saddles	24
Mechanical Clamp-On Transition Saddles	31
Schedule 40 Tank Adapters	32
PVC White Schedule 40 - Hard to Find Configurations - Pool & Spa Specialties	33
Pool & Spa Fittings	33
True Union 2000 Standard Ball Valve - PVC White	34
PVC Pool Butterfly Valves	35
UVR Schedule 40 Fittings	36
UVR Sch 40 Fittings	36
PVC Gray Schedule 40 Fittings	38
PVC Gray Sch 40 Fittings	38
PVC Black Schedule 40 Pipe & Fittings	42
PVC Black Schedule 40 Pipe & Fittings	42
PVC Clear Schedule 40 Pipe & Fittings	44
PVC Clear Sch 40 Pipe & Fittings	44
Clear Ultra Violet Resistant (UVR) PVC Pipe	46
Clear Ultra Violet Resistant (UVR) PVC Pipe	46
Compression & Repair Fittings	47
Schedule 40 Repair Fittings	47
Repair Couplings	48
Short Repair Couplings	49
Compression Couplings	50
Compression Male Adapters	52
Irrigation & Hose Filters	53
Filters	53
Reverse Flow Filters	54
In-line Tee Style Filters and Reverse In-line Tee Style Filters	56
Hose Filters	58
PVC Irrigation Specialty Products	60
• Hose Fittings • Solvent Weld For Flexible PVC Hose	60
• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose	60
Hose Adapters	61
Irrigation Accessories	62
Sprinkler Accessories	62
Dri-Splice Wire Connectors	64
PVC Irrigation Manifold Systems	65
High Strength 1" Manifold Systems	66



Turf Swivel Joints	67
Turf Swivel Kits	68
Turf Swivel Joints	69
Compact Turf Swivel Joints	69
Pressure Regulated Swivel Joints	71
Turf Swivel Joint Replacement Parts	71
Pipe Flanges	73
Pipe Flanges	73
Flange Bolt Kits	75
Full-Faced Flange Gaskets	76
Ball Valves	77
True Union 2000 Standard Ball Valve - PVC White	77
True Union 2000 Standard Ball Valves	77
CWV Ball Valves	79
Utility Ball Valves	79
Single Entry Ball Valves	80
Electro Actuated True Union 2000 Standard Ball Valve	81
Electro Actuated Compact 2000 Ball Valve	81
Check Valves	82
Utility Swing Check Valves	82
True Union Utility Swing Check Valves	82
Compression Utility Swing Check Valves	83
Utility Spring Check Valves	83
True Union Utility Spring Check Valves	84
PVC In-line Adjustable Spring Check Valves	84
Turf & Irrigation	85
EverTUFF® TURF™ Fittings For Golf Course & Turf Applications	85
EverTUFF® TURF™ PVC Tees	85
EverTUFF® TURF™ PVC Elbows	85
EverTUFF® TURF™ PVC Couplings	85
EverTUFF® TURF™ PVC Special Reinforced Female Adapters	85
EverTUFF® TURF™ PVC Male Adapters	85
EverTUFF® TURF™ PVC Reducer Bushings	86
EverTUFF® TURF™ CPVC Tees	86
EverTUFF® TURF™ CPVC Elbows	86
EverTUFF® TURF™ CPVC Couplings	86
EverTUFF® TURF™ CPVC Special Reinforced Female Adapters	86
EverTUFF® TURF™ CPVC Male Adapters	86
EverTUFF® TURF™ CPVC Reducer Bushings	86
EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles	87
EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles	87
EverTUFF® TURF™ Swing Joint Riser Assemblies	88
EverTUFF® TURF™ Swing Joint Riser Assemblies	90
Turf Swivel Joints	96
Turf Swivel Kits	97
Turf Swivel Joints	98
Compact Turf Swivel Joints	98
Pressure Regulated Swivel Joints	100
Turf Swivel Joint Replacement Parts	100
PVC Irrigation Manifold Systems	102
High Strength 1" Manifold Systems	103
Four-In-One • Cut-Off Nipples	104
Four-In-One • Cut-Off Nipples	104
PVC Irrigation Specialty Products	105
• Hose Fittings • Solvent Weld For Flexible PVC Hose	105
• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose	105
Irrigation Accessories	106



Hose Adapters	107
Sprinkler Accessories	108
Dri-Splice Wire Connectors	109
Filters	110
Reverse Flow Filters	111
In-line Tee Style Filters and Reverse In-line Tee Style Filters	113
Hose Filters	115
PVC Low Head PIP Fabricated Fittings, Risers & Accessories	117
Couplings	117
Non 90° Ells	117
90° Ells	117
Reducer Bushings	117
Adapters	117
Glue-on Saddles	118
Caps	119
Tees	119
Crosses	120
Riser Extension	120
Wyes	121
DISTRIBUTING GATE RISER	122
RITE FLO RISER	122
DISTRIBUTING GATE REPAIR UNIT	122
RITE FLO RISER REPAIR UNIT	122
PVC 125, 100 & 80 PSI PIP Fabricated Fittings	128
Tees	128
90° Ells	131
Non 90° Ells	132
Couplings	134
Reducer Couplings	135
Crosses	137
Wyes	139
Surface Reducers	140
Stub Surface Reducers	140
Eccentric Stub Surface Reducer	141
Caps	142
Glue-on Saddles	142
Pipe Flanges	143
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125	144
Tees	144
90° Ells	148
Non 90° Ells	148
Couplings	151
Reducer Couplings	152
Crosses	153
Surface Reducers	154
Caps	155
Glue-on Saddles	155
Class 125 Molded Fittings	157
Barbed Insert Fittings	158
Barbed Insert Fittings	158
Insert Fittings	159
Nipples	164
PVC, CPVC & PE Nipples	164
PVC Nipples	164
Machined PVC Nipple Options Threaded Both Ends (TBE)	171



PVC Reducing Nipples	171
CPVC Nipples	171
Machined CPVC Nipple Options -Threaded Both Ends (TBE)	178
PE Nipples	178
Grooved Nipples	178
Four-In-One • Cut-Off Nipples	179
Four-In-One • Cut-Off Nipples	179
Schedule 80 PVC Industrial Products & Accessories	180
PVC Industrial Pipe	180
Schedule 80 PVC Industrial Pipe	180
PVC Clear Schedule 80 Pipe	181
Schedule 80 Clear Pipe	181
Low VOC Solvent Cements & Primers for PVC	182
PVC Low VOC Cements	182
CPVC Low VOC Cements	184
Low VOC Solvent Primers & Cleaners	185
PVC Schedule 80 Fittings	186
Tees	186
90° Ells	188
Non 90° Ells	190
Wyes	191
Crosses	193
Couplings	194
Adapters	196
Reducer Bushings	197
Caps	199
Plugs	199
Unions	200
Clamp-On & Hot-Tap Saddles	204
Mechanical Clamp-On Transition Saddles	212
Glue-on Saddles	212
Tank Adapters	214
Expansion Joints	217
Pipe Flanges	218
Van Stone Style Flange Replacement Split Rings	221
Flange Insulating Joints	222
Flange Bolt Kits	222
Full-Faced Flange Gaskets	223
PVC Compression & Repair Fittings	224
Schedule 80 Repair Fittings	224
Compression Couplings	224
PVC Cut-in Kit	226
PVC Cut-in Kit	226
Gauge & Instrument Fittings Schedule 80 Specialty Fittings for Sensor Probes	227
Gauge Guards	227
Gauge & Instrument Fittings Schedule 80 Specialty Fittings for Sensor Probes	228
Ball Valves	229
True Union 2000 Industrial Ball Valves	229
True Union 2000 Industrial Vented/Bleach Ball Valves	230
True Union 2000 Industrial 3-Way Ball Valves	231
Tee-Style "Zero Dead-Leg" Ball Valves	233
True Union 2000 Standard Ball Valves	234
True Union 2000 Industrial Retrofit Ball Valves - Replaces Other Brand Valves	235
True Union 2000 Industrial Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves	236
True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves	237
True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves	237
True Union Ball Valves (Regular Style)	238



Single Entry Ball Valves	238
Compact 2000 Ball Valves	239
Compact Ball Valves (Regular Style)	240
Utility Ball Valves	241
Lab Ball Valves	241
Check Valves	242
True Union 2000 Industrial Ball Check Valves	242
True Union Ball Check Valves (Regular Style)	243
Foot Valve Screens	244
Y-Check Valves	244
Butterfly Check Valves	247
Industrial Swing Check Valves	248
Industrial Swing Check Valve Accessory and Repair Kits	249
Diaphragm Check Valves	249
PVC In-line Adjustable Spring Check Valves	250
Gate Valves	251
Gate Valves	251
Plug Gate Valves	252
Butterfly Valves	253
Butterfly Valves	253
Lug Insert Butterfly Valves	254
True Lug Butterfly Valves	255
Large Diameter Butterfly Valves	256
Wafer Butterfly Valves	256
Globe and Needle Valves	257
Globe Valves	257
Needle Valves	257
Diaphragm Valves	258
Diaphragm Valves	258
Y-Pattern Valves	260
Y-Pattern Valves	260
Industrial Strainers & Filters	262
In-line Tee-Style Filters	262
Y-Strainers	264
True Union Y-Strainers	266
Basket Strainers	269
Suction Strainers	272
Schedule 80 CPVC Industrial Products & Accessories	273
CPVC Industrial Pipe	273
CPVC Industrial Pipe	273
Low VOC Solvent Cement & Primer for CPVC	275
CPVC Low VOC Cements	275
Low VOC Solvent Primers & Cleaners	276
CPVC Schedule 80 Fittings	277
Tees	277
90° Ells	279
Non 90° Ells	280
Wyes	282
Crosses	283
Couplings	284
Adapters	286
Reducer Bushings	287
Caps	288
Plugs	289
Unions	289
Clamp-On & Hot-Tap Saddles	292
Glue-on Saddles	299



Spears® Super Sourcebook - Part 1: List Price Catalog
TABLE OF CONTENTS

Tank Adapters	301
Expansion Joints	304
Pipe Flanges	305
Van Stone Style Flange Replacement Split Rings	306
Flange Insulating Joints	307
Flange Bolt Kits	307
Full-Faced Flange Gaskets	308
CPVC Cut-in Kit	309
CPVC Cut-in Kit	309
Gauge & Instrument Fittings Schedule 80 Specialty Fittings for Sensor Probes	310
Gauge Guards	310
Gauge & Instrument Fittings Schedule 80 Specialty Fittings for Sensor Probes	311
Ball Valves	312
True Union 2000 Industrial Ball Valves	312
True Union 2000 Industrial Vented/Bleach Ball Valves	313
True Union 2000 Industrial 3-Way Ball Valves	314
Tee-Style "Zero Dead-Leg" Ball Valves	316
True Union 2000 Standard Ball Valves	317
True Union 2000 Industrial Retrofit Ball Valves - Replaces Other Brand Valves	318
True Union 2000 Industrial Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves	319
True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves	320
True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves	320
True Union Ball Valves (Regular Style)	321
Compact 2000 Ball Valves	321
Compact Ball Valves (Regular Style)	322
Utility Ball Valves	323
Lab Ball Valves	323
Check Valves	324
True Union 2000 Industrial Ball Check Valves	324
True Union Ball Check Valves (Regular Style)	325
Foot Valve Screens	325
Y-Check Valves	326
Butterfly Check Valves	327
Industrial Swing Check Valves	328
Diaphragm Check Valves	329
Gate Valves	330
Gate Valves	330
Plug Gate Valves	331
Butterfly Valves	332
Butterfly Valves	332
Lug Insert Butterfly Valves	333
True Lug Butterfly Valves	334
Large Diameter Butterfly Valves	335
Wafer Butterfly Valves	335
Globe and Needle Valves	336
Globe Valves	336
Needle Valves	336
Diaphragm Valves	337
Diaphragm Valves	337
Y-Pattern Valves	339
Y-Pattern Valves	339
Industrial Strainers & Filters	340
In-line Tee-Style Filters	340
Y-Strainers	342
True Union Y-Strainers	343
Basket Strainers	345
Transition Fittings & Adapters	348



Special Reinforced (SR) & Metal Thread Transition Fittings & Adapters	348
PVC White Special Reinforced (SR) Fittings	349
PVC White Brass Thread Fittings	350
PVC Gray Special Reinforced (SR) Fittings	351
PVC Gray Brass Thread Fittings	355
CPVC Gray Special Reinforced (SR) Fittings	356
CPVC Gray Brass Thread Fittings	360
CPVC Orange Special Reinforced (SR) Fittings	361
CPVC Orange Brass Thread Fittings	362
CPVC Orange Brass Grooved Coupling Adapter	363
CTS CPVC Tan Special Reinforced (SR) Fittings	364
CTS CPVC Tan Brass Thread Fittings	364
CTS CPVC Tan Gasket Sealed Thread Fittings	365
Blue 75™ Thread Sealant	365
Polypropylene Fittings & Accessories	366
Polypropylene Schedule 80 Natural & Black SR Threaded Fittings	366
Polypropylene Schedule 80 Natural SR Threaded Fittings	367
Polypropylene Schedule 80 Black SR Threaded Fittings	367
Gauge Guards	369
Gauge Guards	369
Needle Valves	370
Needle Valves	370
Check Valves	371
Industrial Swing Check Valves	371
Butterfly Valves	372
Polypropylene Butterfly Valves	372
Large Diameter Butterfly and Diaphragm Valves	373
Large Diameter Butterfly Valves	373
Diaphragm Valves	374
Thermoplastic Valves	375
Ball Valves	375
True Union 2000 Industrial Ball Valves	375
True Union 2000 Industrial Vented/Bleach Ball Valves	377
True Union 2000 Industrial 3-Way Ball Valves	379
Tee-Style "Zero Dead-Leg" Ball Valves	383
True Union 2000 Standard Ball Valves	384
True Union 2000 Industrial Retrofit Ball Valves - Replaces Other Brand Valves	386
True Union 2000 Industrial Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves	387
True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves	388
True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves	389
True Union Ball Valves (Regular Style)	389
Single Entry Ball Valves	391
Compact 2000 Ball Valves	392
Compact Ball Valves (Regular Style)	393
Lab Ball Valves	394
Utility Ball Valves	395
CWV Ball Valves	396
Swing Check Ball Valve	396
CTS Valves	397
Ball Valve Accessories & Repair Kits	398
Check Valves	408
True Union 2000 Industrial Ball Check Valves	408
True Union Ball Check Valves (Regular Style)	410
Foot Valve Screens	411



Y-Check Valves	411
Y-Check Valve Repair Kits	415
Butterfly Check Valves	416
Butterfly Check Valve Repair Kits	418
Industrial Swing Check Valves	418
Industrial Swing Check Valve Accessory and Repair Kits	420
Utility Swing Check Valves	421
True Union Utility Swing Check Valves	421
Compression Utility Swing Check Valves	422
Utility Spring Check Valves	423
True Union Utility Spring Check Valves	424
Diaphragm Check Valves	424
PVC In-line Adjustable Spring Check Valves	425
Industrial PVC Backwater Valves	426
Sump Pump Swing Check Valve	429
Quiet Check Valve	429
Swing Check Ball Valve	430
Gate Valves	431
Gate Valves	431
Plug Gate Valves	432
Gate Valve Accessories & Repair Kits	433
Butterfly Valves	434
PVC Pool Butterfly Valves	434
Butterfly Valves	434
Lug Insert Butterfly Valves	435
True Lug Butterfly Valves - Zinc Plated Lugs	437
True Lug Butterfly Valves - SS Lugs	438
Polypropylene Butterfly Valves	439
Large Diameter Butterfly Valves	440
Wafer Butterfly Valves	441
High Purity TFM-Lined Butterfly Valves	442
Butterfly Valve Accessories & Repair Kits	442
Globe Valves	450
Globe Valves	450
Needle Valves	451
Needle Valves	451
Diaphragm Valves	452
Diaphragm Valves	452
Diaphragm Valve Repair Kits	456
Y-Pattern Valves	457
Y-Pattern Valves	457
Y-Pattern Valve Repair Kits	460
Backwater, Sewage & Sump Pump Specialty Valves	461
Sewer Disconnect	461
Industrial PVC Backwater Valves	462
Sump Pump Swing Check Valve	465
Quiet Check Valve	465
Swing Check Ball Valve	466
Actuated Valves	467
Actuated Valve Information	467
Electro Actuated Compact 2000 Ball Valve	470
Electro Actuated True Union 2000 Standard Ball Valve	471
Electro Actuated True Union 2000 Industrial Ball Valve	472
Premium Actuated True Union 2000 Industrial Ball Valve - Electric	473
Premium Actuated True Union 2000 Industrial Ball Valve - Pneumatic	474
Premium Actuated Standard Butterfly Valve - Electric	476
Premium Actuated Standard Butterfly Valve - Pneumatic	477



Premium Actuated Lug Insert Butterfly Valve - Electric	479
Premium Actuated Lug Insert Butterfly Valve - Pneumatic	480
Premium Actuated True Lug Butterfly Valve - Electric	482
Premium Actuated True Lug Butterfly Valve - Pneumatic	483
Premium Actuated Diaphragm Valve - Electric	486
Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing	489
Premium Actuated Diaphragm Valve - Pneumatic	495

Strainers & Filters 508

Irrigation & Hose Filters 508

Filters	508
Hose Filters	509
In-line Tee Style Filters and Reverse In-line Tee Style Filters	510
Reverse Flow Filters	512

Industrial Strainers & Filters 515

In-line Tee-Style Filters	515
Y-Strainers	517
True Union Y-Strainers	519
Basket Strainers	523
Suction Strainers	527

Expansion Joints 528

Expansion Joints 528

Fabricated Expansion Joints	528
Elastomer Expansion Joints	530
Repair Couplings	532
Short Repair Couplings	534

DWV 535

PVC DWV Drain Waste Vent Fittings 535

PVC DWV Drain Waste Vent Fittings	535
Sewer Disconnect	545
Industrial PVC Backwater Valves	546

PVC Schedule 40 & 80 DWV Fabricated Fittings 549

Tees	549
90° Ells	549
Non 90° Ells	550
Couplings	551
Reducer Couplings	551
Crosses	552
Wyes	553
Sanitary Tees	556
Adapters	557
Caps	557
Plugs	557
Cleanouts	557
Glue-on Saddles	557

CTS CPVC Hot & Cold Water Distribution System 560

EverTUFF® CPVC CTS Fittings, Valves & Pipe 560

EverTUFF® CPVC CTS Fittings, Valves & Pipe	560
--	-----



High Purity PVC System 565

Low-Extractable Piping For Ultra-Pure Water Systems	565
Low-Extractable Piping For Ultra-Pure Water Systems	566

LabWaste™ CPVC Corrosive Waste Drainage System 573

LabWaste™ CPVC Corrosive Waste Drainage Systems	573
LabWaste™ CPVC Corrosive Waste Drainage Systems	573
LabWaste™ Standard CPVC & HDPE Neutralization Tanks	581
LabWaste™ Standard HDPE Round Neutralization Tanks	583
LabWaste™ Standard CPVC Round Neutralization Tanks	584
1-Gallon CPVC Dilution Tanks	585
1-Gallon CPVC Dilution Traps	586
Pedestrian Traffic Covers	587
Heavy-Duty Pedestrian Traffic Covers	587
Vehicular Traffic Covers	587
Optional Inspection Manhole Ports & Tank Extensions	588
Tank Extensions	588
Limestone Chips for Acid Neutralization Tanks	588

Lab Specialty Products 589

Lab Specialty Products	589
Lab Ball Valves	589
Needle Valves	589
Gauge Guards	591
Lab Fixtures	593

Fume & Air Duct 597

PVC & CPVC Duct & Fabricated Duct Fittings	597
PVC & CPVC Round Seamless Duct	598
PVC & CPVC Cold Rolled Fabricated Duct	598
PVC & CPVC Duct Fittings	599

Double Containment 606

Double Containment	606
Tees	607
90° Ells	609
45° Ells	611
Couplings	613
Access Tees	615
Closure Fittings	617
Isolation Couplers	618
Termination Fittings	620
Centralizers	622
Ball Valve Box With Valve	623
Ball Check Valve Box With Valve	625
Diaphragm Valve Box With Valve	627
Clamp-on Saddles for Leak Detection Sensors	629



Fabricated Fittings	630
PVC Low Head PIP Fabricated Fittings, Risers & Accessories	630
Tees	630
90° Ells	630
Non 90° Ells	630
Couplings	630
Reducer Bushings	631
Adapters	631
Crosses	631
Riser Extension	632
Wyes	633
Caps	633
Glue-on Saddles	634
DISTRIBUTING GATE RISER	635
RITE FLO RISER	635
DISTRIBUTING GATE REPAIR UNIT	635
RITE FLO RISER REPAIR UNIT	635
PVC 125, 100 & 80 PSI PIP Fabricated Fittings	641
Tees	641
90° Ells	644
Non 90° Ells	645
Couplings	647
Reducer Couplings	648
Crosses	650
Wyes	652
Surface Reducers	653
Stub Surface Reducers	653
Eccentric Stub Surface Reducer	654
Caps	655
Glue-on Saddles	655
Pipe Flanges	656
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125	657
Tees	657
90° Ells	661
Non 90° Ells	661
Couplings	664
Reducer Couplings	665
Crosses	666
Surface Reducers	667
Caps	668
Glue-on Saddles	668
Class 125 Molded Fittings	670
PVC Schedule 40 & 80 DWV Fabricated Fittings	671
Tees	671
90° Ells	671
Non 90° Ells	672
Couplings	673
Reducer Couplings	673
Crosses	674
Wyes	675
Sanitary Tees	678
Adapters	679
Caps	679
Plugs	679
Cleanouts	679
Glue-on Saddles	679
PVC Schedule 40 & 80 Low Pressure Fabricated Fittings	682
Tees	682



90° Ells	682
Non 90° Ells	683
Couplings	684
Reducer Couplings	684
Crosses	685
Caps	686
Plugs	686

Metric Fittings & Valves 687

PVC & CPVC Metric Fittings, Unions & Valves 687

PN16 PVC Metric Fittings	691
PN16 CPVC Metric Fittings	691
Class 10/12 PVC & CPVC Metric Fittings & Class 150 Flanges	692
PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray)	693
PVC Transition Unions	694
True Union Ball Valves (Regular Style)	695
PVC & CPVC True Union 2000 Industrial Ball Valves	696
PVC & CPVC True Union 2000 Standard Ball Valves	697
PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves	699
PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves	701
PVC & CPVC True Union 2000 Industrial Ball Check Valves	707
PVC & CPVC Gate Valves	708
PVC & CPVC Diaphragm Valves	710
PVC Irrigation Manifold Systems	711

Pipe 712

CPVC Industrial Pipe 712

CPVC Industrial Pipe	712
----------------------	-----

CPVC Copper Tube Size (CTS) Pipe 714

CPVC CTS Hot & Cold Water Distribution Pipe	714
---	-----

PVC Industrial Pipe 715

Schedule 80 PVC Industrial Pipe	715
---------------------------------	-----

PVC White Schedule 40 Pipe 716

PVC White Schedule 40 Pipe	716
----------------------------	-----

PVC Clear Schedule 40 & Schedule 80 Pipe 717

Schedule 40 Clear Pipe	717
------------------------	-----

Schedule 80 Clear Pipe	717
------------------------	-----

Clear Ultra Violet Resistant (UVR) PVC Pipe 718

Clear Ultra Violet Resistant (UVR) PVC Pipe	718
---	-----

Low Extractable PVC Pipe 719

Low Extractable PVC Pipe	719
--------------------------	-----

LabWaste™ Corrosive Waste Drainage Pipe 720

LabWaste™ CPVC Corrosive Waste Drainage System Pipe	720
---	-----

FlameGuard® CPVC Fire Sprinkler Pipe 721

FlameGuard® CPVC Fire Sprinkler Pipe	721
--------------------------------------	-----

PVC & CPVC Duct 722

PVC & CPVC Round Seamless Duct	722
--------------------------------	-----

PVC & CPVC Cold Rolled Fabricated Duct	722
--	-----

Solvent Cements & Thread Sealants 723

Blue 75™ Thread Sealant 723

Blue 75™ Thread Sealant	723
-------------------------	-----

Low VOC Solvent Cements, Primers & Accessories 724



PVC Low VOC Cements	724
CPVC Low VOC Cements	727
ABS Low VOC Cements	728
ABS to PVC Transition & Multi Purpose Low VOC Cements	729
Low Extractable Low VOC Cement	730
Low VOC Solvent Primers & Cleaners	731
Applicators & Accessories	732
FlameGuard® CPVC Fire Sprinkler Products	737
FlameGuard® CPVC Fire Sprinkler Piping Products	737
FlameGuard® CPVC Fire Sprinkler Piping Products	738
Spears® Sprinkler Head Adapter Removal Kit	743
CPVC Riser Drain Valves For NFPA 13D Installations Only	743
Part Number Index	745
Part II - Technical Information Catalog	810
Appendices	
Appendix A - Basic Abbreviations Used in this Catalog	
Appendix B - Applicable Industry Standards & Test Methods	
Appendix C - Product Approvals & Certificates	
Appendix D - Recommendations for Installers & Users	
Appendix E - Special Information on Fabricated Fittings	
Appendix F - Sustainable Solutions for Total Piping System Needs	
Appendix G - Discount Codes	
Appendix H - Terms & Conditions	



Schedule 40 Fittings & Accessories
PVC White Schedule 40 Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Schedule 40 Pipe Plain End

20' Lengths, Price Per Foot



List Price Per Foot

PD-400-005	1/2	20	0	947	1.12
PD-400-007	3/4	20	0	947	1.37
PD-400-010	1	20	0	947	2.18
PD-400-012	1-1/4	20	0	947	2.90
PD-400-015	1-1/2	20	0	947	3.29
PD-400-020	2	20	0	947	4.52
PD-400-025	2-1/2	20	0	947	7.62
PD-400-030	3	20	0	947	8.90
PD-400-040	4	20	0	947	12.46
PD-400-060	6	20	0	947	22.53
PD-400-080	8	20	0	947	39.95
PD-400-100	10	20	0	947	54.37
PD-400-120	12	20	0	947	78.75
PD-400-140	14	20	0	947	99.58
PD-400-160	16	20	0	947	105.07

Schedule 40 Fittings & Accessories

Spears® Low VOC Solvent Cements & Primers & PVC Low VOC Cements



Essential solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

PVC Low VOC Cements

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

PVC-00 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4". Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-05 CLEAR: Medium bodied, fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter in industrial, plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-00 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC00C-005	1/4 Pint	24	0	705	6.55
PVC00C-010	1/2 Pint	24	0	705	9.52
PVC00C-020	Pint	12	0	705	14.67
PVC00C-030	Quart	12	0	705	24.75
PVC00C-040	Gallon	6	0	705	80.35

PVC-05 Clear Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC05C-005	1/4 Pint	24	0	705	7.39
PVC05C-010	1/2 Pint	24	0	705	10.69
PVC05C-020	Pint	12	0	705	18.76
PVC05C-030	Quart	12	0	705	29.84
PVC05C-040	Gallon	6	0	705	101.68

PVC-02 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4" diameter. Goes on clear, dries clearest and is slightly thicker than PVC-00. Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-21 BLUE: Medium bodied, fast setting, high strength PVC cement. It is suitable for use on rigid PVC with interference fit Schedule 40 thru 6" and Schedule 80 thru 4". Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems through 4" if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-02 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC02C-005	1/4 Pint	24	0	705	7.27
PVC02C-010	1/2 Pint	24	0	705	10.58
PVC02C-020	Pint	12	0	705	16.29
PVC02C-030	Quart	12	0	705	27.49
PVC02C-040	Gallon	6	0	705	89.19

PVC-21 Blue Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC21B-005	1/4 Pint	24	0	705	7.89
PVC21B-010	1/2 Pint	24	0	705	12.99
PVC21B-020	Pint	12	0	705	22.23
PVC21B-030	Quart	12	0	705	37.35
PVC21B-040	Gallon	6	0	705	128.39



Schedule 40 Fittings & Accessories PVC Low VOC Cements

PVC-25 AQUA BLUE WET-N-DRY: Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-25 Aqua Blue Wet-N-Dry Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC25B-005	1/4 Pint	24	0	705	7.89
PVC25B-010	1/2 Pint	24	0	705	12.82
PVC25B-020	Pint	12	0	705	21.83
PVC25B-030	Quart	12	0	705	36.56
PVC25B-040	Gallon	6	0	705	126.09

PVC-27 CLEAR COLD-N-HOT: Medium bodied, very fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. Formulated for -15°F to 110°F (-26°C to 43°C) weather conditions. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-27 Clear Cold-N-Hot Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC27C-020	Pint	12	0	705	22.79
PVC27C-030	Quart	12	0	705	38.36
PVC27C-040	Gallon	6	0	705	133.09

PVC-50 HOT BLUE: Medium bodied, very fast setting, high strength PVC cement. Can be used on PVC with interference fit for Schedule 40 thru 6" and Schedule 80 thru 4". Hot Blue premium all-weather formulation is excellent for use in challenging conditions including wet, damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-50 HOT BLUE Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC50B-005	1/4 Pint	24	0	705	7.12
PVC50B-010	1/2 Pint	24	0	705	11.71
PVC50B-020	Pint	12	0	705	20.04
PVC50B-030	Quart	12	0	705	33.65
PVC50B-040	Gallon	6	0	705	115.67

PVC-95 CLEAR/BLUE Flexible: Medium bodied, fast setting PVC cement specially formulated for use on flex-to-flex and flex-to-rigid PVC connections with interference fit through 6" and Schedule 80 through 3". Maintains high-strength, flexible joints. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-95 Clear Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95C-005	1/4 Pint	24	0	705	8.96
PVC95C-010	1/2 Pint	24	0	705	13.33
PVC95C-020	Pint	12	0	705	22.79
PVC95C-030	Quart	12	0	705	38.46
PVC95C-040	Gallon	6	0	705	133.09



PVC-95 Blue Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95B-030	Quart	12	0	705	38.36
PVC95B-040	Gallon	6	0	705	133.09

PVC-11 GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter. Medium set allows more working time in warm weather and has good gap filling properties. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2.



PVC-11 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC11G-010	1/2 Pint	24	0	706	17.47
PVC11G-020	Pint	12	0	706	23.29
PVC11G-030	Quart	12	0	706	39.19
PVC11G-040	Gallon	6	0	706	132.53

PVC-17 CLEAR/GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter (non-pressure applications only up to 18"). Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code (Clear/Gray); CSA B137.3, B181.2 (Gray only).



PVC-17 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17G-010	1/2 Pint	24	0	706	13.11
PVC17G-020	Pint	12	0	706	23.01
PVC17G-030	Quart	12	0	706	38.85
PVC17G-040	Gallon	6	0	706	130.91

Schedule 40 Fittings & Accessories PVC Low VOC Cements



PVC-17 Clear Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17C-010	1/2 Pint	24	0	706	13.11
PVC17C-020	Pint	12	0	706	23.01
PVC17C-030	Quart	12	0	706	38.85
PVC17C-040	Gallon	6	0	706	130.91

PVC-19 WHITE/GRAY: Extra heavy bodied, slow setting PVC cement for all classes and schedules with interference fit through 30" diameter. Designed for large size piping systems requiring high gap filling properties such as industrial piping and fitting fabrication in pressure and non-pressure applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA (Gray Only) B137.3, B181.2.



PVC-19 White Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19W-020	Pint	12	0	706	35.20
PVC19W-030	Quart	12	0	706	46.92
PVC19W-040	Gallon	4	0	706	154.71
PVC19W-040-F*	Gallon	6	0	706	154.71
PVC19W-050	5 Gallon	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"



PVC-19 Gray Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-020	Pint	12	0	706	35.20
PVC19G-030	Quart	12	0	706	46.92
PVC19G-040	Gallon	4	0	706	154.71
PVC19G-040-F*	Gallon	6	0	706	154.71
PVC19G-050	5 Gallon	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"



Schedule 40 Fittings & Accessories Low VOC Solvent Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with SCAQMD Rule 1168/316A.
- Spears® Primers are certified for use with potable water by NSF® International.
- 3-Year Shelf Life

PRIMER-68 PURPLE/CLEAR: Essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Choose from Clear or Purple color which provides positive identification that a primer was used (check local code requirements). Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-68 Clear Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68C-005	1/4 Pint	24	0	709	7.27
PRIM68C-010	1/2 Pint	24	0	709	9.85
PRIM68C-020	Pint	12	0	709	18.25
PRIM68C-030	Quart	12	0	709	30.46
PRIM68C-040	Gallon	6	0	709	91.82

PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	1/4 Pint	24	0	709	7.89
PRIM70P-010	1/2 Pint	24	0	709	10.75
PRIM70P-020	Pint	12	0	709	21.51
PRIM70P-030	Quart	12	0	709	34.83
PRIM70P-040	Gallon	6	0	709	114.44



CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



PRIMER-68 Purple Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68P-005	1/4 Pint	24	0	709	7.27
PRIM68P-010	1/2 Pint	24	0	709	9.85
PRIM68P-020	Pint	12	0	709	18.25
PRIM68P-030	Quart	12	0	709	30.46
PRIM68P-040	Gallon	6	0	709	91.82

CLEANER-65 Clear Cleaner

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	1/4 Pint	24	0	709	5.82
CLEAN65-010	1/2 Pint	24	0	709	8.67
CLEAN65-020	Pint	12	0	709	15.06
CLEAN65-030	Quart	12	0	709	22.12
CLEAN65-040	Gallon	6	0	709	70.83

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR: Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

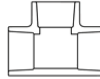
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	1/4 Pint	24	0	709	7.89
PRIM70C-010	1/2 Pint	24	0	709	10.75
PRIM70C-020	Pint	12	0	709	21.51
PRIM70C-030	Quart	12	0	709	34.83
PRIM70C-040	Gallon	6	0	709	114.44

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



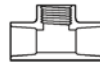
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee Soc



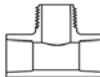
401-003	3/8	50	400	040	2.48
401-005	1/2	50	300	040	.80
401-007	3/4	50	0	040	.92
401-010	1	50	0	040	1.72
401-012	1-1/4	25	0	040	2.68
401-015	1-1/2	25	0	040	3.26
401-020	2	25	0	040	4.75
401-025	2-1/2	10	0	040	15.67
401-030	3	10	0	040	20.59
401-040	4	6	0	040	37.25
401-050	5	5	0	040	89.96
401-060	6	4	0	040	125.37
401-080	8	2	0	040	290.76
401-100	10	1	0	041	963.41
401-100F	10	1	0	047	712.86
401-120	12	1	0	041	1423.49
401-120F	12	1	0	047	1004.45
401-140F	14	1	0	047	1564.14
401-160F	16	1	0	047	2264.16
401-180F	18	1	0	047	2750.32
401-200F	20	1	0	047	3351.79
401-240F	24	1	0	047	4556.13

Tee Soc x Fipt



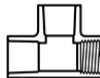
402-003	3/8	50	200	040	2.51
402-005	1/2	50	300	040	1.06
402-007	3/4	50	0	040	1.64
402-010	1	50	0	040	3.04
402-012	1-1/4	25	0	040	4.85
402-015	1-1/2	25	0	040	6.31
402-020	2	10	0	040	8.00
402-025	2-1/2	10	0	040	24.32
402-030	3	10	0	040	30.99
402-040	4	6	0	040	47.37

Tee Soc x Mipt



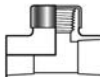
402B-010	1	50	0	040	3.46
----------	---	----	---	-----	------

Tee Soc x Fipt x Soc



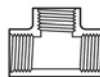
403-007	3/4	50	0	040	1.80
---------	-----	----	---	-----	------

Special Reinforced Tee Soc x SR Fipt - Stainless Steel Collar



402-005SR	1/2	25	200	046	8.06
402-012SR	1-1/4	25	0	046	15.85

Tee Fipt



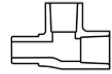
405-005	1/2	50	0	040	2.94
405-007	3/4	50	0	040	4.61
405-010	1	50	0	040	6.38
405-012	1-1/4	25	0	040	8.83
405-015	1-1/2	25	0	040	9.11
405-020	2	10	0	040	12.06

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee (continued) Fipt

405-025 ¹	2-1/2	5	0	040	42.94
¹ Outlet sized with Bushing					

Street Tee Spig x Soc x Soc



444-005	1/2	25	200	040	4.14
444-007	3/4	15	120	040	5.52
444-010	1	15	0	040	7.13
444-012	1-1/4	10	0	040	11.46
444-015	1-1/2	10	0	040	15.83
444-020	2	10	0	040	27.54

Reducing Tee Soc



401-053	3/8X1/2	50	0	040	2.20
401-074	1/2X3/4	50	0	040	1.71
401-075	1/2X1	50	0	040	3.17
401-094	3/4X1/2X1/2	50	0	040	1.55
401-095	3/4X1/2X3/4	50	0	040	1.55
401-101	3/4X1/2	50	0	040	1.06
D401-101	3/4X1/2	50	0	040	1.47
401-102	3/4X1	50	0	040	3.04
401-122	1X1/2X1	50	0	040	3.04
401-124	1X3/4X1/2	50	0	040	3.04
401-125	1X3/4X3/4	50	0	040	3.04
401-126	1X3/4X1	50	0	040	3.04
401-130	1X1/2	50	0	040	1.81
D401-130	1X1/2	50	0	040	2.96
401-131	1X3/4	50	0	040	1.98
401-132	1X1-1/4	25	0	040	4.07
401-133	1X1-1/2	25	0	040	5.26
401-134	1X2	25	0	040	7.39
401-156	1-1/4X1X1/2	25	0	040	4.15
401-157	1-1/4X1X3/4	25	0	040	4.15
401-158	1-1/4X1X1	25	0	040	4.15
401-166	1-1/4X1/2	25	0	040	2.95
D401-166	1-1/4X1/2	25	0	040	2.95
401-167	1-1/4X3/4	25	0	040	2.95
401-168	1-1/4X1	25	0	040	2.95
401-169	1-1/4X1-1/2	25	0	040	5.39
401-170	1-1/4X2	25	0	040	7.39
401-199	1-1/2X1-1/4X1/2	25	0	040	5.17
401-201	1-1/2X1-1/4X3/4	25	0	040	5.17
401-202	1-1/2X1-1/4X1	25	0	040	5.17
401-209	1-1/2X1/2	25	0	040	5.17
D401-209	1-1/2X1/2	25	0	040	5.31
401-210	1-1/2X3/4	25	0	040	5.17
401-211	1-1/2X1	25	0	040	5.17
401-212	1-1/2X1-1/4	25	0	040	5.17
401-213	1-1/2X2	25	0	040	7.39
401-214	1-1/2X2-1/2	25	0	040	16.28
401-233	2X1X2	10	0	040	7.39
401-238	2X1-1/2X3/4	10	0	040	7.39
401-239	2X1-1/2X1	10	0	040	7.39
401-241	2X1-1/2X1-1/2	10	0	040	7.39
401-247	2X1/2	10	0	040	5.08
D401-247	2X1/2	10	0	040	7.39
401-248	2X3/4	10	0	040	5.08
401-249	2X1	10	0	040	5.08
401-250	2X1-1/4	10	0	040	5.08
401-251	2X1-1/2	10	0	040	5.08
401-253 ¹	2X3	10	0	040	34.19
401-254 ¹	2X4	6	0	040	67.67



Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc

401-287	2-1/2X1/2	10	0	040	15.63
401-288	2-1/2X3/4	10	0	040	15.63
401-289	2-1/2X1	10	0	040	15.63
401-290	2-1/2X1-1/4	10	0	040	15.63
401-291	2-1/2X1-1/2	10	0	040	15.63
401-292	2-1/2X2	10	0	040	15.63
401-293 ¹	2-1/2X3	10	0	040	34.93
401-294 ¹	2-1/2X4	6	0	040	67.67
401-333	3X1/2	10	0	040	22.40
401-334	3X3/4	10	0	040	22.40
401-335	3X1	10	0	040	22.40
401-336	3X1-1/4	10	0	040	22.40
401-337	3X1-1/2	10	0	040	22.40
401-338	3X2	6	0	040	22.36
401-339	3X2-1/2	6	0	040	27.97
401-342	3X4	6	0	040	38.48
401-344 ¹	3X6	4	0	040	200.62
401-415 ¹	4X1/2	6	0	040	38.69
401-416	4X3/4	6	0	040	37.25
401-417	4X1	6	0	040	37.25
401-418	4X1-1/4	10	0	040	37.25
401-419	4X1-1/2	10	0	040	37.25
401-420	4X2	10	0	040	37.25
401-421 ¹	4X2-1/2	6	0	040	43.17
401-422	4X3	6	0	040	37.25
401-426 ¹	4X6	4	0	040	200.62
401-428 ¹	4X8	2	0	040	553.74
401-486 ¹	5X2	5	0	040	87.34
401-487 ¹	5X2-1/2	4	0	040	96.09
401-488	5X3	4	0	040	87.34
401-490	5X4	3	0	040	87.34
401-492 ¹	5X6	4	0	040	204.87
401-494 ¹	5X8	1	2	040	704.86
401-526 ¹	6X1-1/4	4	0	040	128.23
401-527 ¹	6X1-1/2	5	0	040	128.23
401-528	6X2	3	0	040	125.37
401-529 ¹	6X2-1/2	5	0	040	134.88
401-530	6X3	5	0	040	125.37
401-532	6X4	2	0	040	125.37
401-533 ¹	6X5	4	0	040	166.41
401-535 ¹	6X8	2	0	040	553.74
401-537 ¹	6X10	1	0	041	1589.98
401-578 ¹	8X2	2	0	040	303.64
401-579 ¹	8X2-1/2	4	0	040	303.64
401-580	8X3	4	0	040	290.76
401-582	8X4	2	0	040	290.76
401-583 ¹	8X5	2	0	040	335.16
401-585	8X6	2	0	040	290.76
401-589 ¹	8X10	1	0	041	1589.98
401-621 ¹	10X2	1	0	041	863.35
401-621F	10X2	1	0	047	566.63
401-622F	10X2-1/2	1	2	047	597.93
401-623 ¹	10X3	1	0	041	863.35
401-623F	10X3	1	0	047	607.77
401-624 ¹	10X4	1	0	041	863.35
401-624F	10X4	1	0	047	629.60
401-625 ¹	10X5	1	0	041	863.35
401-625F	10X5	1	0	047	738.67
401-626	10X6	1	0	041	825.62
401-626F	10X6	1	0	047	711.99
401-628 ¹	10X8	1	0	041	1057.06
401-628F	10X8	1	0	047	798.78
401-632 ¹	10X12	1	0	041	1759.45
401-634F	10X14	1	0	047	1804.71
401-636F	10X16	1	0	047	2247.38

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc

401-661F	12X2	1	0	047	732.69
401-662F	12X2-1/2	1	0	047	773.08
401-663F	12X3	1	0	047	789.23
401-664 ¹	12X4	1	0	041	1351.39
401-664F	12X4	1	0	047	837.26
401-665F	12X5	1	0	047	993.12
401-666 ¹	12X6	1	0	041	1351.39
401-666F	12X6	1	0	047	890.59
401-668	12X8	1	0	041	1192.86
401-668F	12X8	1	0	047	991.93
401-670 ¹	12X10	1	0	041	1858.69
401-670F	12X10	1	0	047	1102.17
401-674F	12X14	1	0	047	2083.20
401-676F	12X16	1	0	047	2515.47
401-678F	12X18	1	0	047	4467.56
401-691F	14X2	1	0	047	918.09
401-693F	14X3	1	0	047	1000.22
401-694F	14X4	1	0	047	1063.72
401-695F	14X5	1	0	047	1110.13
401-696F	14X6	1	0	047	1127.21
401-698F	14X8	1	0	047	1187.92
401-700F	14X10	1	0	047	1390.32
401-702F	14X12	1	0	047	1579.24
401-706F	14X16	1	0	047	3051.73
401-751F	16X2	1	0	047	1020.12
401-753F	16X3	1	0	047	1075.91
401-754F	16X4	1	0	047	1141.00
401-756F	16X6	1	0	047	1216.69
401-758F	16X8	1	0	047	1337.32
401-760F	16X10	1	0	047	1457.80
401-762F	16X12	1	0	047	1698.32
401-764F	16X14	1	0	047	2030.45
401-768F	16X18	1	0	047	4545.36
401-781F	18X2	1	0	047	1133.67
401-783F	18X3	1	0	047	1162.85
401-784F	18X4	1	0	047	1176.16
401-786F	18X6	1	0	047	1348.82
401-788F	18X8	1	0	047	1479.98
401-790F	18X10	1	0	047	1759.27
401-792F	18X12	1	0	047	1824.32
401-794F	18X14	1	0	047	2406.14
401-796F	18X16	1	0	047	2762.14
401-811F	20X2	1	0	047	1435.19
401-813F	20X3	1	0	047	1462.59
401-814F	20X4	1	0	047	1484.69
401-816F	20X6	1	0	047	1508.23
401-818F	20X8	1	0	047	1568.46
401-820F	20X10	1	0	047	1943.21
401-822F	20X12	1	0	047	2115.47
401-824F	20X14	1	0	047	2673.49
401-826F	20X16	1	0	047	3156.02
401-828F	20X18	1	0	047	3507.78
401-901F	24X2	1	0	047	2372.20
401-903F	24X3	1	0	047	2467.92
401-904F	24X4	1	0	047	2953.34
401-906F	24X6	1	0	047	3033.57
401-908F	24X8	1	0	047	3167.79
401-910F	24X10	1	0	047	3237.25
401-912F	24X12	1	0	047	3328.96
401-914F	24X14	1	0	047	3573.79
401-916F	24X16	1	0	047	3754.69
401-918F	24X18	1	0	047	4102.93
401-920F	24X20	1	0	047	4406.42

¹Outlet sized with Bushing

Schedule 40 Fittings & Accessories
PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee
Soc x Fipt



402-071	1/2X1/8	50	300	040	2.28
402-072	1/2X1/4	50	200	040	2.28
402-074	1/2X3/4	50	0	040	2.28
402-094	3/4X1/2X1/2	50	0	040	1.60
402-095	3/4X1/2X3/4	50	0	040	1.60
402-101	3/4X1/2	50	0	040	1.41
402-124	1X3/4X1/2	50	0	040	3.04
402-125	1X3/4X3/4	50	0	040	3.04
402-130	1X1/2	50	0	040	2.13
402-131	1X3/4	50	0	040	3.04
402-156	1-1/4X1X1/2	25	0	040	4.85
402-157	1-1/4X1X3/4	25	0	040	4.85
402-158	1-1/4X1X1	25	0	040	4.85
402-166	1-1/4X1/2	25	0	040	5.08
402-167	1-1/4X3/4	25	0	040	5.08
402-168	1-1/4X1	25	0	040	5.08
402-199	1-1/2X1-1/4X1/2	25	0	040	6.31
402-201	1-1/2X1-1/4X3/4	25	0	040	6.31
402-202	1-1/2X1-1/4X1	25	0	040	6.31
402-209	1-1/2X1/2	25	0	040	6.31
402-210	1-1/2X3/4	25	0	040	6.31
402-211	1-1/2X1	25	0	040	6.31
402-212	1-1/2X1-1/4	25	0	040	6.31
402-238	2X1-1/2X3/4	10	0	040	7.94
402-239	2X1-1/2X1	10	0	040	7.94
402-247	2X1/2	10	0	040	7.94
402-248	2X3/4	10	0	040	7.94
402-249	2X1	10	0	040	7.94
402-250	2X1-1/4	10	0	040	7.94
402-251	2X1-1/2	10	0	040	7.94
402-287	2-1/2X1/2	10	0	040	17.18
402-288	2-1/2X3/4	10	0	040	17.18
402-289	2-1/2X1	10	0	040	17.18
402-290	2-1/2X1-1/4	10	0	040	17.18
402-291	2-1/2X1-1/2	10	0	040	17.18
402-292	2-1/2X2	10	0	040	17.18
402-333	3X1/2	10	0	040	24.54
402-334	3X3/4	10	0	040	24.54
402-335	3X1	10	0	040	24.54
402-336	3X1-1/4	10	0	040	24.54
402-337	3X1-1/2	10	0	040	24.54
402-338	3X2	6	0	040	24.54
402-417	4X1	6	0	040	41.01
402-419	4X1-1/2	10	0	040	41.01
402-420	4X2	10	0	040	41.01
402-422	4X3	6	0	040	41.01
402-490	5X4	3	0	040	107.13
402-525 ¹	6X1	3	0	040	139.00
402-528	6X2	3	0	040	139.00
402-530	6X3	5	0	040	139.00
402-532	6X4	2	0	040	139.00
402-578 ¹	8X2	3	0	040	300.60
402-580 ¹	8X3	2	0	040	300.60
402-582 ¹	8X4	2	0	040	300.60
402-621F	10X2	1	0	047	584.85
402-622F	10X2-1/2	1	0	047	588.97
402-623F	10X3	1	0	047	625.91
402-624F	10X4	1	0	047	678.69
402-661F	12X2	1	0	047	750.88
402-663F	12X3	1	0	047	809.00
402-664F	12X4	1	0	047	875.84

¹Outlet-sized with Bushing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee
Soc x Fipt x Soc



403-095	3/4X1/2X3/4	50	0	040	4.31
---------	-------------	----	---	-----	------

Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar



402-072SR	1/2X1/4	25	150	046	8.06
402-098SR	3/4X1/4	25	100	046	10.47
402-101SR	3/4X1/2	50	0	046	10.47
402-166SR	1-1/4X1/2	15	0	046	17.52
402-168SR	1-1/4X1	10	0	046	17.87
402-212SR	1-1/2X1-1/4	10	0	046	19.35
402-287SR	2-1/2X1/2	10	0	046	23.55
402-288SR	2-1/2X3/4	10	0	046	24.88
402-289SR	2-1/2X1	10	0	046	25.13
402-290SR	2-1/2X1-1/4	10	0	046	24.74
402-291SR	2-1/2X1-1/2	10	0	046	25.72
402-292SR	2-1/2X2	10	0	046	25.93
402-333SR	3X1/2	10	0	046	31.40
402-334SR	3X3/4	10	0	046	31.40
402-335SR	3X1	10	0	046	32.03
402-336SR	3X1-1/4	10	0	046	32.78
402-337SR	3X1-1/2	10	0	046	32.49
402-338SR	3X2	6	0	046	34.42
402-417SR	4X1	6	0	046	41.59
402-419SR	4X1-1/2	10	0	046	45.68
402-420SR	4X2	10	0	046	47.17
402-422SR	4X3	6	0	046	74.11

Special Reinforced Reducing Tee
Soc x SR Fipt-Stainless Steel Collar x Soc



403-095SR	3/4X1/2X3/4	50	0	046	2.73
-----------	-------------	----	---	-----	------

Manifold Tee
Spig x Soc x Mipt



476-010	1	20	0	020	5.98
---------	---	----	---	-----	------

Manifold Tee
Spig x Soc x Fipt



477-010	1	25	0	020	5.98
---------	---	----	---	-----	------

O-ring Sealed Manifold Tee
O-ring Sealed MIPT x Fipt x MIPT

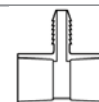


EPDM O-ring Seal on Tee run

451A-010	1	50	0	019	4.49
----------	---	----	---	-----	------

O-ring end MIPT is designed to assemble to corresponding Manifold Tee FIPT Only. Multiple Mainifold Tee-to-Manifold Tee assemblies can be made with NO Thread Sealant required. Branch MIPT and Terminal MIPT in manifold assembly can be joined without O-ring to standard FIPT using thread sealant.

Transition Tee for P.E. Hose Laterals
Soc x Insert (.580 I.D.)



1102-007	3/4	50	0	040	3.22
1102-130	1X1/2	200	0	040	3.61
1102-248	2X2X3/4	10	0	040	5.08
1102-250	2X1-1/4	10	0	040	5.08



Schedule 40 Fittings & Accessories

PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° EII Soc



406-003	3/8	50	600	040	3.23
406-005	1/2	50	400	040	.64
406-007	3/4	50	300	040	.72
406-010	1	50	0	040	1.29
406-012	1-1/4	25	0	040	2.28
406-015	1-1/2	25	0	040	2.46
406-020	2	25	0	040	3.85
406-025	2-1/2	10	0	040	11.73
406-030	3	10	0	040	14.03
406-040	4	8	0	040	25.09
406-045F	4-1/2	1	5	047	178.54
406-050	5	4	0	040	64.84
406-060	6	4	0	040	79.80
406-080	8	2	0	040	205.47
406-100	10	1	0	041	773.92
406-100F	10	1	0	047	412.87
406-120	12	1	0	041	1037.97
406-120F	12	1	0	047	674.80
406-140F	14	1	0	047	972.61
406-160F	16	1	0	047	1391.76
406-180F	18	1	0	047	1494.04
406-200F	20	1	0	047	2260.04
406-240F	24	1	0	047	3386.87

90° EII Soc x Fipt



407-005	1/2	50	400	040	.80
407-007	3/4	50	300	040	.92
407-010	1	50	0	040	1.72
407-012	1-1/4	25	0	040	2.87
407-015	1-1/2	25	0	040	3.19
407-020	2	10	0	040	8.24
407-025	2-1/2	10	0	040	20.37
407-030	3	8	0	040	30.54
407-040	4	8	0	040	46.29

Special Reinforced 90° EII & Reducing 90° EII Soc x SR Fipt - Stainless Steel Collar



407-005SR	1/2	50	400	046	7.15
407-007SR	3/4	75	0	046	9.18
407-010SR	1	50	0	046	9.28
407-012SR	1-1/4	25	0	046	11.22
407-131SR	1X3/4	50	0	046	3.94
407-168SR ¹	1-1/4X1	25	0	046	15.55
407-249SR	2X1	10	0	046	17.68
407-251SR	2X1-1/2	10	0	046	18.65

¹Sized with SR Adapter

90° EII Fipt



408-005	1/2	50	400	040	1.55
408-007	3/4	50	0	040	2.29
408-010	1	50	0	040	4.91
408-012	1-1/4	25	0	040	5.25
408-015	1-1/2	25	0	040	6.64
408-020	2	10	0	040	10.07

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing 90° EII Soc



406-053	3/8X1/2	50	0	040	1.88
406-101	3/4X1/2	50	0	040	1.29
D406-101	3/4X1/2	50	0	040	1.57
406-130	1X1/2	50	0	040	1.93
D406-130	1X1/2	50	0	040	2.76
406-131	1X3/4	50	0	040	2.29
406-166	1-1/4X1/2	25	0	040	3.67
D406-166	1-1/4X1/2	25	0	040	4.21
406-167	1-1/4X3/4	25	0	040	3.67
406-168	1-1/4X1	25	0	040	3.67
406-209	1-1/2X1/2	25	0	040	5.80
406-211	1-1/2X1	25	0	040	5.80
406-212	1-1/2X1-1/4	25	0	040	5.80
406-249	2X1	10	0	040	7.15
406-250	2X1-1/4	10	0	040	7.15
406-251	2X1-1/2	10	0	040	9.89
406-251N	2X1-1/2	10	0	015	9.89
406-292	2-1/2X2	10	0	040	11.59
406-292N	2-1/2X2 (2-1/2 Spigot)	10	0	040	11.59

Reducing 90° EII Soc x Fipt



407-053	3/8X1/2	50	600	040	2.20
407-074	1/2X3/4	50	0	040	1.72
407-101	3/4X1/2	50	300	040	.95
407-130	1X1/2	50	0	040	2.64
407-131	1X3/4	50	0	040	2.64
407-168	1-1/4X1	25	0	040	3.85
407-211	1-1/2X1	25	0	040	6.39
407-212	1-1/2X1-1/4	20	0	040	6.65
407-249	2X1	10	0	040	11.06
407-250	2X1-1/4	10	0	040	11.06
407-251	2X1-1/2	10	0	040	11.06

90° Sweep EII Soc



406-005S	1/2	25	300	040	4.92
406-007S	3/4	25	100	040	5.63
406-010S	1	25	0	040	9.22
406-012S	1-1/4	25	0	040	12.16
406-015S	1-1/2	25	0	040	13.14
406-020S	2	25	0	040	15.84
406-025S	2-1/2	20	0	040	18.53

Long Sweep 90° EII Soc



406-025LSF	2-1/2	1	7	047	53.27
406-030LSF	3	1	5	047	75.03
406-040LSF	4	1	4	047	97.68
406-060LSF	6	1	2	047	151.04
406-080LSF	8	1	0	047	300.71

90° Street EII Spig x Soc



409-005	1/2	50	400	040	1.81
409-007	3/4	50	0	040	2.23
409-010	1	50	0	040	3.85
409-012	1-1/4	25	0	040	4.61

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° Street Ell (continued)

Spig x Soc

409-015	1-1/2	25	0	040	5.08
409-020	2	10	0	040	9.81
409-025	2-1/2	10	0	040	17.59
409-030	3	5	0	040	21.72
409-040	4	6	0	040	40.39
409-050	5	2	0	040	96.62
409-060	6	2	0	040	122.09
409-080	8	2	0	040	312.31
409-100	10	1	0	041	1153.13
409-120	12	1	0	041	1276.99
409-140F	14	1	0	047	1343.31
409-160F	16	1	0	047	1411.15
409-180F	18	1	0	047	1765.28
409-200F	20	1	0	047	2510.82
409-240F	24	1	0	047	3882.56

90° Street Ell

Mipt x Soc

410-005	1/2	50	750	040	1.41
410-007	3/4	50	0	040	1.64
410-010	1	50	0	040	2.76
410-012	1-1/4	25	0	040	3.85
410-015	1-1/2	25	0	040	4.03
410-020	2	10	0	040	9.91
410-030	3	10	0	040	35.40
410-101	3/4X1/2	50	400	040	2.01
410-102	3/4X1	50	0	040	3.41

90° Street Ell

Mipt x Fipt

412-005	1/2	50	600	040	1.88
412-007	3/4	50	0	040	2.29
412-010	1	50	0	040	3.96
412-012	1-1/4	25	0	040	4.91
412-015	1-1/2	25	0	040	5.33
412-020	2	10	0	040	10.16
412-030	3	8	0	040	36.29

HDPE 90° Street Ell

Mipt x Fipt

M412-005	1/2	50	450	040	1.75
M412-007	3/4	50	0	040	2.12
M412-010	1	50	0	040	3.69
M412-012	1-1/4	25	0	040	4.87
M412-015	1-1/2	25	0	040	5.52

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

HDPE 90° Street Ell

Mipt x Fipt (Short Pattern)

MS412-005	1/2	50	700	040	1.57
MS412-007	3/4	50	400	040	1.89
MS412-010	1	50	0	040	3.32

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

HDPE Reducing 90° Street Ell

Mipt x Fipt (Short Pattern)

MS412-101	3/4X1/2	50	400	040	2.54
-----------	---------	----	-----	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

HDPE Reducing 90° Street Ell (continued)

Mipt x Fipt (Short Pattern)

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

Side Outlet Ell

Soc

413-005	1/2	50	0	040	3.49
413-007	3/4	50	0	040	4.75
413-010	1	25	0	040	6.08
413-015	1-1/2	10	0	040	6.67
413-020	2	10	0	040	9.26

Side Outlet Ell

Soc x Fipt

414-005	1/2	50	0	040	3.40
414-007	3/4	50	0	040	5.22
414-101	3/4X1/2	50	0	040	4.40
414-130	1X1/2	50	0	040	5.77

60° Ell

Soc

424-005F	1/2	7	0	047	69.87
424-007F	3/4	6	0	047	77.68
424-010F	1	1	3	047	78.89
424-012F	1-1/4	16	0	047	84.12
424-015F	1-1/2	16	0	047	97.06
424-020F	2	1	16	047	127.54
424-025F	2-1/2	10	0	047	139.81
424-030F	3	1	8	047	159.40
424-040F	4	1	4	047	187.15
424-045F	4-1/2	1	4	047	209.64
424-050F	5	1	4	047	215.51
424-060F	6	1	4	047	262.04
424-080F	8	1	2	047	348.46
424-100F	10	1	2	047	715.66
424-120F	12	1	0	047	911.02
424-140F	14	1	0	047	962.79
424-160F	16	1	0	047	1158.63
424-180F	18	1	0	047	1718.01
424-240F	24	1	0	047	2895.78

45° Ell

Soc

417-005	1/2	50	600	040	1.06
417-007	3/4	50	300	040	1.64
417-010	1	50	0	040	1.98
417-012	1-1/4	25	0	040	2.76
417-015	1-1/2	25	0	040	3.46
417-020	2	25	0	040	4.51
417-025	2-1/2	10	0	040	11.75
417-030	3	10	0	040	18.23
417-040	4	5	0	040	32.68
417-045F	4-1/2	1	15	047	67.15
417-050	5	5	0	040	64.84
417-050F	5	1	2	047	87.00
417-060	6	8	0	040	80.76
417-080	8	3	0	040	194.22
417-080F	8	1	4	047	183.81
417-100	10	1	0	041	505.60
417-100F	10	1	2	047	290.39
417-120	12	1	0	041	749.24
417-120F	12	1	2	047	307.99



Schedule 40 Fittings & Accessories

PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

45° EII (continued)

Soc

417-140F	14	1	0	047	646.07
417-160F	16	1	0	047	853.85
417-180F	18	1	0	047	902.80
417-200F	20	1	0	047	1169.47
417-240F	24	1	0	047	1881.75

45° Street EII

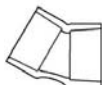
Spig x Soc



427-005	1/2	50	400	040	1.06
427-007	3/4	50	0	040	1.64
427-010	1	50	0	040	1.98
427-012	1-1/4	25	0	040	2.76
427-015	1-1/2	25	0	040	3.46
427-020	2	25	0	040	4.51
427-025	2-1/2	10	0	040	14.68
427-030	3	10	0	040	18.23
427-040	4	5	0	040	32.68
427-050	5	4	0	040	98.27
427-060	6	4	0	040	100.94
427-080	8	2	0	040	242.78
427-100	10	1	0	041	638.82
427-120	12	1	0	041	936.57
427-140F	14	1	0	047	697.99
427-160F	16	1	0	047	948.73
427-180F	18	1	0	047	1035.62
427-200F	20	1	0	047	1314.52
427-240F	24	1	0	047	2070.62

30° EII

Soc



415-005F	1/2	1	25	047	21.59
415-007F	3/4	25	0	047	21.73
415-010F	1	1	25	047	23.78
415-012F	1-1/4	1	15	047	25.74
415-015F	1-1/2	1	25	047	26.11
415-020F	2	1	25	047	27.07
415-025F	2-1/2	25	0	047	31.93
415-030F	3	1	20	047	34.15
415-040F	4	1	6	047	41.13
415-045F	4-1/2	1	15	047	65.07
415-050F	5	1	6	047	57.03
415-060F	6	1	10	047	66.07
415-080F	8	1	4	047	111.69
415-100F	10	1	2	047	168.54
415-120F	12	1	0	047	266.62
415-140F	14	1	0	047	419.17
415-160F	16	1	0	047	571.40
415-180F	18	1	0	047	686.21
415-200F	20	1	0	047	848.25
415-240F	24	1	0	047	1689.55

22-1/2° EII

Soc



416-005	1/2	20	240	040	1.51
416-007	3/4	20	240	040	2.35
416-010	1	20	160	040	2.81
416-012	1-1/4	20	0	040	3.93
416-015	1-1/2	20	0	040	4.93
416-015F	1-1/2	1	25	047	26.11
416-020	2	20	0	040	6.45
416-025	2-1/2	5	0	040	16.77
416-025F	2-1/2	25	0	047	31.93

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

22-1/2° EII (continued)

Soc

416-030	3	5	0	040	26.01
416-040	4	4	0	040	46.72
416-045F	4-1/2	1	15	047	65.07
416-050F	5	1	10	047	57.03
416-060	6	4	0	040	115.34
416-060F	6	1	5	047	66.07
416-080	8	4	0	040	277.46
416-080F	8	1	4	047	111.69
416-100F	10	1	0	047	168.54
416-120F	12	1	0	047	266.62
416-140F	14	1	0	047	419.17
416-160F	16	1	0	047	571.40
416-180F	18	1	0	047	686.21
416-200F	20	1	0	047	848.25
416-240F	24	1	0	047	1689.55

22-1/2° Street EII

Spig x Soc



442-005	1/2	50	400	040	1.51
442-007	3/4	50	0	040	2.35
442-010	1	50	0	040	2.81
442-012	1-1/4	20	0	040	3.93
442-015	1-1/2	25	0	040	4.93
442-020	2	20	0	040	6.45
442-025F	2-1/2	1	18	047	36.53
442-030	3	5	0	040	37.68
442-040	4	4	0	040	58.15
442-060	6	4	0	040	143.56
442-060F	6	1	5	047	84.72
442-080	8	1	4	040	345.31
442-080F	8	1	4	047	127.60
442-100F	10	1	0	047	197.47
442-120F	12	1	0	047	296.41

15° EII

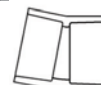
Soc



418-005F	1/2	1	25	047	21.59
418-007F	3/4	23	0	047	21.73
418-010F	1	20	0	047	23.78
418-012F	1-1/4	15	0	047	25.74
418-015F	1-1/2	25	0	047	26.11
418-020F	2	1	25	047	27.07
418-025F	2-1/2	18	0	047	31.93
418-030F	3	1	35	047	34.15
418-040F	4	1	20	047	41.13
418-045F	4-1/2	1	15	047	65.07
418-050F	5	1	15	047	57.03
418-060F	6	1	10	047	66.07
418-080F	8	1	4	047	111.69
418-100F	10	1	2	047	168.54
418-120F	12	1	2	047	266.62
418-140F	14	1	0	047	419.17
418-160F	16	1	0	047	571.40
418-180F	18	1	0	047	686.21
418-200F	20	1	0	047	848.25
418-240F	24	1	0	047	1689.55

11-1/4° EII

Soc



411-005F	1/2	52	0	047	21.59
411-007F	3/4	52	0	047	21.73
411-010F	1	52	0	047	23.78

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

11-1/4° Ell (continued)

Soc

411-012F	1-1/4	25	0	047	25.74
411-015	1-1/2	25	0	040	5.57
411-015F	1-1/2	25	0	047	26.11
411-020	2	10	0	040	6.45
411-025F	2-1/2	1	25	047	31.93
411-030	3	10	0	040	26.01
411-040	4	4	0	040	46.72
411-045F	4-1/2	1	15	047	65.07
411-050F	5	1	15	047	57.03
411-060F	6	1	10	047	66.07
411-080F	8	1	4	047	111.69
411-100F	10	1	2	047	168.54
411-120F	12	1	2	047	266.62
411-140F	14	1	0	047	419.17
411-160F	16	1	0	047	571.40
411-180F	18	1	0	047	686.21
411-200F	20	1	0	047	848.25
411-240F	24	1	0	047	1689.55

Wye Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-005	1/2	25	100	040	2.76
475-007	3/4	20	0	040	4.33
475-010	1	20	0	040	6.06
475-012	1-1/4	20	0	040	9.32
475-015	1-1/2	20	0	040	11.95
475-020	2	10	0	040	35.85
475-025 ¹	2-1/2	4	0	040	81.96
475-030	3	5	0	040	60.40
475-040	4	4	0	040	113.92
475-050F	5	1	3	047	444.56
475-060	6	3	0	040	241.02
475-080	8	1	0	040	387.67
475-100	10	1	0	041	1284.57
475-100F [*]	10	1	0	047	1077.91
475-120	12	1	0	041	1898.02
475-120F [*]	12	1	0	047	1465.32
475-140F [*]	14	1	0	047	2075.98
475-160F [*]	16	1	0	047	2683.45
475-180F [*]	18	1	0	047	3435.76
475-200F [*]	20	1	0	047	4062.04
475-240F [*]	24	1	0	047	5051.87

¹ Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Reducing Wye Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-101 ¹	3/4X1/2	20	0	040	8.54
475-130 ¹	1X1/2	20	0	040	10.86
475-131 ¹	1X3/4	20	0	040	10.86
475-166 ¹	1-1/4X1/2	20	0	040	14.61
475-167 ¹	1-1/4X3/4	20	0	040	14.61
475-168 ¹	1-1/4X1	20	0	040	14.61

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Wye (continued)

Soc

475-209 ¹	1-1/2X1/2	20	0	040	17.39
475-210 ¹	1-1/2X3/4	20	0	040	17.39
475-211 ¹	1-1/2X1	20	0	040	17.39
475-212 ¹	1-1/2X1-1/4	20	0	040	17.39
475-247 ¹	2X1/2	10	0	040	39.51
475-248 ¹	2X3/4	10	0	040	39.51
475-249 ¹	2X1	10	0	040	39.51
475-250 ¹	2X1-1/4	10	0	040	39.51
475-251 ¹	2X1-1/2	10	0	040	39.51
475-292 ¹	2-1/2X2	4	0	040	88.03
475-334 ¹	3X3/4	5	0	040	68.60
475-335 ¹	3X1	5	0	040	68.60
475-336 ¹	3X1-1/4	5	0	040	68.60
475-337 ¹	3X1-1/2	5	0	040	68.60
475-338 ¹	3X2	5	0	040	68.60
475-339 ¹	3X2-1/2	5	0	040	68.60
475-420	4X2	4	0	040	131.78
475-421 ¹	4X2-1/2	4	0	040	131.78
475-422 ¹	4X3	4	0	040	131.78
475-488F [*]	5X3	1	4	047	353.59
475-490F [*]	5X4	1	4	047	368.20
475-528 ¹	6X2	4	0	040	284.43
475-529 ¹	6X2-1/2	5	0	040	284.43
475-530 ¹	6X3	5	0	040	284.43
475-532	6X4	5	0	040	309.89
475-578F [*]	8X2	1	2	047	532.21
475-579F [*]	8X2-1/2	1	0	047	564.77
475-580F [*]	8X3	1	2	047	578.25
475-582F [*]	8X4	1	2	047	596.45
475-585F [*]	8X6	1	0	047	614.53
475-621F [*]	10X2	1	0	047	639.77
475-622F [*]	10X2-1/2	1	0	047	650.77
475-623F [*]	10X3	1	0	047	685.51
475-624F [*]	10X4	1	0	047	725.43
475-626	10X6	1	0	041	1100.84
475-626F [*]	10X6	1	0	047	801.01
475-628	10X8	1	0	041	1223.16
475-628F [*]	10X8	1	0	047	857.09
475-661F [*]	12X2	1	0	047	868.42
475-663F [*]	12X3	1	0	047	889.14
475-664F [*]	12X4	1	0	047	930.55
475-666F [*]	12X6	1	0	047	935.02
475-668F [*]	12X8	1	0	047	1084.33
475-670F [*]	12X10	1	0	047	1239.80
475-691F [*]	14X2	1	0	047	1032.35
475-693F [*]	14X3	1	0	047	1117.36
475-694F [*]	14X4	1	0	047	1171.81
475-696F [*]	14X6	1	0	047	1320.22
475-698F [*]	14X8	1	0	047	1512.75
475-700F [*]	14X10	1	0	047	1689.82
475-702F [*]	14X12	1	0	047	1893.25
475-751F [*]	16X2	1	0	047	1199.41
475-753F [*]	16X3	1	0	047	1296.59
475-754F [*]	16X4	1	0	047	1348.37
475-756F [*]	16X6	1	0	047	1517.35
475-758F [*]	16X8	1	0	047	1727.99
475-760F [*]	16X10	1	0	047	1923.22
475-762F [*]	16X12	1	0	047	2143.16
475-764F [*]	16X14	1	0	047	2425.75
475-781F [*]	18X2	1	0	047	1308.67
475-783F [*]	18X3	1	0	047	1368.57
475-784F [*]	18X4	1	0	047	1388.89
475-786F [*]	18X6	1	0	047	2661.03
475-788F [*]	18X8	1	0	047	1985.98
475-790F [*]	18X10	1	0	047	2209.00



Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Wye (continued)

Soc

475-792F [*]	18X12	1	0	047	2562.64
475-794F [*]	18X14	1	0	047	2813.63
475-796F [*]	18X16	0	0	047	2950.83
475-811F [*]	20X2	1	0	047	1376.09
475-813F [*]	20X3	1	0	047	1491.22
475-814F [*]	20X4	1	0	047	1510.54
475-818F [*]	20X8	1	0	047	2080.20
475-816F [*]	20X6	1	0	047	1538.88
475-820F [*]	20X10	1	0	047	2312.57
475-822F [*]	20X12	1	0	047	2787.00
475-824F [*]	20X14	1	0	047	3118.99
475-826F [*]	20X16	0	0	047	3457.07
475-828F [*]	20X18	0	0	047	3710.88
475-901F [*]	24X2	1	0	047	1737.02
475-903F [*]	24X3	1	0	047	1775.23
475-904F [*]	24X4	1	0	047	1824.16
475-906F [*]	24X6	1	0	047	3210.71
475-908F [*]	24X8	1	0	047	3502.38
475-910F [*]	24X10	1	0	047	3539.38
475-912F [*]	24X12	1	0	047	3746.56
475-914F [*]	24X14	1	0	047	3875.11
475-916F [*]	24X16	1	0	047	4058.18
475-918F [*]	24X18	1	0	047	4411.72
475-920F [*]	24X20	0	0	047	4822.38

[†] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Double Wye Soc



100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

476-020F [*]	2	1	4	047	278.43
476-030F [*]	3	1	3	047	458.60
476-040F [*]	4	1	2	047	510.84
476-060F [*]	6	1	0	047	581.76
476-080F [*]	8	1	0	047	708.48
476-100F [*]	10	1	0	047	1299.16
476-120F [*]	12	1	0	047	1546.67

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Reducing Double Wye Soc



Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

476-338	3X2	5	0	040	100.68
476-420F [*]	4X2	1	4	047	452.25
476-421F [*]	4X2-1/2	1	2	047	471.85
476-422F [*]	4X3	1	3	047	485.42
476-528F [*]	6X2	1	2	047	455.41
476-529F [*]	6X2-1/2	1	2	047	495.79
476-530F [*]	6X3	1	2	047	515.27
476-532F [*]	6X4	1	0	047	523.33
476-578F [*]	8X2	1	2	047	555.58
476-579F [*]	8X2-1/2	1	2	047	577.67
476-580F [*]	8X3	1	0	047	621.64
476-582F [*]	8X4	1	0	047	629.64
476-585F [*]	8X6	1	0	047	660.09
476-621F [*]	10X2	1	0	047	827.76
476-622F [*]	10X2-1/2	1	0	047	877.01
476-623F [*]	10X3	1	0	047	902.16

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Double Wye (continued)

Soc

476-624F [*]	10X4	1	0	047	991.25
476-626F [*]	10X6	1	0	047	1111.88
476-628F [*]	10X8	1	0	047	1159.46
476-661F [*]	12X2	1	0	047	1180.96
476-662F [*]	12X2 1/2	1	0	047	1194.37
476-663F [*]	12X3	1	0	047	1258.47
476-664F [*]	12X4	1	0	047	1283.05
476-666F [*]	12X6	1	0	047	1355.85
476-668F [*]	12X8	1	0	047	1390.63
476-670F [*]	12X10	1	0	047	1473.23

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Cross Soc



420-005	1/2	50	0	040	2.46
420-007	3/4	50	0	040	4.08
420-010	1	50	0	040	5.08
420-012	1-1/4	25	0	040	6.72
420-015	1-1/2	25	0	040	7.62
420-020	2	10	0	040	11.23
420-025	2-1/2	10	0	040	23.82
420-030	3	5	0	040	29.22
420-040	4	4	0	040	43.28
420-050F	5	1	3	047	618.29
420-060F	6	1	0	047	609.52
420-080F	8	1	0	047	785.12
420-100F	10	1	0	047	950.24
420-120F	12	1	0	047	1339.13
420-140F	14	1	0	047	2381.20
420-160F	16	1	0	047	3018.71
420-180F	18	1	0	047	3435.15
420-200F	20	1	0	047	5123.86
420-240F	24	1	0	047	7473.22

Reducing Cross Soc



420-101 [†]	3/4X1/2	50	0	040	9.48
420-130 [†]	1X1/2	25	0	040	11.13
420-131	1X3/4	20	0	040	11.13
420-166 [†]	1-1/4X1/2	4	0	040	13.63
420-167 [†]	1-1/4X3/4	25	0	040	13.63
420-168 [†]	1-1/4X1	4	32	040	13.63
420-209 [†]	1-1/2X1/2	20	0	040	14.75
420-210 [†]	1-1/2X3/4	4	0	040	14.75
420-211 [†]	1-1/2X1	4	0	040	14.75
420-212 [†]	1-1/2X1-1/4	4	0	040	14.75
420-247 [†]	2X1/2	4	0	040	17.33
420-248 [†]	2X3/4	10	0	040	17.33
420-249	2X1	25	0	040	17.33
420-250 [†]	2X1-1/4	10	0	040	17.33
420-251 [†]	2X1-1/2	10	0	040	17.33
420-287 [†]	2-1/2X1/2	4	0	040	33.63
420-288 [†]	2-1/2X3/4	4	0	040	33.63
420-289 [†]	2-1/2X1	10	0	040	33.63
420-290	2-1/2X1-1/4	5	0	040	33.63
420-291 [†]	2-1/2X1-1/2	10	0	040	33.63
420-292 [†]	2-1/2X2	10	0	040	33.63
420-334 [†]	3X3/4	5	0	040	43.71
420-335 [†]	3X1	5	0	040	43.71
420-336 [†]	3X1-1/4	4	0	040	43.71

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Cross (continued)

Soc

420-337 ¹	3X1-1/2	5	0	040	43.71
420-338 ¹	3X2	5	0	040	43.71
420-339 ¹	3X2-1/2	4	0	040	43.71
420-420 ¹	4X2	3	0	040	75.22
420-421 ¹	4X2-1/2	3	0	040	75.22
420-422 ¹	4X3	3	0	040	75.22
420-528F	6X2	1	2	047	402.74
420-529F	6X2 1/2	1	2	047	411.83
420-530F	6X3	1	2	047	418.88
420-532F	6X4	1	2	047	480.94
420-578F	8X2	1	2	047	527.62
420-579F	8X2 1/2	1	0	047	542.39
420-580F	8X3	1	0	047	549.62
420-582F	8X4	1	0	047	577.57
420-585F	8X6	1	0	047	657.53
420-621F	10X2	1	0	047	666.75
420-622F	10X2-1/2	1	0	047	682.88
420-623F	10X3	1	0	047	718.69
420-624F	10X4	1	0	047	744.78
420-626F	10X6	1	0	047	798.31
420-628F	10X8	1	0	047	848.22
420-661F	12X2	1	0	047	749.45
420-662F	12X2-1/2	1	0	047	776.75
420-663F	12X3	1	0	047	804.25
420-664F	12X4	1	0	047	842.49
420-666F	12X6	1	0	047	886.04
420-668F	12X8	1	0	047	955.88
420-670F	12X10	1	0	047	1089.28
420-691F	14X2	1	0	047	1035.99
420-693F	14X3	1	0	047	1110.64
420-694F	14X4	1	0	047	1134.75
420-696F	14X6	1	0	047	1331.76
420-698F	14X8	1	0	047	1482.95
420-700F	14X10	1	0	047	1685.44
420-702F	14X12	1	0	047	1914.46
420-751F	16X2	1	0	047	1265.98
420-753F	16X3	1	0	047	1361.63
420-754F	16X4	1	0	047	1407.23
420-756F	16X6	1	0	047	1522.20
420-758F	16X8	1	0	047	1783.02
420-760F	16X10	1	0	047	1921.55
420-762F	16X12	1	0	047	2168.38
420-764F	16X14	1	0	047	2399.26
420-781F	18X2	1	0	047	1423.39
420-783F	18X3	1	0	047	1509.00
420-784F	18X4	1	0	047	1524.42
420-786F	18X6	1	0	047	1628.94
420-788F	18X8	1	0	047	1890.39
420-790F	18X10	1	0	047	2403.94
420-792F	18X12	1	0	047	2581.58
420-794F	18X14	1	0	047	2986.72
420-796F	18X16	1	0	047	3076.73
420-811F	20X2	1	0	047	1505.92
420-813F	20X3	1	0	047	1607.46
420-814F	20X4	1	0	047	1701.97
420-816F	20X6	1	0	047	1821.69
420-818F	20X8	1	0	047	1994.57
420-820F	20X10	1	0	047	3397.94
420-822F	20X12	1	0	047	3597.97
420-824F	20X14	1	0	047	3814.86
420-826F	20X16	1	0	047	4450.96
420-828F	20X18	1	0	047	4964.02
420-901F	24X2	1	0	047	2509.01
420-903F	24X3	1	0	047	2583.73
420-904F	24X4	1	0	047	2671.00

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Cross (continued)

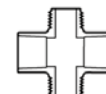
Soc

420-906F	24X6	1	0	047	2823.59
420-908F	24X8	1	0	047	3039.72
420-910F	24X10	1	0	047	4364.01
420-912F	24X12	1	0	047	4449.71
420-914F	24X14	1	0	047	4604.69
420-916F	24X16	1	0	047	5705.99
420-918F	24X18	1	0	047	6274.36
420-920F	24X20	1	0	047	7294.55

¹Outlet sized with Bushing

Cross

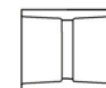
Soc x Mipt



421A-010	1	50	0	040	5.98
----------	---	----	---	-----	------

Coupling

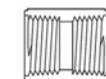
Soc



429-003	3/8	50	300	040	1.16
429-005	1/2	50	600	040	.42
429-005N	1/2	50	300	040	.42
429-007	3/4	50	400	040	.58
429-007N	3/4	50	400	040	.58
429-010	1	50	0	040	1.02
429-010N	1	50	0	040	1.02
429-012	1-1/4	25	150	040	1.41
429-015	1-1/2	25	0	040	1.51
429-020	2	25	0	040	2.29
429-025	2-1/2	12	0	040	5.08
429-030	3	10	0	040	7.96
429-040	4	6	0	040	11.52
429-045F	4-1/2	1	10	047	51.25
429-050	5	5	0	040	21.08
429-060	6	5	0	040	36.41
429-080	8	8	0	040	67.99
429-100	10	1	0	041	198.15
429-100F	10	1	0	047	123.99
429-120	12	1	0	041	394.79
429-120F	12	1	0	047	131.99
429-140	14	1	0	041	577.23
429-140F	14	1	0	047	214.33
429-160F	16	1	0	047	239.05
429-180F	18	1	0	047	407.66
429-200F	20	1	0	047	711.17
429-240F	24	1	0	047	987.67

Coupling

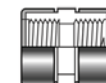
Fipt



430-005	1/2	50	600	040	.81
430-005G	1/2	50	300	043	.92
430-007	3/4	50	400	040	1.51
430-010	1	50	0	040	1.98
430-012	1-1/4	10	120	040	6.66

Special Reinforced Coupling

SR FiPt - Stainless Steel Collar



430-005SR	1/2	25	300	046	3.69
430-007SR	3/4	25	300	046	5.25
430-010SR	1	25	200	046	5.61
430-012SR	1-1/4	10	120	046	6.99
430-015SR	1-1/2	10	60	046	15.47
430-020SR	2	10	0	046	16.22



Schedule 40 Fittings & Accessories

PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Coupling Soc



429-101	3/4X1/2	50	200	040	1.06
429-130 ¹	1X1/2	25	200	040	2.53
429-131	1X3/4	50	0	040	1.81
429-166 ¹	1-1/4X1/2	25	0	040	4.78
429-167	1-1/4X3/4	25	0	040	4.78
429-168	1-1/4X1	25	0	040	3.04
429-209 ¹	1-1/2X1/2	8	48	040	3.98
429-210	1-1/2X3/4	25	0	040	3.22
429-211 ¹	1-1/2X1	25	0	040	4.98
429-212	1-1/2X1-1/4	25	0	040	3.22
429-247 ¹	2X1/2	10	0	040	7.02
429-248 ¹	2X3/4	10	0	040	7.02
429-249 ¹	2X1	25	0	040	7.39
429-250 ¹	2X1-1/4	10	80	040	7.02
429-251	2X1-1/2	10	40	040	5.14
429-291 ¹	2-1/2X1-1/2	10	0	040	13.73
429-292	2-1/2X2	10	0	040	10.57
429-335 ¹	3X1	10	0	040	31.12
429-337 ¹	3X1-1/2	8	0	040	31.12
429-338	3X2	8	0	040	27.62
429-339 ¹	3X2-1/2	8	0	040	23.44
429-340F	3X2-1/2	1	10	047	29.54
429-416 ¹	4X3/4	10	0	040	36.13
429-417 ¹	4X1	8	0	040	57.37
429-420	4X2	4	0	040	33.45
429-421 ¹	4X2-1/2	6	0	040	42.14
429-422	4X3	4	0	040	34.51
429-460F	4-1/2X4	1	4	047	55.02
429-486F	5X2	1	24	047	121.98
429-487F	5X2-1/2	1	10	047	105.52
429-488F	5X3	1	6	047	93.89
429-490F	5X4	1	6	047	60.63
429-491F	5X4-1/2	1	15	047	58.18
429-528F	6X2	1	4	047	89.85
429-530F	6X3	1	15	047	78.78
429-532	6X4	4	0	040	45.54
429-533F	6X5	1	15	047	69.46
429-534F	6X4-1/2	1	15	047	83.94
429-578F	8X2	1	4	047	200.02
429-580F	8X3	1	4	047	178.97
429-582	8X4	1	2	040	105.60
429-583F	8X5	1	4	047	135.08
429-585	8X6	2	0	040	116.62
429-621F	10X2	1	2	047	285.19
429-623F	10X3	1	2	047	253.38
429-624	10X4	1	2	041	559.34
429-624F	10X4	1	2	047	211.83
429-626	10X6	1	0	041	559.34
429-626F	10X6	1	4	047	197.41
429-628	10X8	1	0	041	559.34
429-628F	10X8	1	2	047	138.17
429-664F	12X4	1	2	047	376.89
429-666	12X6	1	0	041	636.86
429-666F	12X6	1	2	047	347.27
429-668	12X8	1	0	041	636.86
429-668F	12X8	1	0	047	336.73
429-670F	12X10	1	0	047	201.13
429-693F	14X3	1	0	047	716.46
429-694F	14X4	1	0	047	627.97
429-696F	14X6	1	0	047	570.42
429-698F	14X8	1	0	047	565.27
429-700F	14X10	1	0	047	447.31
429-702F	14X12	1	0	047	336.89

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

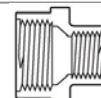
Reducer Coupling (continued)

Soc

429-751F	16X2	1	0	047	792.14
429-754F	16X4	1	0	047	734.99
429-756F	16X6	1	0	047	727.75
429-758F	16X8	1	0	047	558.99
429-760F	16X10	1	0	047	518.37
429-762F	16X12	1	0	047	424.02
429-764F	16X14	1	0	047	404.32
429-786F	18X6	1	0	047	1067.38
429-788F	18X8	1	0	047	1000.17
429-790F	18X10	1	0	047	894.44
429-792F	18X12	1	0	047	711.55
429-794F	18X14	1	0	047	660.40
429-796F	18X16	1	0	047	597.87
429-814F	20X4	1	0	047	1718.56
429-816F	20X6	1	0	047	1430.35
429-818F	20X8	1	0	047	1404.92
429-820F	20X10	1	0	047	1350.91
429-822F	20X12	1	0	047	1299.23
429-824F	20X14	1	0	047	1217.75
429-826F	20X16	1	0	047	1116.02
429-828F	20X18	1	0	047	1014.77
429-906F	24X6	1	0	047	2546.73
429-908F	24X8	1	0	047	2343.18
429-910F	24X10	1	0	047	2137.31
429-912F	24X12	1	0	047	2103.63
429-914F	24X14	1	0	047	2022.61
429-916F	24X16	1	0	047	1945.19
429-918F	24X18	1	0	047	1722.47
429-920F	24X20	1	0	047	1549.42

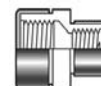
¹Outlet sized with Bushing

Reducer Coupling Fipt



430-101	3/4X1/2	50	200	040	1.95
---------	---------	----	-----	-----	------

Special Reinforced Reducer Coupling SR Fipt - Stainless Steel Collar



430-101SR	3/4X1/2	50	200	046	7.96
-----------	---------	----	-----	-----	------

Eccentric Reducer Coupling Soc



429-131FE	1X3/4	1	15	047	29.54
429-168FE	1-1/4X1	1	12	047	26.81
429-212FE	1-1/2X1-1/4	1	25	047	27.78
429-249FE	2X1	1	25	047	43.57
429-250FE	2X1-1/4	1	25	047	38.18
429-251FE	2X1-1/2	1	20	047	36.89
429-290FE ²	2-1/2X1-1/4	1	25	047	56.21
429-291FE ²	2-1/2X1-1/2	1	10	047	56.14
429-292FE	2-1/2X2	1	10	047	43.62
429-335FE ³	3X1	1	10	047	60.78
429-336FE ²	3X1-1/4	1	10	047	59.40
429-337FE ²	3X1-1/2	1	10	047	54.85
429-338E	3X2	15	0	040	35.05
429-338FE	3X2	1	20	047	33.63
429-339FE	3X2-1/2	1	24	047	31.96
429-417FE ³	4X1	1	10	047	92.09
429-418FE ³	4X1-1/4	1	12	047	88.96
429-419FE ³	4X1-1/2	1	10	047	84.92
429-420E	4X2	15	0	040	50.83
429-420FE ²	4X2	1	6	047	45.67
429-421FE ²	4X2-1/2	1	5	047	44.93

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Eccentric Reducer Coupling (continued)

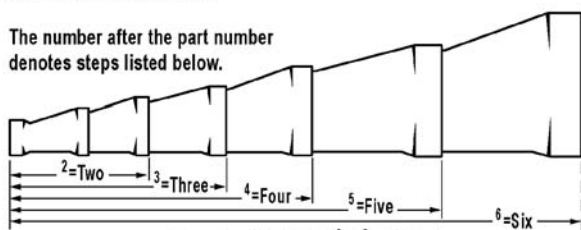
Soc

429-422FE	4X3	1	10	047	42.21
429-490FE	5X4	1	6	047	68.26
429-528FE ²	6X2	1	4	047	148.53
429-529FE ³	6X2-1/2	1	4	047	135.58
429-530FE ²	6X3	1	6	047	94.96
429-532E	6X4	10	0	040	60.53
429-532FE	6X4	1	6	047	47.48
429-533FE	6X5	1	10	047	47.06
429-578FE ⁴	8X2	1	3	047	207.95
429-580FE ³	8X3	1	2	047	195.86
429-582FE ²	8X4	1	2	047	97.80
429-583FE ²	8X5	1	2	047	92.65
429-585FE	8X6	1	4	047	79.06
429-624FE ²	10X4	1	2	047	223.63
429-626FE	10X6	1	2	047	205.62
429-628FE	10X8	1	2	047	193.86
429-664FE ³	12X4	1	0	047	417.24
429-666FE ²	12X6	1	0	047	342.84
429-668FE ²	12X8	1	0	047	227.35
429-670FE	12X10	1	0	047	197.12
429-696FE ²	14X6	1	0	047	696.46
429-698FE ²	14X8	1	0	047	570.52
429-700FE	14X10	1	0	047	517.91
429-702FE	14X12	1	0	047	285.47
429-756FE ³	16X6	1	0	047	679.37
429-758FE ³	16X8	1	0	047	566.96
429-760FE ²	16X10	1	0	047	510.12
429-762FE ¹	16X12	1	0	047	478.42
429-764FE	16X14	1	0	047	448.63
429-786FE ⁴	18X6	1	0	047	1074.09
429-788FE ⁴	18X8	1	0	047	1058.79
429-790FE ³	18X10	1	0	047	946.11
429-792FE ²	18X12	1	0	047	853.85
429-794FE ²	18X14	1	0	047	754.93
429-796FE	18X16	1	0	047	608.98

Eccentric Reducer Coupling Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.

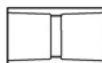


Example: 429-582 FE² (2 = 2 Step)

Deep Socket Coupling

Soc

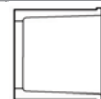
479-005N	1/2	50	400	040	.82
479-007	3/4	50	0	040	1.99
479-010	1	50	0	040	2.84
479-015	1-1/2	50	0	040	3.93
479-020	2	60	0	040	6.51
479-025	2-1/2	25	0	040	8.37
479-030	3	15	0	040	12.61
479-040	4	8	0	040	25.33
479-050F	5	1	4	047	85.56



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

IPS to PIP Adapter

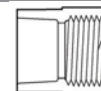
Spig x Soc



431-060	6	5	0	040	27.67
431-080	8	10	0	040	34.09
431-100F	10	1	10	047	46.57
431-120F	12	1	8	047	71.11

Female Adapter

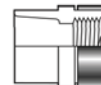
Soc x Fipt



435-003	3/8	50	600	040	2.36
435-005	1/2	50	600	040	.72
D435-005	1/2	50	400	040	1.05
435-007	3/4	50	400	040	.92
D435-007	3/4	50	0	040	1.41
435-010	1	50	0	040	1.06
435-012	1-1/4	25	0	040	1.64
435-015	1-1/2	25	0	040	1.88
435-020	2	10	80	040	2.53
435-025	2-1/2	10	0	040	6.39
435-030	3	5	0	040	8.60
435-040	4	6	0	040	14.25
435-050	5	5	0	040	36.91
435-060	6	5	0	040	52.44
435-080	8	2	0	040	98.88
435-100F	10	1	2	047	185.75
435-120F	12	1	0	047	276.77

Special Reinforced Female Adapter

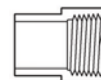
Soc x SR Fipt - Stainless Steel Collar



435-002SR	1/4	25	450	046	5.59
435-003SR	3/8	25	300	046	5.59
435-005SR	1/2	25	300	046	3.11
435-007SR	3/4	25	300	046	4.52
435-010SR	1	25	200	046	6.72
435-012SR	1-1/4	10	60	046	10.86
435-015SR	1-1/2	10	80	046	13.37
435-020SR	2	10	0	046	23.32
435-025SR	2-1/2	5	0	046	36.79
435-030SR	3	10	0	046	41.45
435-040SR	4	5	0	046	71.24

Spigot Female Adapter

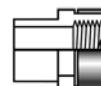
Spig x Fipt



478-005	1/2	50	600	040	.81
478-007	3/4	25	300	040	.95
478-010	1	50	0	040	1.52
478-012	1-1/4	25	0	040	2.12
478-015	1-1/2	20	0	040	2.62
478-020	2	20	0	040	3.85
478-030	3	10	0	040	13.05
478-040	4	5	0	040	21.67

Special Reinforced Spigot Female Adapter

Spig x SR Fipt - Stainless Steel Collar



478-005SR	1/2	50	600	046	4.08
478-007SR	3/4	25	300	046	4.81
478-010SR	1	50	0	046	7.41
478-012SR	1-1/4	25	0	046	11.80
478-015SR	1-1/2	25	0	046	14.15
478-020SR	2	15	0	046	23.55



Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Spigot Female Adapter (continued)

Spig x SR Fipt - Stainless Steel Collar

478-030SR	3	5	0	046	43.28
478-040SR	4	5	0	046	66.85

Special Reinforced Reducing Spigot Female Adapter

Spig x SR Fipt - Stainless Steel Collar

478-072SR	1/2X1/4	25	450	046	11.35
478-098SR	3/4X1/4	50	300	046	16.53
478-128SR	1X1/4	50	400	046	17.04

Spears® SR Series reinforced spigot adapters can be user-installed in a variety of socket type tees, elbows and reducer bushings for superior thread reinforcement demanding applications.

Reducing Female Adapter Soc x Fipt

435-072	1/2X1/4	50	300	040	1.29
435-073	1/2X3/8	50	300	040	1.29
435-074	1/2X3/4	50	400	040	1.29
435-101	3/4X1/2	50	400	040	1.29
435-102	3/4X1	50	0	040	1.72
435-130	1X1/2	50	0	040	1.72
435-131	1X3/4	50	0	040	1.72
435-133	1X1-1/2	25	0	040	3.46
435-168	1-1/4X1	25	0	040	4.44
435-247	2X1/2	25	0	040	5.97
435-460F ¹	4-1/2X4	1	8	047	58.26
435-532 ¹	6X4	4	0	040	76.39
435-578F ¹	8X2	1	8	047	153.18
435-582F ¹	8X4	1	8	047	176.63
435-628F	10X8	1	2	047	193.32

¹Outlet sizes with Threaded Adapter

Special Reinforced Reducing Female Adapter Soc x SR Fipt - Stainless Steel Collar

435-072SR	1/2X1/4	50	600	046	4.06
435-074SR	1/2X3/4	50	400	046	4.52
435-101SR	3/4X1/2	50	400	046	4.52
435-102SR	3/4X1	50	0	046	6.72
435-130SR	1X1/2	50	0	046	6.72
435-131SR	1X3/4	25	200	046	6.72

Male Adapter Mipt x Soc

436-003	3/8	50	300	040	2.20
436-005	1/2	50	300	040	.58
436-007	3/4	50	400	040	.64
436-010	1	50	300	040	1.16
436-012	1-1/4	25	0	040	1.41
436-015	1-1/2	25	0	040	1.88
436-020	2	25	0	040	2.47
436-025	2-1/2	10	0	040	7.29
436-030	3	10	0	040	10.67
436-040	4	5	0	040	13.61
436-050	5	5	0	040	22.42
436-060	6	7	0	040	35.48
436-080	8	3	0	040	161.27
436-100F	10	1	2	047	208.56
436-120F	12	1	0	047	309.94

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Male Adapter Spig x Mipt

461-005	1/2	50	300	040	1.02
461-007	3/4	50	400	040	1.16
461-010	1	50	0	040	2.00
461-131	1X3/4	50	200	040	5.91
461-012	1-1/4	25	100	040	2.47
461-015	1-1/2	25	0	040	3.31
461-020	2	25	0	040	4.07

Reducing Male Adapter Mipt x Soc

436-053	3/8X1/2	50	300	040	1.16
436-073	1/2X3/8	50	300	040	1.16
436-074	1/2X3/4	50	200	040	1.16
436-075	1/2X1	50	200	040	1.56
436-101	3/4X1/2	50	300	040	1.06
436-102	3/4X1	50	0	040	1.64
436-131	1X3/4	50	400	040	3.54
436-132	1X1-1/4	50	0	040	3.85
436-133	1X1-1/2	50	0	040	4.34
436-168	1-1/4X1	25	200	040	4.34
436-169	1-1/4X1-1/2	25	0	040	4.34
436-212	1-1/2X1-1/4	25	0	040	5.24
436-213	1-1/2X2	25	0	040	5.24
436-251	2X1-1/2	10	80	040	5.98
436-252	2X2-1/2	10	0	040	9.31
436-253	2X3	10	0	040	10.46
436-294	2-1/2X3	10	0	040	11.26
436-296	2-1/2X4	10	0	040	17.29
436-342	3X4	5	0	040	18.02
436-492F	5X6	1	15	047	98.40
436-535F	6X8	1	2	047	130.80
436-537F	6X10	1	2	047	254.94

IPT Adapter Mipt x Fipt

446-003	3/8	50	300	040	1.98
446-012	1-1/4	25	100	040	4.51
446-053	3/8X1/2	50	300	040	1.98
446-074	1/2X3/4	50	300	040	2.47

Insert Adapter (White PVC) Insert x Soc

474-005	1/2	50	600	040	2.06
474-007	3/4	50	400	040	2.47
474-010	1	50	0	040	2.62
474-012	1-1/4	25	0	040	4.16
474-015	1-1/2	25	0	040	4.61
474-020	2	25	0	040	8.54
474-030	3	15	0	040	25.45
474-040	4	15	0	040	29.09
474-060F	6	1	4	047	150.35
474-080F	8	1	4	047	238.85

ASTM D 2609 Plastic Insert Fittings for Polyethylene (PE) pipe

Insert Adapter (White PVC) Insert x I.P.S. Spigot

460-005	1/2	50	300	040	2.26
460-007	3/4	50	200	040	2.97
460-010	1	50	0	040	3.11

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Insert Adapter (White PVC) (continued)

Insert x I.P.S. Spigot

460-012	1-1/4	20	160	040	3.20
460-015	1-1/2	25	0	040	3.44
460-020	2	10	0	040	5.72
460-030	3	25	0	040	19.31
460-040	4	10	0	040	22.24
1432-060	6	8	0	140	95.61
1432-080*	8	4	0	140	189.82

ASTM D 2609 - Plastic Insert Fitting for Polyethylene (PE) pipe

*Fabricated

Insert Adapter (White PVC)

Insert x I.P.S. Spigot x I.P.S. Socket

460-007N	3/4X3/4X1/2	50	200	040	2.97
460-012N	1-1/4X1-1/4X1	20	160	040	3.20
460-131N	3/4X1X3/4	20	160	040	3.46
460-132N	1X1-1/4X1	20	160	040	3.74

ASTM D 2609 - Plastic Insert Fitting for Polyethylene (PE) pipe

N=Nesting

Riser Extension

Fipt x Mipt

(See also HDPE Cut-Off Riser Extensions in this catalog)

434-005	1/2	50	300	040	1.18
434-007	3/4	50	300	040	1.98
434-010	1	50	0	040	2.47

HDPE Cut-Off Riser Extension

Fipt x Mipt

(1/2" = 3-Section Cut-Off; 3/4" = 4-Section Cut-Off)

M434-005-3	1/2X3	50	600	120	1.42
M434-007-4	3/4X4	50	0	120	1.88

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

Reducer (T.T.) Bushing

Mipt x Fipt

439-052	3/8X1/4	50	450	040	3.04
439-071	1/2X1/8	50	300	040	3.04
439-072	1/2X1/4	50	300	040	3.04
439-073	1/2X3/8	50	300	040	3.04
439-098	3/4X1/4	50	300	040	1.88
439-099	3/4X3/8	50	300	040	1.88
439-101	3/4X1/2	50	300	040	1.88
439-128	1X1/4	25	150	040	2.64
439-130	1X1/2	50	300	040	2.64
439-131	1X3/4	50	800	040	2.64
439-166	1-1/4X1/2	25	150	040	3.93
439-167	1-1/4X3/4	25	150	040	3.93
439-168	1-1/4X1	25	150	040	3.93
439-209	1-1/2X1/2	25	300	040	4.75
439-210	1-1/2X3/4	25	300	040	4.75
439-211	1-1/2X1	25	300	040	4.75
439-212	1-1/2X1-1/4	25	300	040	4.75
439-247	2X1/2	10	60	040	5.08
439-248	2X3/4	10	60	040	5.08
439-249	2X1	10	60	040	5.08
439-250	2X1-1/4	10	60	040	5.08
439-251	2X1-1/2	10	60	040	5.08
439-292	2-1/2X2	10	80	040	17.77
439-337	3X1-1/2	10	0	040	21.02
439-338	3X2	10	0	040	21.02

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer (T.T.) Bushing (continued)

Mipt x Fipt

439-339	3X2-1/2	10	0	040	21.02
439-420	4X2	6	0	040	62.83
439-422	4X3	6	0	040	48.59

Reducer Bushing Flush Style

Spig x Soc



437-072	1/2X1/4	50	300	040	1.22
437-073	1/2X3/8	50	300	040	1.22
437-101	3/4X1/2	50	350	040	.67
437-130	1X1/2	50	300	040	1.22
437-131	1X3/4	50	300	040	1.22
437-166	1-1/4X1/2	25	300	040	1.64
437-167	1-1/4X3/4	25	300	040	1.64
437-168	1-1/4X1	25	300	040	1.64
437-209	1-1/2X1/2	25	200	040	1.74
437-210	1-1/2X3/4	25	200	040	1.74
437-211	1-1/2X1	25	200	040	1.74
437-212	1-1/2X1-1/4	25	200	040	1.74
437-247	2X1/2	10	120	040	2.87
437-248	2X3/4	10	60	040	2.87
437-249	2X1	10	60	040	2.87
437-250	2X1-1/4	10	120	040	2.87
437-251	2X1-1/2	25	0	040	2.87
437-287	2-1/2X1/2	10	80	040	4.62
437-288	2-1/2X3/4	10	0	040	4.62
437-289	2-1/2X1	10	40	040	4.62
437-290	2-1/2X1-1/4	10	0	040	4.62
437-291	2-1/2X1-1/2	10	80	040	4.62
437-292	2-1/2X2	10	80	040	4.62
437-333 ¹	3X1/2	10	0	040	9.09
437-334	3X3/4	10	0	040	6.80
437-335	3X1	10	0	040	6.80
437-336	3X1-1/4	10	0	040	6.80
437-337	3X1-1/2	10	0	040	6.80
437-338	3X2	10	0	040	6.80
437-339	3X2-1/2	15	0	040	6.80
437-420	4X2	6	0	040	15.23
437-421	4X2-1/2	6	0	040	15.23
437-422	4X3	6	0	040	15.23
437-486	5X2	5	0	040	21.41
437-488	5X3	5	0	040	21.41
437-490	5X4	4	0	040	21.41
437-528	6X2	5	0	040	37.72
437-530	6X3	5	0	040	37.72
437-532	6X4	5	0	040	37.72
437-534	6X5	5	0	040	37.72
437-578 ¹	8X2	4	0	040	148.75
437-580 ¹	8X3	4	0	040	148.75
437-582	8X4	4	0	040	131.47
437-583 ¹	8X5	4	0	040	171.79
437-585	8X6	4	0	040	131.47
437-623	10X3	2	0	041	394.56
437-624 ¹	10X4	2	0	041	394.56
437-626	10X6	1	2	041	357.89
437-628	10X8	4	0	041	357.89
437-664 ¹	12X4	2	0	041	532.94
437-666 ¹	12X6	2	0	041	532.94
437-666F	12X6	1	2	047	393.51
437-668	12X8	2	0	041	398.02
437-670	12X10	2	0	041	398.02
437-696F	14X6	1	3	047	965.78
437-698F	14X8	1	3	047	691.95
437-700F	14X10	1	3	047	461.60
437-702F	14X12	1	3	047	161.11



Schedule 40 Fittings & Accessories

PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style (continued)

Spig x Soc

437-756F	16X6	1	0	047	1150.64
437-758F	16X8	1	2	047	907.41
437-760F	16X10	1	0	047	651.96
437-762F	16X12	1	2	047	376.62
437-764F	16X14	1	2	047	394.17
437-786F	18X6	1	0	047	1931.96
437-788F	18X8	1	0	047	1774.75
437-790F	18X10	1	0	047	1451.53
437-792F	18X12	1	0	047	934.35
437-794F	18X14	1	0	047	910.41
437-796F	18X16	1	0	047	429.23
437-816F	20X6	1	0	047	2674.61
437-818F	20X8	1	0	047	2513.74
437-820F	20X10	1	0	047	2329.65
437-822F	20X12	1	0	047	2034.75
437-824F	20X14	1	0	047	1667.55
437-826F	20X16	1	0	047	1332.84
437-828F	20X18	1	0	047	664.62
437-906F	24X6	1	0	047	4259.46
437-908F	24X8	1	0	047	4082.60
437-910F	24X10	1	0	047	3594.11
437-912F	24X12	1	0	047	3284.87
437-914F	24X14	1	0	047	3029.82
437-916F	24X16	1	0	047	2536.46
437-918F	24X18	1	0	047	2522.54
437-920F	24X20	1	0	047	2053.58

¹ Sized with Bushing

Reducer Bushing Flush Style

Spig x Fipt



438-071	1/2X1/8	50	350	040	1.41
438-072	1/2X1/4	50	350	040	1.41
438-073	1/2X3/8	50	350	040	1.41
438-098	3/4X1/4	50	300	040	1.41
438-101	3/4X1/2	50	300	040	1.06
438-127	1X1/8	25	150	040	1.72
438-128	1X1/4	50	200	040	1.72
438-129	1X3/8	50	200	040	1.72
438-130	1X1/2	50	300	040	1.72
438-131	1X3/4	50	300	040	1.72
438-166	1-1/4X1/2	25	150	040	2.64
438-167	1-1/4X3/4	25	150	040	2.64
438-168	1-1/4X1	25	100	040	2.64
438-206	1-1/2X1/8	25	100	040	3.04
438-207	1-1/2X1/4	25	200	040	3.04
438-209	1-1/2X1/2	25	100	040	3.04
438-210	1-1/2X3/4	25	100	040	3.04
438-211	1-1/2X1	25	100	040	3.04
438-212	1-1/2X1-1/4	25	100	040	3.04
438-245	2X1/4	10	60	040	4.08
438-247	2X1/2	10	120	040	4.08
438-248	2X3/4	10	60	040	4.08
438-249	2X1	10	120	040	4.08
438-250	2X1-1/4	10	120	040	4.08
438-251	2X1-1/2	10	120	040	4.08
438-287	2-1/2X1/2	10	0	040	5.92
438-288	2-1/2X3/4	10	40	040	5.92
438-289	2-1/2X1	10	40	040	5.92
438-290	2-1/2X1-1/4	10	0	040	5.92
438-291	2-1/2X1-1/2	10	40	040	5.92
438-292	2-1/2X2	10	40	040	5.92
438-334	3X3/4	10	0	040	6.80
438-335	3X1	10	0	040	6.80
438-336	3X1-1/4	10	0	040	6.80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style (continued)

Spig x Fipt

438-337	3X1-1/2	10	0	040	6.80
438-338	3X2	10	0	040	6.80
438-339	3X2-1/2	10	0	040	6.80
438-420	4X2	6	0	040	15.20
438-421	4X2-1/2	6	0	040	15.20
438-422	4X3	6	0	040	15.20
438-488	5X3	5	0	040	29.64
438-490	5X4	6	0	040	29.64
438-528	6X2	5	0	040	55.63
438-530	6X3	5	0	040	55.63
438-532	6X4	5	0	040	55.63
438-534	6X5	5	0	040	55.63

Special Reinforced Reducer Bushing Flush Style

Spig x SR Fipt - Stainless Steel Collar



438-128SR	1X1/4	25	150	046	3.31
438-166SR	1-1/4X1/2	25	100	046	6.04
438-207SR	1-1/2X1/4	25	100	046	8.43
438-209SR	1-1/2X1/2	25	100	046	8.43
438-210SR	1-1/2X3/4	25	100	046	8.43
438-247SR	2X1/2	10	80	046	10.32
438-248SR	2X3/4	10	80	046	10.32
438-249SR	2X1	10	80	046	10.32
438-334SR	3X3/4	10	0	046	40.38
438-335SR	3X1	10	0	046	40.38
438-336SR	3X-1/4	10	0	046	40.38
438-337SR	3X1-1/2	10	0	046	40.38
438-420SR	4X2	6	0	046	62.07
438-421SR	4X2-1/2	6	0	046	69.86
438-528SR	6X2	5	0	046	71.48
438-530SR	6X3	5	0	046	64.35
438-532SR	6X4	5	0	046	71.48

Special Reinforced Reducer Bushing Flush Style

Mipt X SR Fipt - Stainless Steel Collar



439-209SR	1-1/2X1/2	25	300	046	8.74
439-248SR	2X3/4	10	60	046	7.91
439-249SR	2X1	10	120	046	12.83

Cap Soc



447-003	3/8	50	1000	040	1.64
447-005	1/2	50	600	040	.58
447-007	3/4	50	300	040	.67
447-010	1	50	200	040	1.06
447-012	1-1/4	25	100	040	1.51
447-015	1-1/2	25	0	040	1.64
447-020	2	25	0	040	1.98
447-025	2-1/2	10	0	040	6.31
447-030	3	10	0	040	6.89
447-040	4	6	0	040	15.67
447-045F	4-1/2	10	0	047	50.37
447-050	5	5	0	040	26.32
447-060	6	4	0	040	37.57
447-080	8	3	0	040	94.38
447-100F	10	1	5	047	210.39
447-120F	12	1	5	047	305.66
447-140F	14	1	2	047	383.61
447-160F	16	1	2	047	457.86
447-180F	18	1	2	047	806.80
447-200F	20	1	0	047	1225.11
447-240F	24	1	0	047	1949.91

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cap Fipt



448-003	3/8	50	1000	040	2.21
448-005	1/2	50	600	040	1.22
448-007	3/4	50	300	040	1.41
448-010	1	50	200	040	2.13
448-012	1-1/4	25	100	040	2.53
448-015	1-1/2	25	100	040	2.64
448-020	2	10	120	040	4.67
448-025	2-1/2	10	0	040	6.89
448-030	3	10	0	040	9.01
448-040	4	6	0	040	15.81
448-050	5	5	0	040	30.63
448-060	6	8	0	040	37.37
448-080F	8	1	2	047	182.38
448-100F	10	1	2	047	370.62
448-120F	12	1	0	047	740.53

Special Reinforced Cap SR Fipt - Stainless Steel Collar



448-012SR	1-1/4	25	100	046	6.74
-----------	-------	----	-----	-----	------

Plug Spig



449-003	3/8	50	700	040	1.74
449-005	1/2	50	1000	040	1.41
449-007	3/4	50	300	040	1.64
449-010	1	50	200	040	1.98
449-012	1-1/4	25	150	040	2.64
449-015	1-1/2	25	100	040	3.36
449-020	2	10	120	040	4.16
449-025	2-1/2	10	0	040	7.13
449-030	3	10	0	040	9.41
449-040	4	6	0	040	21.31
449-060	6	6	0	040	28.85
449-060F ⁴	6	1	6	047	73.00
449-080F ⁴	8	1	6	047	112.39
449-100F ⁴	10	1	0	047	258.01
449-120F ⁴	12	1	0	047	421.87
449-140F ⁴	14	1	2	047	462.49
449-160F ⁴	16	1	0	047	511.44
449-180F ⁴	18	1	0	047	912.68
449-200F ⁴	20	1	0	047	1669.72
449-240F ⁴	24	1	0	047	2222.62

⁴ Plug fabricated using Cap and pipe spigot.

Plug Mipt



450-003	3/8	50	700	040	1.89
450-005	1/2	50	500	040	1.74
450-007	3/4	50	300	040	1.87
450-010	1	50	400	040	3.04
450-012	1-1/4	25	300	040	3.20
450-015	1-1/2	25	150	040	3.44
450-020	2	10	120	040	4.44
450-025	2-1/2	10	80	040	6.17
450-030	3	10	0	040	9.34
450-040	4	6	0	040	21.07
450-060	6	6	0	040	61.78
450-080F ⁴	8	1	4	047	234.89
450-100F ⁴	10	1	3	047	376.41

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Plug (continued)

Mipt

450-120F ⁴	12	1	0	047	455.63
-----------------------	----	---	---	-----	--------

⁴ Plug fabricated using Cap and threaded pipe.

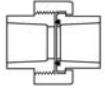
Counter Sunk Plug Spig



449-007CS	3/4	50	300	040	1.64
449-010CS	1	50	300	040	1.98

Union

Soc with Buna-N O-ring Seal



150 psi @ 73°F (23°C)

457-005	1/2	20	120	040	6.31
457-007	3/4	15	90	040	7.17
457-010	1	10	60	040	7.39
457-012	1-1/4	5	30	040	23.81
457-015	1-1/2	5	20	040	24.79
457-020	2	5	0	040	33.45
457-025	2-1/2	5	0	040	46.82
457-030	3	5	0	040	74.77
457-040	4	4	0	040	103.53
457-060	6	1	0	040	230.05

Union

Soc with EPDM O-ring Seal

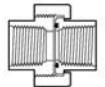


150 psi @ 73°F (23°C)

497-005	1/2	20	120	040	6.94
497-007	3/4	15	90	040	7.94
497-010	1	10	60	040	8.11
497-012	1-1/4	5	30	040	26.18
497-015	1-1/2	5	20	040	27.29
497-020	2	5	0	040	36.80
497-025	2-1/2	5	0	040	51.52
497-030	3	5	0	040	82.17
497-040	4	4	0	040	110.54
497-060	6	1	0	040	245.64

Union

Fipt with Buna O-ring Seal

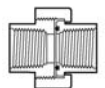


150 psi 73°F (23°C)

458-005	1/2	20	120	040	7.06
458-007	3/4	15	90	040	11.80
458-010	1	10	60	040	16.12
458-012	1-1/4	5	30	040	27.67
458-015	1-1/2	5	30	040	28.28
458-020	2	5	20	040	34.72
458-025	2-1/2	5	0	040	49.45
458-030	3	5	0	040	79.37
458-040	4	4	0	040	105.33
458-060	6	1	0	040	234.09

Union

Fipt with EPDM O-ring Seal



150 psi @ 73°F (23°C)

498-005	1/2	10	60	040	7.78
498-007	3/4	15	90	040	13.00
498-010	1	10	60	040	17.71
498-012	1-1/4	5	20	040	30.40
498-015	1-1/2	5	30	040	31.13



Schedule 40 Fittings & Accessories

PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Union (continued)

Fipt with EPDM O-ring Seal

498-020	2	5	0	040	38.23
498-025	2-1/2	5	0	040	53.53
498-030	3	5	0	040	86.27
498-040	4	4	0	040	116.26
498-060	6	1	0	040	258.37

Special Reinforced Union

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar



235 psi @ 73°F (23°C)

459-002SR	1/4	25	150	046	15.32
459-003SR	3/8	25	100	046	15.32
459-005SR	1/2	10	60	046	8.32
459-007SR	3/4	10	40	046	11.45
459-010SR	1	10	40	046	15.24
459-012SR	1-1/4	5	20	046	29.09
459-015SR	1-1/2	5	0	046	36.01
459-020SR	2	5	0	046	55.46
459-030SR	3	5	0	046	130.95
459-040SR	4	4	0	046	150.35
459-060SR	6	1	0	046	334.11

Special Reinforced Union

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi @ 73°F (23°C)

499-002SR	1/4	25	150	046	16.82
499-003SR	3/8	25	100	046	16.82
499-005SR	1/2	10	60	046	9.14
499-007SR	3/4	10	40	046	12.59
499-010SR	1	10	40	046	16.73
499-012SR	1-1/4	5	20	046	31.97
499-015SR	1-1/2	5	0	046	39.58
499-020SR	2	5	0	046	60.95
499-030SR	3	5	0	046	143.91
499-040SR	4	4	0	046	165.21
499-060SR	6	1	0	046	367.16

Transition Union

Soc x Fipt with Brass Thread Insert & Buna-N O-ring Seal



235 psi @ 73°F (23°C)

459-010BR	1	10	0	046	64.74
459-012BR	1-1/4	5	20	046	108.76
459-015BR	1-1/2	5	0	046	143.89
459-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Union

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi @ 73°F (23°C)

499-010BR	1	10	0	046	64.74
499-012BR	1-1/4	5	20	046	108.76
499-015BR	1-1/2	5	0	046	143.89
499-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle

IPS O.D. x Soc



NSF-61

463-288	2-1/2X3/4	10	0	040	27.57
463-333 ¹	3X1/2	10	0	040	30.21
463-335 ¹	3X1	10	0	040	30.21
463-336 ¹	3X1-1/4	10	0	040	30.21
463-337	3X1-1/2	10	0	040	27.57
463-338 ²	3X2	10	0	040	30.21
463-415 ¹	4X1/2	10	0	040	40.32
463-416 ¹	4X3/4	10	0	040	49.59
463-417 ¹	4X1	10	0	040	40.32
463-418 ¹	4X1-1/4	10	0	040	40.32
463-419	4X1-1/2	10	0	040	36.83
463-420 ²	4X2	10	0	040	40.32
463-485 ¹	5X1-1/2	6	0	040	50.35
463-486	5X2	6	0	040	45.97
463-523 ¹	6X1/2	5	0	040	60.48
463-525 ¹	6X1	10	0	040	60.48
463-526 ¹	6X1-1/4	5	0	040	60.48
463-527	6X1-1/2	5	0	040	55.27
463-528 ²	6X2	5	0	040	60.48
463-530 ¹	6X3	5	0	040	86.33
463-532	6X4	5	0	040	69.54
463-573 ¹	8X1/2	5	0	040	90.19
463-575 ¹	8X1	5	0	040	90.19
463-576 ¹	8X1-1/4	5	0	040	90.19
463-577	8X1-1/2	5	0	040	82.36
463-578 ²	8X2	5	0	040	90.19
463-580 ¹	8X3	5	0	040	104.59
463-582	8X4	5	0	040	88.29
463-624	10X4	5	0	041	101.23

¹ Outlet-sized with Bushing

² Outlet-sized with Coupling

Note: See following Installation Instructions

Saddle

IPS O.D. x Fipt



NSF-61

464-288	2-1/2X3/4	10	0	040	27.57
464-337	3X1-1/2	10	0	040	27.57
464-419	4X1-1/2	10	0	040	36.83
464-486	5X2	6	0	040	45.97
464-527	6X1-1/2	5	0	040	55.24
464-532	6X4	5	0	040	69.54
464-577	8X1-1/2	5	0	040	82.36
464-582	8X4	5	0	040	88.29
464-624	10X4	5	0	041	101.23

Saddle Installation Instructions:

When Assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without saddle straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to ensure good compression between the pipe and fitting surfaces as the solvent cures. Solvent cemented saddles are non pressure rated. For additional information, contact Spears® Technical Service.

Snap-On Saddle

IPS O.D. x Soc



NSF-61

463-005	1/2	25	300	040	1.44
463-007	3/4	25	200	040	1.60
463-010	1	50	0	040	3.05
463-012	1-1/4	50	0	040	4.75

Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Snap-On Saddle (continued)

IPS O.D. x Soc

463-015	1-1/2	25	0	040	5.77
463-020	2	20	0	040	8.43
463-101	3/4X1/2	25	300	040	1.87
463-130	1X1/2	50	0	040	3.05

Note: See following installation instructions

Snap-On Saddle

IPS O.D. x Fipt



464-005	1/2	25	300	040	1.87
464-007	3/4	25	200	040	2.94
464-010	1	50	0	040	5.39
464-071	1/2X1/8	50	300	040	1.87
464-097	3/4X1/8	50	200	040	2.47
464-101	3/4X1/2	25	300	040	2.47
464-130	1X1/2	50	0	040	4.45
464-131	1X3/4	50	0	040	4.45
464-210	1-1/2X3/4	25	0	040	11.21

Snap-On Saddle Installation Instructions

- The surface to be joined must be wiped clean.
- Using an appropriate applicator, apply a coat of primer to the fitting and pipe.
- While the primer is still wet, apply a generous coat of medium bodied cement first to the pipe, then to the fitting and then to the pipe again, covering an area of the pipe slightly larger than the saddle.
- Without delay, push the saddle onto the pipe and rotate the fitting approximately 15° in each direction to evenly distribute the cement.
- Allow cement to cure.
- Drill fitting and pipe with the recommended size hole saw.
- Remove debris from the line.
- Follow all safe handling precautions.

Solvent cemented saddles are non pressure rated. For additional information, contact Spears® Technical Service.

Saddle

IPS O.D.x Socket Schedule 40



Non Pressure Rated

3763-528	6X2	1	10	390	35.83
3763-530	6X3	1	10	390	36.68
3763-532	6X4	1	10	390	38.15
3763-578	8X2	1	10	390	52.81
3763-580	8X3	1	10	390	53.33
3763-582	8X4	1	10	390	53.98
3763-585	8X6	1	10	390	55.51
3763-621	10X2	1	5	390	66.74
3763-623	10X3	1	10	390	67.67
3763-624	10X4	1	8	390	67.95
3763-626	10X6	1	5	390	79.52
3763-628	10X8	1	5	390	127.61
3763-661	12X2	1	10	390	78.93
3763-663	12X3	1	10	390	80.39
3763-664	12X4	1	10	390	82.11
3763-666	12X6	1	4	390	95.22
3763-668	12X8	1	5	390	151.80
3763-670	12X10	1	4	390	219.51
3763-691	14X2	1	10	390	101.16
3763-693	14X3	1	8	390	168.11
3763-694	14X4	1	5	390	115.48
3763-696	14X6	1	10	390	117.80
3763-698	14X8	1	4	390	180.77
3763-700	14X10	1	3	390	232.54
3763-702	14X12	1	4	390	256.32
3763-751	16X2	1	5	390	107.66
3763-753	16X3	1	5	390	109.14
3763-754	16X4	1	10	390	110.80
3763-756	16X6	1	3	390	126.94

Saddle (continued)

IPS O.D.x Socket Schedule 40

3763-758	16X8	1	3	390	188.67
3763-760	16X10	1	0	390	239.80
3763-762	16X12	1	0	390	265.75
3763-764	16X14	1	0	390	276.25
3763-781	18X2	1	5	390	157.82
3763-783	18X3	1	5	390	160.89
3763-784	18X4	1	10	390	163.35
3763-786	18X6	1	4	390	173.93
3763-788	18X8	1	0	390	253.79
3763-790	18X10	1	0	390	281.34
3763-792	18X12	1	0	390	289.11
3763-794	18X14	1	0	390	436.77
3763-796	18X16	1	0	390	570.18
3763-811	20X2	1	5	390	158.19
3763-813	20X3	1	4	390	160.36
3763-814	20X4	1	4	390	168.19
3763-816	20X6	1	0	390	175.66
3763-818	20X8	1	5	390	253.46
3763-820	20X10	1	0	390	281.35
3763-822	20X12	1	0	390	401.12
3763-824	20X14	1	0	390	437.67
3763-826	20X16	1	0	390	572.27
3763-828	20X18	1	0	390	648.56
3763-901	24X2	1	5	390	150.91
3763-903	24X3	1	5	390	166.80
3763-904	24X4	1	5	390	168.65
3763-906	24X6	1	5	390	178.92
3763-908	24X8	1	5	390	255.81
3763-910	24X10	1	0	390	284.56
3763-912	24X12	1	0	390	402.54
3763-914	24X14	1	0	390	450.77
3763-916	24X16	1	0	390	506.61
3763-918	24X18	1	0	390	682.74
3763-920	24X20	1	0	390	764.43

Stub Saddle

IPS O.D x Socket Schedule 40



Non Pressure Rated

3765-528	6X2	1	8	390	38.53
3765-530	6X3	1	4	390	39.44
3765-532	6X4	1	10	390	41.03
3765-578	8X2	1	6	390	56.79
3765-580	8X3	1	4	390	57.34
3765-582	8X4	1	8	390	58.04
3765-585	8X6	1	4	390	59.69
3765-621	10X2	1	5	390	71.75
3765-623	10X3	1	5	390	72.77
3765-624	10X4	1	4	390	92.22
3765-626	10X6	1	2	390	85.51
3765-628	10X8	1	2	390	137.21
3765-661	12X2	1	6	390	84.86
3765-663	12X3	1	5	390	86.44
3765-664	12X4	1	2	390	88.28
3765-666	12X6	1	2	390	102.32
3765-668	12X8	1	2	390	163.23
3765-670	12X10	1	2	390	236.03
3765-691	14X2	1	10	390	108.77
3765-693	14X3	1	2	390	110.00
3765-694	14X4	1	5	390	111.38
3765-696	14X6	1	3	390	126.67
3765-698	14X8	1	0	390	193.11
3765-700	14X10	1	0	390	250.04
3765-702	14X12	1	0	390	275.62
3765-751	16X2	1	0	390	115.76



Schedule 40 Fittings & Accessories PVC Schedule 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Stub Saddle (continued)

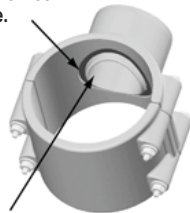
IPS O.D x Socket Schedule 40

3765-753	16X3	1	5	390	117.35
3765-754	16X4	1	5	390	119.13
3765-756	16X6	1	2	390	136.48
3765-758	16X8	1	0	390	202.87
3765-760	16X10	1	0	390	257.85
3765-762	16X12	1	0	390	285.75
3765-764	16X14	1	0	390	297.04
3765-781	18X2	1	4	390	169.68
3765-783	18X3	1	10	390	133.45
3765-784	18X4	1	10	390	175.64
3765-786	18X6	1	2	390	187.02
3765-788	18X8	1	0	390	272.88
3765-790	18X10	1	0	390	302.51
3765-792	18X12	1	0	390	310.86
3765-794	18X14	1	0	390	469.63
3765-796	18X16	1	0	390	612.58
3765-811	20X2	1	0	390	170.09
3765-813	20X3	1	2	390	172.43
3765-814	20X4	1	2	390	180.85
3765-816	20X6	1	0	390	188.89
3765-818	20X8	1	0	390	272.54
3765-820	20X10	1	0	390	302.52
3765-822	20X12	1	0	390	431.33
3765-824	20X14	1	0	390	470.62
3765-826	20X16	1	0	390	615.34
3765-828	20X18	1	0	390	697.38
3765-901	24X2	1	4	390	162.25
3765-903	24X3	1	2	390	179.34
3765-904	24X4	1	4	390	181.35
3765-906	24X6	1	3	390	192.39
3765-908	24X8	1	0	390	275.06
3765-910	24X10	1	0	390	305.96
3765-912	24X12	1	0	390	432.83
3765-914	24X14	1	0	390	484.71
3765-916	24X16	1	0	390	544.75
3765-918	24X18	1	0	390	734.11
3765-920	24X20	1	0	390	821.97

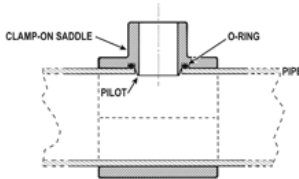
Spears® Two-Piece Clamp-On Saddle Design Clamps onto Pipe for Quick and Easy Installation



O-ring seal provides positive, trouble-free sealing to pipe.

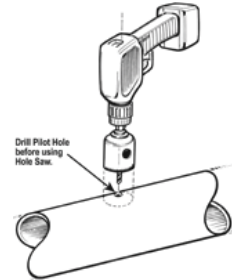


Special pilot engages with hole in pipe to prevent saddle dislocation.



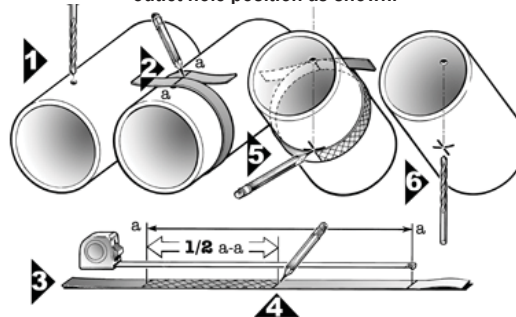
Clamp-On Saddle Installation Instructions

1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.



Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque - ft/lb	8	8	8	10

For Double Outlet Saddle Installation — Determine second outlet hole position as shown.



Spears® Hot-Tap Saddles Designed for Adding Branch Connections to Piping Systems Under Live ("Hot") Pressure

Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 6" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F (23°C) is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles and 150 psi for 8" saddles. See packaged Installation Instructions for details.

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Single Outlet

with Buna-N O-ring Seal & Zinc-Plated Hardware

2" - 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

466-247	2X1/2	3/4	1	10	046	28.43
466-248	2X3/4	7/8	1	10	046	28.43
466-249	2X1	1-1/8	1	10	046	28.43
466-250	2X1-1/4	1-1/2	1	10	046	28.43
466-251	2X1-1/2	1-1/2	1	10	046	28.43
466-291	2-1/2X1-1/2	1-3/4	1	10	046	38.57
466-333 ¹	3X1/2	7/8	1	10	046	38.57
466-334	3X3/4	7/8	1	10	046	38.57
466-335	3X1	1-1/8	1	10	046	38.57
466-336 ¹	3X1-1/4	2-1/4	1	10	046	38.57
466-337 ¹	3X1-1/2	2-1/4	1	10	046	38.57
466-338	3X2	2-1/4	1	10	046	38.57



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Single Outlet

(continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

466-415 ¹	4X1/2	1-1/8	1	10	046	49.42
466-416 ¹	4X3/4	1-1/8	1	10	046	49.42
466-417	4X1	1-1/8	1	8	046	49.42
466-418 ¹	4X1-1/4	1-3/4	1	8	046	49.42
466-419	4X1-1/2	1-3/4	1	8	046	49.42
466-420	4X2	2-1/4	1	8	046	49.42
466-421 ¹	4X2-1/2	3	1	4	046	55.92
466-422	4X3	3	1	4	046	61.42
466-523 ¹	6X1/2	1-1/8	1	4	046	85.03
466-524 ¹	6X3/4	1-1/8	1	4	046	85.03
466-525	6X1	1-1/8	1	4	046	85.03
466-526 ¹	6X1-1/4	2-1/4	1	4	046	85.03
466-527 ¹	6X1-1/2	2-1/4	1	4	046	85.03
466-528	6X2	2-1/4	1	4	046	85.03



Schedule 40 Fittings & Accessories Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Single Outlet

(continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

466-529 ¹	6X2-1/2	3	1	4	046	93.48
466-530	6X3	3	1	4	046	97.40
466-532	6X4	4	1	4	046	102.54
466-573 ¹	8X1/2	4	1	0	046	132.20
466-574 ¹	8X3/4	4	1	0	046	132.20
466-575 ¹	8X1	4	1	0	046	132.20
466-576 ¹	8X1-1/4	4	1	0	046	132.20
466-577 ¹	8X1-1/2	4	1	0	046	132.20
466-578 ¹	8 X 2	4	1	0	046	132.20
466-579 ¹	8X2-1/2	4	1	0	046	145.36
466-580 ¹	8X3	4	1	0	046	154.14
466-582	8X4	4	1	0	046	163.23
466-585	8X6	6	1	0	046	181.28
466-620 ¹	10X1-1/2	4	1	0	046	215.72
466-624	10X4	4	1	0	046	215.72
466-626	10X6	6	1	0	046	248.04
466-660 ¹	12X1-1/2	4	1	0	046	270.41
466-664	12X4	4	1	0	046	270.41
466-666	12X6	6	1	0	046	313.58

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Single Outlet

with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



466S-247	2X1/2	3/4	1	10	046	46.74
466S-248	2X3/4	7/8	1	10	046	46.74
466S-249	2X1	1-1/8	1	10	046	46.74
466S-250	2X1-1/4	1-1/2	1	10	046	46.74
466S-251	2X1-1/2	1-1/2	1	10	046	46.74
466S-291	2-1/2X1-1/2	1-3/4	1	10	046	62.88
466S-333 ¹	3X1/2	7/8	1	10	046	62.88
466S-334	3X3/4	7/8	1	10	046	62.88
466S-335	3X1	1-1/8	1	10	046	62.88
466S-336 ¹	3X1-1/4	2-1/4	1	10	046	62.88
466S-337 ¹	3X1-1/2	2-1/4	1	10	046	62.88
466S-338	3X2	2-1/4	1	10	046	62.88
466S-415 ¹	4X1/2	1-1/8	1	10	046	79.12
466S-416 ¹	4X3/4	1-1/8	1	10	046	79.12
466S-417	4X1	1-1/8	1	10	046	79.12
466S-418 ¹	4X1-1/4	1-3/4	1	8	046	79.12
466S-419	4X1-1/2	1-3/4	1	8	046	79.12
466S-420	4X2	2-1/4	1	8	046	79.12
466S-421 ¹	4X2-1/2	3	1	4	046	86.45
466S-422	4X3	3	1	4	046	89.93
466S-523 ¹	6X1/2	1-1/8	1	4	046	129.59
466S-524 ¹	6X3/4	1-1/8	1	4	046	129.59
466S-525	6X1	1-1/8	1	4	046	129.59
466S-526 ¹	6X1-1/4	2-1/4	1	4	046	129.59
466S-527 ¹	6X1-1/2	2-1/4	1	4	046	129.59
466S-528	6X2	2-1/4	1	4	046	129.59
466S-529 ¹	6X2-1/2	3	1	4	046	133.85
466S-530	6X3	3	1	4	046	136.61
466S-532	6X4	4	1	4	046	142.69
466S-573 ¹	8X1/2	4	1	0	046	189.20
466S-574 ¹	8X3/4	4	1	0	046	189.20
466S-575 ¹	8X1	4	1	0	046	189.20
466S-576 ¹	8X1-1/4	4	1	0	046	189.20
466S-577 ¹	8X1-1/2	4	1	0	046	189.20
466S-578 ¹	8 X 2	4	1	0	046	189.20
466S-579 ¹	8X2-1/2	4	1	0	046	208.13
466S-580 ¹	8X3	4	1	0	046	218.56
466S-582	8X4	4	1	0	046	231.73
466S-585	8X6	6	1	0	046	257.17

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Single Outlet

(continued)

with Buna-N O-ring Seal & SS Hardware

466S-620 ¹	10X1-1/2	4	1	0	046	306.02
466S-624	10X4	4	1	0	046	306.02
466S-626	10X6	6	1	0	046	351.94
466S-664	12X4	4	1	0	046	383.59
466S-666	12X6	6	1	0	046	444.99

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Single Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



466E-247	2X1/2	3/4	1	10	046	30.63
466E-248	2X3/4	7/8	1	10	046	30.63
466E-249	2X1	1-1/8	1	10	046	30.63
466E-250	2X1-1/4	1-1/2	1	10	046	30.63
466E-251	2X1-1/2	1-1/2	1	10	046	30.63
466E-291	2-1/2X1-1/2	1-3/4	1	10	046	39.58
466E-333 ¹	3X1/2	7/8	1	10	046	39.58
466E-334	3X3/4	7/8	1	10	046	39.58
466E-335	3X1	1-1/8	1	10	046	39.58
466E-336 ¹	3X1-1/4	2-1/4	1	10	046	39.58
466E-337 ¹	3X1-1/2	2-1/4	1	10	046	39.58
466E-338	3X2	2-1/4	1	10	046	39.58
466E-415 ¹	4X1/2	1-1/8	1	10	046	50.68
466E-416 ¹	4X3/4	1-1/8	1	10	046	50.68
466E-417	4X1	1-1/8	1	8	046	50.68
466E-418 ¹	4X1-1/4	1-3/4	1	8	046	50.68
466E-419	4X1-1/2	1-3/4	1	8	046	50.68
466E-420	4X2	2-1/4	1	8	046	50.68
466E-421 ¹	4X2-1/2	3	1	4	046	61.67
466E-422	4X3	3	1	4	046	68.99
466E-523 ¹	6X1/2	1-1/8	1	4	046	90.93
466E-524 ¹	6X3/4	1-1/8	1	4	046	90.93
466E-525	6X1	1-1/8	1	4	046	90.93
466E-526 ¹	6X1-1/4	2-1/4	1	4	046	90.93
466E-527 ¹	6X1-1/2	2-1/4	1	4	046	90.93
466E-528	6X2	2-1/4	1	4	046	90.93
466E-529 ¹	6X2-1/2	3	1	4	046	101.12
466E-530	6X3	3	1	4	046	106.82
466E-532	6X4	4	1	4	046	112.56
466E-573	8X1/2	4	1	0	046	139.77
466E-574	8X3/4	4	1	0	046	139.77
466E-575	8X1	4	1	0	046	139.77
466E-576 ¹	8X1-1/4	4	1	0	046	139.77
466E-577 ¹	8X1-1/2	4	1	0	046	139.77
466E-578 ¹	8 X 2	4	1	0	046	139.77
466E-579	8X2-1/2	4	1	0	046	153.79
466E-580 ¹	8X3	4	1	0	046	161.36
466E-582	8X4	4	1	0	046	171.17
466E-585	8X6	6	1	0	046	189.93
466E-624	10X4	4	1	0	046	226.02
466E-626	10X6	6	1	0	046	259.94
466E-664	12X4	4	1	0	046	283.31
466E-666	12X6	6	1	0	046	334.75

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Single Outlet

with EPDM O-ring & Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



466SE-247	2X1/2	3/4	1	10	046	48.21
466SE-248	2X3/4	7/8	1	10	046	48.21
466SE-249	2X1	1-1/8	1	10	046	48.21
466SE-250	2X1-1/4	1-1/2	1	10	046	48.21

Schedule 40 Fittings & Accessories Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Single Outlet

(continued)

with EPDM O-ring & Seal & SS Hardware

466SE-251	2X1-1/2	1-1/2	1	10	046	48.21
466SE-291	2-1/2X1-1/2	1-3/4	1	10	046	64.84
466SE-333 ¹	3X1/2	7/8	1	10	046	64.84
466SE-334	3X3/4	7/8	1	10	046	64.84
466SE-335	3X1	1-1/8	1	10	046	64.84
466SE-336 ¹	3X1-1/4	2-1/4	1	10	046	64.84
466SE-337 ¹	3X1-1/2	2-1/4	1	10	046	64.84
466SE-338	3X2	2-1/4	1	10	046	64.84
466SE-415 ¹	4X1/2	1-1/8	1	10	046	80.05
466SE-416 ¹	4X3/4	1-1/8	1	10	046	80.05
466SE-417	4X1	1-1/8	1	8	046	80.05
466SE-418 ¹	4X1-1/4	1-3/4	1	8	046	80.05
466SE-419	4X1-1/2	1-3/4	1	8	046	80.05
466SE-420	4X2	2-1/4	1	8	046	80.05
466SE-421 ¹	4X2-1/2	3	1	4	046	86.56
466SE-422	4X3	3	1	4	046	95.89
466SE-523 ¹	6X1/2	1-1/8	1	4	046	136.20
466SE-524 ¹	6X3/4	1-1/8	1	4	046	136.20
466SE-525	6X1	1-1/8	1	4	046	136.20
466SE-526 ¹	6X1-1/4	2-1/4	1	4	046	136.20
466SE-527 ¹	6X1-1/2	2-1/4	1	4	046	136.20
466SE-528	6X2	2-1/4	1	4	046	136.20
466SE-529 ¹	6X2-1/2	3	1	4	046	143.06
466SE-530	6X3	3	1	4	046	147.56
466SE-532	6X4	4	1	4	046	154.76
466SE-573	8X1/2	4	1	0	046	197.84
466SE-574 ¹	8X3/4	4	1	0	046	197.84
466SE-575 ¹	8X1	4	1	0	046	197.84
466SE-576	8X1-1/4	4	1	0	046	197.84
466SE-577 ¹	8X1-1/2	4	1	0	046	197.84
466SE-578 ¹	8X2	4	1	0	046	197.84
466SE-579 ¹	8X2-1/2	4	1	0	046	217.61
466SE-580 ¹	8X3	4	1	0	046	228.45
466SE-582	8X4	4	1	0	046	242.11
466SE-585	8X6	6	1	0	046	268.78
466SE-624	10X4	4	1	0	046	319.78
466SE-626	10X6	6	1	0	046	367.76
466SE-664	12X4	4	1	0	046	400.80
466SE-666	12X6	4	1	0	046	464.96

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Single Outlet

with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

467-247SR	2X1/2	3/4	1	10	046	31.77
467-248SR	2X3/4	7/8	1	10	046	31.77
467-249SR	2X1	1-1/8	1	10	046	31.77
467-250SR	2X1-1/4	1-1/2	1	10	046	31.77
467-251SR	2X1-1/2	1-1/2	1	10	046	31.77
467-291SR	2-1/2X1-1/2	1-3/4	1	10	046	43.45
467-333SR ¹	3X1/2	7/8	1	10	046	43.45
467-334SR	3X3/4	7/8	1	10	046	43.45
467-335SR	3X1	1-1/8	1	10	046	43.45
467-336SR ¹	3X1-1/4	2-1/4	1	10	046	43.45
467-337SR ¹	3X1-1/2	2-1/4	1	10	046	43.45
467-338SR	3X2	2-1/4	1	10	046	43.45
467-415SR ¹	4X1/2	1-1/8	1	10	046	54.71
467-416SR ¹	4X3/4	1-1/8	1	10	046	54.71
467-417SR	4X1	1-1/8	1	8	046	54.71
467-418SR ¹	4X1-1/4	1-3/4	1	8	046	54.71
467-419SR	4X1-1/2	1-3/4	1	8	046	54.71
467-420SR	4X2	2-1/4	1	8	046	54.71
467-421SR ¹	4X2-1/2	3	1	4	046	59.18



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x SR Thread Single Outlet

(continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

467-422SR	4X3	3	1	4	046	64.53
467-523SR ¹	6X1/2	1-1/8	1	4	046	95.54
467-524SR ¹	6X3/4	1-1/8	1	4	046	95.54
467-525SR	6X1	1-1/8	1	4	046	95.54
467-526SR ¹	6X1-1/4	2-1/4	1	4	046	95.54
467-527SR ¹	6X1-1/2	2-1/4	1	4	046	95.54
467-528SR	6X2	2-1/4	1	4	046	95.54
467-529SR ¹	6X2-1/2	3	1	4	046	112.74
467-530SR	6X3	3	1	4	046	119.95
467-532SR	6X4	4	1	4	046	124.87
467-573SR ¹	8X1/2	4	1	0	046	145.61
467-574SR ¹	8X3/4	4	1	0	046	145.61
467-575SR ¹	8X1	4	1	0	046	145.61
467-576SR ¹	8X1-1/4	4	1	0	046	145.61
467-577SR ¹	8X1-1/2	4	1	0	046	145.61
467-578SR ¹	8X2	4	1	0	046	145.61
467-579SR ¹	8X2-1/2	4	1	0	046	160.14
467-580SR ¹	8X3	4	1	0	046	168.23
467-582SR	8X4	4	1	0	046	178.29
467-585SR	8X6	6	1	0	046	196.12
467-624SR	10X4	4	1	0	046	233.45
467-626SR	10X6	6	1	0	046	268.33
467-664SR	12X4	4	1	0	046	292.43
467-666SR	12X6	6	1	0	046	339.20

¹ Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Single Outlet

with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

467S-247SR	2X1/2	3/4	1	10	046	51.96
467S-248SR	2X3/4	7/8	1	10	046	51.96
467S-249SR	2X1	1-1/8	1	10	046	51.96
467S-250SR	2X1-1/4	1-1/2	1	10	046	51.96
467S-251SR	2X1-1/2	1-1/2	1	10	046	51.96
467S-291SR	2-1/2X1-1/2	1-3/4	1	10	046	69.87
467S-333SR ¹	3X1/2	7/8	1	10	046	69.87
467S-334SR	3X3/4	7/8	1	10	046	69.87
467S-335SR	3X1	1-1/8	1	10	046	69.87
467S-336SR ¹	3X1-1/4	2-1/4	1	10	046	69.87
467S-337SR ¹	3X1-1/2	2-1/4	1	10	046	69.87
467S-338SR	3X2	2-1/4	1	10	046	69.87
467S-415SR ¹	4X1/2	1-1/8	1	10	046	87.91
467S-416SR ¹	4X3/4	1-1/8	1	10	046	87.91
467S-417SR	4X1	1-1/8	1	8	046	87.91
467S-418SR ¹	4X1-1/4	1-3/4	1	8	046	87.91
467S-419SR	4X1-1/2	1-3/4	1	8	046	87.91
467S-420SR	4X2	2-1/4	1	8	046	87.91
467S-421SR ¹	4X2-1/2	3	1	4	046	93.48
467S-422SR	4X3	3	1	4	046	98.73
467S-523SR ¹	6X1/2	1-1/8	1	4	046	146.49
467S-524SR ¹	6X3/4	1-1/8	1	4	046	146.49
467S-525SR	6X1	1-1/8	1	4	046	146.49
467S-526SR ¹	6X1-1/4	2-1/4	1	4	046	146.49
467S-527SR ¹	6X1-1/2	2-1/4	1	4	046	146.49
467S-528SR	6X2	2-1/4	1	4	046	146.49
467S-529SR ¹	6X2-1/2	3	1	4	046	157.65
467S-530SR	6X3	3	1	4	046	162.26
467S-532SR	6X4	4	1	4	046	168.55
467S-573SR ¹	8X1/2	4	1	0	046	210.98
467S-574SR ¹	8X3/4	4	1	0	046	210.98
467S-575SR ¹	8X1	4	1	0	046	210.98
467S-576SR ¹	8X1-1/4	4	1	0	046	210.98
467S-577SR ¹	8X1-1/2	4	1	0	046	210.98





Schedule 40 Fittings & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x SR Thread Single Outlet (continued) with Buna-N O-ring Seal & SS Hardware

467S-578SR ¹	8X2	4	1	0	046	210.98
467S-579SR ¹	8X2-1/2	4	1	0	046	229.13
467S-580SR ¹	8X3	4	1	0	046	240.56
467S-582SR	8X4	4	1	0	046	255.02
467S-585SR	8X6	6	1	0	046	280.38
467S-624SR	10X4	4	1	0	046	333.72
467S-626SR	10X6	6	1	0	046	383.76
467S-664SR	12X4	4	1	0	046	418.33
467S-666SR	12X6	6	1	0	046	485.08

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Single Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

467E-247SR	2X1/2	3/4	1	10	046	34.19
467E-248SR	2X3/4	7/8	1	10	046	34.19
467E-249SR	2X1	1-1/8	1	10	046	34.19
467E-250SR	2X1-1/4	1-1/2	1	10	046	34.19
467E-251SR	2X1-1/2	1-1/2	1	10	046	34.19
467E-291SR	2-1/2X1-1/2	1-3/4	1	10	046	47.67
467E-333SR ¹	3X1/2	7/8	1	10	046	47.67
467E-334SR	3X3/4	7/8	1	10	046	47.67
467E-335SR	3X1	1-1/8	1	10	046	47.67
467E-336SR ¹	3X1-1/4	2-1/4	1	10	046	47.67
467E-337SR ¹	3X1-1/2	2-1/4	1	10	046	47.67
467E-338SR	3X2	2-1/4	1	10	046	47.67
467E-415SR ¹	4X1/2	1-1/8	1	10	046	59.60
467E-416SR ¹	4X3/4	1-1/8	1	10	046	59.60
467E-417SR	4X1	1-1/8	1	8	046	59.60
467E-418SR ¹	4X1-1/4	1-3/4	1	8	046	59.60
467E-419SR	4X1-1/2	1-3/4	1	8	046	59.60
467E-420SR	4X2	2-1/4	1	8	046	59.60
467E-421SR ¹	4X2-1/2	3	1	4	046	63.87
467E-422SR	4X3	3	1	4	046	68.47
467E-523SR ¹	6X1/2	1-1/8	1	4	046	99.45
467E-524SR ¹	6X3/4	1-1/8	1	4	046	99.45
467E-525SR	6X1	1-1/8	1	4	046	99.45
467E-526SR ¹	6X1-1/4	2-1/4	1	4	046	99.45
467E-527SR ¹	6X1-1/2	2-1/4	1	4	046	99.45
467E-528SR	6X2	2-1/4	1	4	046	99.45
467E-529SR ¹	6X2-1/2	3	1	4	046	123.19
467E-530SR	6X3	3	1	4	046	129.60
467E-532SR	6X4	4	1	4	046	136.13
467E-573SR ¹	8X1/2	4	1	0	046	150.67
467E-574SR ¹	8X3/4	4	1	0	046	150.67
467E-575SR ¹	8X1	4	1	0	046	150.67
467E-576SR ¹	8X1-1/4	4	1	0	046	150.67
467E-577SR ¹	8X1-1/2	4	1	0	046	150.67
467E-578SR ¹	8X2	4	1	0	046	150.67
467E-579SR ¹	8X2-1/2	4	1	0	046	165.74
467E-580SR ¹	8X3	4	1	0	046	174.07
467E-582SR	8X4	4	1	0	046	184.51
467E-585SR	8X6	6	1	0	046	204.69
467E-624SR	10X4	4	1	0	046	243.57
467E-626SR	10X6	6	1	0	046	280.05
467E-664SR	12X4	4	1	0	046	305.33
467E-666SR	12X6	6	1	0	046	354.19

¹Outlet-sized with Bushing



PVC White Clamp-On Saddle x SR Thread Single Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

467SE-247SR	2X1/2	3/4	1	10	046	53.52
467SE-248SR	2X3/4	7/8	1	10	046	53.52
467SE-249SR	2X1	1-1/8	1	10	046	53.52
467SE-250SR	2X1-1/4	1-1/2	1	10	046	53.52
467SE-251SR	2X1-1/2	1-1/2	1	10	046	53.52
467SE-291SR	2-1/2X1-1/2	1-3/4	1	10	046	71.82
467SE-333SR ¹	3X1/2	7/8	1	10	046	71.82
467SE-334SR	3X3/4	7/8	1	10	046	71.82
467SE-335SR	3X1	1-1/8	1	10	046	71.82
467SE-336SR ¹	3X1-1/4	2-1/4	1	10	046	71.82
467SE-337SR ¹	3X1-1/2	2-1/4	1	10	046	71.82
467SE-338SR	3X2	2-1/4	1	10	046	71.82
467SE-415SR ¹	4X1/2	1-1/8	1	10	046	90.12
467SE-416SR ¹	4X3/4	1-1/8	1	10	046	90.12
467SE-417SR	4X1	1-1/8	1	8	046	90.12
467SE-418SR ¹	4X1-1/4	1-3/4	1	8	046	90.12
467SE-419SR	4X1-1/2	1-3/4	1	8	046	90.12
467SE-420SR	4X2	2-1/4	1	8	046	90.12
467SE-421SR ¹	4X2-1/2	3	1	4	046	93.96
467SE-422SR	4X3	3	1	4	046	99.18
467SE-523SR ¹	6X1/2	1-1/8	1	4	046	151.43
467SE-524SR ¹	6X3/4	1-1/8	1	4	046	151.43
467SE-525SR	6X1	1-1/8	1	4	046	151.43
467SE-526SR ¹	6X1-1/4	2-1/4	1	4	046	151.43
467SE-527SR ¹	6X1-1/2	2-1/4	1	4	046	151.43
467SE-528SR	6X2	2-1/4	1	4	046	151.43
467SE-529SR ¹	6X2-1/2	3	1	4	046	164.37
467SE-530SR	6X3	3	1	4	046	170.51
467SE-532SR	6X4	4	1	4	046	173.58
467SE-573SR ¹	8X1/2	4	1	0	046	217.25
467SE-574SR ¹	8X3/4	4	1	0	046	217.25
467SE-575SR ¹	8X1	4	1	0	046	217.25
467SE-576SR ¹	8X1-1/4	4	1	0	046	217.25
467SE-577SR ¹	8X1-1/2	4	1	0	046	217.25
467SE-578SR ¹	8X2	4	1	0	046	217.25
467SE-579SR ¹	8X2-1/2	4	1	0	046	239.09
467SE-580SR ¹	8X3	4	1	0	046	250.98
467SE-582SR	8X4	4	1	0	046	266.12
467SE-585SR	8X6	6	1	0	046	292.68
467SE-624SR	10X4	4	1	0	046	348.17
467SE-626SR	10X6	6	1	0	046	400.64
467SE-666SR	12X6	6	1	0	046	506.42

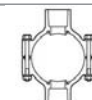
¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Double Outlet

with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

468-247	2X1/2	3/4	1	10	046	34.34
468-248	2X3/4	7/8	1	10	046	34.34
468-249	2X1	1-1/8	1	10	046	34.34
468-250	2X1-1/4	1-1/2	1	10	046	34.34
468-251	2X1-1/2	1-1/2	1	10	046	34.34
468-291	2-1/2X1-1/2	1-3/4	1	10	046	45.84
468-333 ¹	3X1/2	7/8	1	10	046	45.84
468-334	3X3/4	7/8	1	10	046	45.84
468-335	3X1	1-1/8	1	10	046	45.84
468-336 ¹	3X1-1/4	2-1/4	1	10	046	45.84
468-337 ¹	3X1-1/2	2-1/4	1	10	046	45.84
468-338	3X2	2-1/4	1	10	046	45.84
468-415 ¹	4X1/2	1-1/8	1	10	046	58.08
468-416 ¹	4X3/4	1-1/8	1	10	046	58.08



Schedule 40 Fittings & Accessories Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Double Outlet (continued) with Buna-N O-ring Seal & Zinc-Plated Hardware

468-417	4X1	1-1/8	1	8	046	58.08
468-418 ¹	4X1-1/4	1-3/4	1	8	046	58.08
468-419	4X1-1/2	1-3/4	1	8	046	58.08
468-420	4X2	2-1/4	1	8	046	58.08
468-421 ¹	4X2-1/2	3	1	4	046	60.80
468-422	4X3	3	1	4	046	68.64
468-523 ¹	6X1/2	1-1/8	1	4	046	95.64
468-524 ¹	6X3/4	1-1/8	1	4	046	95.64
468-525	6X1	1-1/8	1	4	046	95.64
468-526 ¹	6X1-1/4	2-1/4	1	4	046	95.64
468-527 ¹	6X1-1/2	2-1/4	1	4	046	95.64
468-528	6X2	2-1/4	1	4	046	95.64
468-529 ¹	6X2-1/2	3	1	4	046	108.85
468-530	6X3	3	1	4	046	113.80
468-532	6X4	4	1	4	046	122.33
468-573 ¹	8X1/2	4	1	0	046	137.27
468-574 ¹	8X3/4	4	1	0	046	137.27
468-575 ¹	8X1	4	1	0	046	137.27
468-576 ¹	8X1-1/4	4	1	0	046	137.27
468-577 ¹	8X1-1/2	4	1	0	046	137.27
468-578 ¹	8X2	4	1	0	046	137.27
468-579 ¹	8X2-1/2	4	1	0	046	150.94
468-580 ¹	8X3	4	1	0	046	158.53
468-582	8X4	4	1	0	046	168.07
468-585	8X6	6	1	0	046	186.46
468-624	10X4	4	1	0	046	221.89
468-626	10X6	6	1	0	046	255.09
468-664	12X4	4	1	0	046	278.15
468-666	12X6	6	1	0	046	322.69

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Double Outlet

with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

468S-247	2X1/2	3/4	1	10	046	55.11
468S-248	2X3/4	7/8	1	10	046	55.11
468S-249	2X1	1-1/8	1	10	046	55.11
468S-250	2X1-1/4	1-1/2	1	10	046	55.11
468S-251	2X1-1/2	1-1/2	1	10	046	55.11
468S-291	2-1/2X1-1/2	1-3/4	1	10	046	73.57
468S-333 ¹	3X1/2	7/8	1	10	046	73.57
468S-334	3X3/4	7/8	1	10	046	73.57
468S-335	3X1	1-1/8	1	10	046	73.57
468S-336 ¹	3X1-1/4	2-1/4	1	10	046	73.57
468S-337 ¹	3X1-1/2	2-1/4	1	10	046	73.57
468S-338	3X2	2-1/4	1	10	046	73.57
468S-415 ¹	4X1/2	1-1/8	1	10	046	91.82
468S-416 ¹	4X3/4	1-1/8	1	10	046	91.82
468S-417	4X1	1-1/8	1	8	046	91.82
468S-418 ¹	4X1-1/4	1-3/4	1	8	046	91.82
468S-419	4X1-1/2	1-3/4	1	8	046	91.82
468S-420	4X2	2-1/4	1	8	046	91.82
468S-421 ¹	4X2-1/2	3	1	4	046	96.49
468S-422	4X3	3	1	4	046	105.88
468S-523 ¹	6X1/2	1-1/8	1	4	046	151.67
468S-524 ¹	6X3/4	1-1/8	1	4	046	151.67
468S-525	6X1	1-1/8	1	4	046	151.67
468S-526 ¹	6X1-1/4	2-1/4	1	4	046	151.67
468S-527 ¹	6X1-1/2	2-1/4	1	4	046	151.67
468S-528	6X2	2-1/4	1	4	046	151.67
468S-529 ¹	6X2-1/2	3	1	4	046	158.47
468S-530	6X3	3	1	4	046	161.20
468S-532	6X4	4	1	4	046	166.43



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Double Outlet (continued) with Buna-N O-ring Seal & SS Hardware

468S-573 ¹	8X1/2	4	1	0	046	204.02
468S-574 ¹	8X3/4	4	1	0	046	204.02
468S-575 ¹	8X1	4	1	0	046	204.02
468S-576 ¹	8X1-1/4	4	1	0	046	204.02
468S-577 ¹	8X1-1/2	4	1	0	046	204.02
468S-578 ¹	8X2	4	1	0	046	204.02
468S-579 ¹	8X2-1/2	4	1	0	046	224.39
468S-580 ¹	8X3	4	1	0	046	235.75
468S-582	8X4	4	1	0	046	249.77
468S-585	8X6	6	1	0	046	274.71
468S-624	10X4	4	1	0	046	326.82
468S-626	10X6	6	1	0	046	375.94
468S-664	12X4	4	1	0	046	409.76
468S-666	12X6	6	1	0	046	475.29

¹Outlet-sized with Bushing.

PVC White Clamp-On Saddle x Soc Double Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

468E-247	2X1/2	3/4	1	10	046	36.11
468E-248	2X3/4	7/8	1	10	046	36.11
468E-249	2X1	1-1/8	1	10	046	36.11
468E-250	2X1-1/4	1-1/2	1	10	046	36.11
468E-251	2X1-1/2	1-1/2	1	10	046	36.11
468E-291	2-1/2X1-1/2	1-3/4	1	10	046	49.87
468E-333 ¹	3X1/2	7/8	1	10	046	49.87
468E-334	3X3/4	7/8	1	10	046	49.87
468E-335	3X1	1-1/8	1	10	046	49.87
468E-336 ¹	3X1-1/4	2-1/4	1	10	046	49.87
468E-337 ¹	3X1-1/2	2-1/4	1	10	046	49.87
468E-338	3X2	2-1/4	1	10	046	49.87
468E-415 ¹	4X1/2	1-1/8	1	10	046	60.64
468E-416 ¹	4X3/4	1-1/8	1	10	046	60.64
468E-417	4X1	1-1/8	1	8	046	60.64
468E-418 ¹	4X1-1/4	1-3/4	1	8	046	60.64
468E-419	4X1-1/2	1-3/4	1	8	046	60.64
468E-420	4X2	2-1/4	1	8	046	60.64
468E-421 ¹	4X2-1/2	3	1	4	046	65.03
468E-422	4X3	3	4	0	046	72.47
468E-523 ¹	6X1/2	1-1/8	1	4	046	101.80
468E-524 ¹	6X3/4	1-1/8	1	4	046	101.80
468E-525	6X1	1-1/8	1	4	046	101.80
468E-526 ¹	6X1-1/4	2-1/4	1	4	046	101.80
468E-527 ¹	6X1-1/2	2-1/4	1	4	046	101.80
468E-528	6X2	2-1/4	1	4	046	101.80
468E-529 ¹	6X2-1/2	3	1	4	046	113.85
468E-530	6X3	3	1	4	046	122.48
468E-532	6X4	4	1	4	046	129.05
468E-573 ¹	8X1/2	4	1	0	046	153.59
468E-574 ¹	8X3/4	4	1	0	046	153.59
468E-575 ¹	8X1	4	1	0	046	153.59
468E-576 ¹	8X1-1/4	4	1	0	046	153.59
468E-577 ¹	8X1-1/2	4	1	0	046	153.59
468E-578 ¹	8X2	4	1	0	046	153.59
468E-579 ¹	8X2-1/2	4	1	0	046	169.02
468E-580 ¹	8X3	4	1	0	046	177.53
468E-582	8X4	4	1	0	046	188.20
468E-585	8X6	6	1	0	046	206.95
468E-624	10X4	4	1	0	046	246.33
468E-626	10X6	6	1	0	046	283.15
468E-664	12X4	4	1	0	046	308.77
468E-666	12X6	6	1	0	046	358.05

¹Outlet-sized with Bushing





Schedule 40 Fittings & Accessories Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x Soc Double Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



468SE-247	2X1/2	3/4	1	10	046	58.93
468SE-248	2X3/4	7/8	1	10	046	58.93
468SE-249	2X1	1-1/8	1	10	046	58.93
468SE-250	2X1-1/4	1-1/2	1	10	046	58.93
468SE-251	2X1-1/2	1-1/2	1	10	046	58.93
468SE-291	2-1/2X1-1/2	1-3/4	1	10	046	77.93
468SE-333 ¹	3X1/2	7/8	1	10	046	77.93
468SE-334	3X3/4	7/8	1	10	046	77.93
468SE-335	3X1	1-1/8	1	10	046	77.93
468SE-336 ¹	3X1-1/4	2-1/4	1	10	046	77.93
468SE-337 ¹	3X1-1/2	2-1/4	1	10	046	77.93
468SE-338	3X2	2-1/4	1	10	046	77.93
468SE-415 ¹	4X1/2	1-1/8	1	10	046	97.27
468SE-416 ¹	4X3/4	1-1/8	1	10	046	97.27
468SE-417	4X1	1-1/8	1	8	046	97.27
468SE-418 ¹	4X1-1/4	1-3/4	1	8	046	97.27
468SE-419	4X1-1/2	1-3/4	1	8	046	97.27
468SE-420	4X2	2-1/4	1	8	046	97.27
468SE-421 ¹	4X2-1/2	3	1	4	046	106.18
468SE-422	4X3	3	4	0	046	113.18
468SE-523 ¹	6X1/2	1-1/8	1	4	046	162.15
468SE-524 ¹	6X3/4	1-1/8	1	4	046	162.15
468SE-525	6X1	1-1/8	1	4	046	162.15
468SE-526 ¹	6X1-1/4	2-1/4	1	4	046	162.15
468SE-527 ¹	6X1-1/2	2-1/4	1	4	046	162.15
468SE-528	6X2	2-1/4	1	4	046	162.15
468SE-529 ¹	6X2-1/2	3	1	4	046	166.53
468SE-530	6X3	3	1	4	046	172.31
468SE-532	6X4	4	1	4	046	182.24
468SE-573 ¹	8X1/2	4	1	0	046	231.01
468SE-574 ¹	8X3/4	4	1	0	046	231.01
468SE-575 ¹	8X1	4	1	0	046	231.01
468SE-576 ¹	8X1-1/4	4	1	0	046	231.01
468SE-577 ¹	8X1-1/2	4	1	0	046	231.01
468SE-578 ¹	8X2	4	1	0	046	231.01
468SE-579 ¹	8X2-1/2	4	1	0	046	254.16
468SE-580 ¹	8X3	4	1	0	046	262.84
468SE-582	8X4	4	1	0	046	283.21
468SE-585	8X6	6	1	0	046	313.93
468SE-624	10X4	4	1	0	046	373.54
468SE-626	10X6	6	1	0	046	429.51
468SE-664	12X4	4	1	0	046	468.41
468SE-666	12X6	6	1	0	046	543.23

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Double Outlet

with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



469-247SR	2X1/2	3/4	1	10	046	38.82
469-248SR	2X3/4	7/8	1	10	046	38.82
469-249SR	2X1	1-1/8	1	10	046	38.82
469-250SR	2X1-1/4	1-1/2	1	10	046	38.82
469-251SR	2X1-1/2	1-1/2	1	10	046	38.82
469-291SR	2-1/2X1-1/2	1-3/4	1	10	046	51.55
469-333SR ¹	3X1/2	7/8	1	10	046	51.55
469-334SR	3X3/4	7/8	1	10	046	51.55
469-335SR	3X1	1-1/8	1	10	046	51.55
469-336SR ¹	3X1-1/4	2-1/4	1	10	046	51.55
469-337SR ¹	3X1-1/2	2-1/4	1	10	046	51.55
469-338SR	3X2	2-1/4	1	10	046	51.55
469-415SR ¹	4X1/2	1-1/8	1	10	046	77.39

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x SR Thread Double Outlet (continued) with Buna-N O-ring Seal & Zinc-Plated Hardware

469-416SR ¹	4X3/4	1-1/8	1	10	046	77.39
469-417SR	4X1	1-1/8	1	8	046	77.39
469-418SR ¹	4X1-1/4	1-3/4	1	8	046	77.39
469-419SR	4X1-1/2	1-3/4	1	8	046	77.39
469-420SR	4X2	2-1/4	1	8	046	77.39
469-421SR ¹	4X2-1/2	3	1	4	046	83.14
469-422SR	4X3	3	1	4	046	198.35
469-523SR ¹	6X1/2	1-1/8	1	4	046	126.16
469-524SR ¹	6X3/4	1-1/8	1	4	046	126.16
469-525SR	6X1	1-1/8	1	4	046	126.16
469-526SR ¹	6X1-1/4	2-1/4	1	4	046	126.16
469-527SR ¹	6X1-1/2	2-1/4	1	4	046	126.16
469-528SR	6X2	2-1/4	1	4	046	126.16
469-529SR ¹	6X2-1/2	3	1	4	046	151.31
469-530SR	6X3	3	1	4	046	158.84
469-532SR	6X4	4	1	4	046	166.33
469-573SR ¹	8X1/2	4	1	0	046	184.92
469-574SR ¹	8X3/4	4	1	0	046	184.92
469-575SR ¹	8X1	4	1	0	046	184.92
469-576SR ¹	8X1-1/4	4	1	0	046	184.92
469-577SR ¹	8X1-1/2	4	1	0	046	184.92
469-578SR ¹	8X2	4	1	0	046	184.92
469-579SR ¹	8X2-1/2	4	1	0	046	204.69
469-580SR ¹	8X3	4	1	0	046	214.59
469-582SR	8X4	4	1	0	046	227.57
469-585SR	8X6	6	1	0	046	250.29
469-624SR	10X4	4	1	0	046	297.85
469-626SR	10X6	6	1	0	046	342.31
469-666SR	12X6	6	1	0	046	433.04

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Double Outlet

with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



469S-247SR	2X1/2	3/4	1	10	046	61.25
469S-248SR	2X3/4	7/8	1	10	046	61.25
469S-249SR	2X1	1-1/8	1	10	046	61.25
469S-250SR	2X1-1/4	1-1/2	1	10	046	61.25
469S-251SR	2X1-1/2	1-1/2	1	10	046	61.25
469S-291SR	2-1/2X1-1/2	1-3/4	1	10	046	81.73
469S-333SR ¹	3X1/2	7/8	1	10	046	81.73
469S-334SR	3X3/4	7/8	1	10	046	81.73
469S-335SR	3X1	1-1/8	1	10	046	81.73
469S-336SR ¹	3X1-1/4	2-1/4	1	10	046	81.73
469S-337SR ¹	3X1-1/2	2-1/4	1	10	046	81.73
469S-338SR	3X2	2-1/4	1	10	046	81.73
469S-415SR ¹	4X1/2	1-1/8	1	10	046	103.85
469S-416SR ¹	4X3/4	1-1/8	1	10	046	103.85
469S-417SR	4X1	1-1/8	1	8	046	103.85
469S-418SR ¹	4X1-1/4	1-3/4	1	8	046	103.85
469S-419SR	4X1-1/2	1-3/4	1	8	046	103.85
469S-420SR	4X2	2-1/4	1	8	046	103.85
469S-421SR ¹	4X2-1/2	3	1	4	046	109.55
469S-422SR	4X3	3	4	0	046	119.95
469S-523SR ¹	6X1/2	1-1/8	1	4	046	170.62
469S-524SR ¹	6X3/4	1-1/8	1	4	046	170.62
469S-525SR	6X1	1-1/8	1	4	046	170.62
469S-526SR ¹	6X1-1/4	2-1/4	1	4	046	170.62
469S-527SR ¹	6X1-1/2	2-1/4	1	4	046	170.62
469S-528SR	6X2	2-1/4	1	4	046	170.62
469S-529SR ¹	6X2-1/2	3	1	4	046	178.60
469S-530SR	6X3	3	1	4	046	188.92
469S-532SR	6X4	4	1	4	046	197.27

Schedule 40 Fittings & Accessories Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x SR Thread Double Outlet (continued) with Buna-N O-ring Seal & SS Hardware

469S-573SR ¹	8X1/2	4	1	0	046	241.95
469S-574SR ¹	8X3/4	4	1	0	046	241.95
469S-575SR ¹	8X1	4	1	0	046	241.95
469S-576SR ¹	8X1-1/4	4	1	0	046	241.95
469S-577SR ¹	8X1-1/2	4	1	0	046	241.95
469S-578SR ¹	8X2	4	1	0	046	241.95
469S-579SR ¹	8X2-1/2	4	1	0	046	266.12
469S-580SR ¹	8X3	4	1	0	046	279.35
469S-582SR	8X4	4	1	0	046	295.86
469S-585SR	8X6	6	1	0	046	328.55
469S-624SR	10X4	4	1	0	046	391.00
469S-626SR	10X6	6	1	0	046	449.64
469S-664SR	12X4	4	1	0	046	490.07
469S-666SR	12X6	6	1	0	046	568.35

¹Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Double Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

469E-247SR	2X1/2	3/4	1	10	046	42.67
469E-248SR	2X3/4	7/8	1	10	046	42.67
469E-249SR	2X1	1-1/8	1	10	046	42.67
469E-250SR	2X1-1/4	1-1/2	1	10	046	42.67
469E-251SR	2X1-1/2	1-1/2	1	10	046	42.67
469E-291SR	2-1/2X1-1/2	1-3/4	1	10	046	57.86
469E-333SR ¹	3X1/2	7/8	1	10	046	57.86
469E-334SR	3X3/4	7/8	1	10	046	57.86
469E-335SR	3X1	1-1/8	1	10	046	57.86
469E-336SR ¹	3X1-1/4	2-1/4	1	10	046	57.86
469E-337SR ¹	3X1-1/2	2-1/4	1	10	046	57.86
469E-338SR	3X2	2-1/4	1	16	046	57.86
469E-415SR ¹	4X1/2	1-1/8	1	10	046	90.19
469E-416SR ¹	4X3/4	1-1/8	1	10	046	90.19
469E-417SR	4X1	1-1/8	1	8	046	90.19
469E-418SR ¹	4X1-1/4	1-3/4	1	8	046	90.19
469E-419SR	4X1-1/2	1-3/4	1	8	046	90.19
469E-420SR	4X2	2-1/4	1	8	046	90.19
469E-421SR ¹	4X2-1/2	3	1	4	046	91.98
469E-422SR	4X3	3	4	0	046	117.47
469E-523SR ¹	6X1/2	1-1/8	1	4	046	138.29
469E-524SR ¹	6X3/4	1-1/8	1	4	046	138.29
469E-525SR	6X1	1-1/8	1	4	046	138.29
469E-526SR ¹	6X1-1/4	2-1/4	1	4	046	138.29
469E-527SR ¹	6X1-1/2	2-1/4	1	4	046	138.29
469E-528SR	6X2	2-1/4	1	4	046	138.29
469E-529SR ¹	6X2-1/2	3	1	4	046	154.78
469E-530SR	6X3	3	1	4	046	167.41
469E-532SR	6X4	4	1	4	046	178.02
469E-573SR ¹	8X1/2	4	1	0	046	200.39
469E-574SR ¹	8X3/4	4	1	0	046	200.39
469E-575SR ¹	8X1	4	1	0	046	200.39
469E-576SR ¹	8X1-1/4	4	1	0	046	200.39
469E-577SR ¹	8X1-1/2	4	1	0	046	200.39
469E-578SR	8X2	4	1	0	046	200.39
469E-579SR ¹	8X2-1/2	4	1	0	046	220.53
469E-580SR ¹	8X3	4	1	0	046	231.55
469E-582SR	8X4	4	1	0	046	245.48
469E-585SR	8X6	6	1	0	046	272.46
469E-624SR	10X4	4	1	0	046	324.24
469E-626SR	10X6	6	1	0	046	372.76
469E-666SR	12X6	6	1	0	046	471.51

¹Outlet-sized with Bushing



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC White Clamp-On Saddle x SR Thread Double Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

469SE-247SR	2X1/2	3/4	1	10	046	65.17
469SE-248SR	2X3/4	7/8	1	10	046	65.17
469SE-249SR	2X1	1-1/8	1	10	046	65.17
469SE-250SR	2X1-1/4	1-1/2	1	10	046	65.17
469SE-251SR	2X1-1/2	1-1/2	1	10	046	65.17
469SE-291SR	2-1/2X1-1/2	1-3/4	1	10	046	86.80
469SE-333SR ¹	3X1/2	7/8	1	10	046	86.80
469SE-334SR	3X3/4	7/8	1	10	046	86.80
469SE-335SR	3X1	1-1/8	1	10	046	86.80
469SE-336SR ¹	3X1-1/4	2-1/4	1	10	046	86.80
469SE-337SR ¹	3X1-1/2	2-1/4	1	10	046	86.80
469SE-338SR	3X2	2-1/4	1	10	046	86.80
469SE-415SR ¹	4X1/2	1-1/8	1	10	046	111.98
469SE-416SR ¹	4X3/4	1-1/8	1	10	046	111.98
469SE-417SR	4X1	1-1/8	1	8	046	111.98
469SE-418SR ¹	4X1-1/4	1-3/4	1	8	046	111.98
469SE-419SR	4X1-1/2	1-3/4	1	8	046	111.98
469SE-420SR	4X2	2-1/4	1	8	046	111.98
469SE-421SR ¹	4X2-1/2	3	1	4	046	116.16
469SE-422SR	4X3	3	4	0	046	127.12
469SE-523SR ¹	6X1/2	1-1/8	1	4	046	174.99
469SE-524SR ¹	6X3/4	1-1/8	1	4	046	174.99
469SE-525SR	6X1	1-1/8	1	4	046	174.99
469SE-526SR ¹	6X1-1/4	2-1/4	1	4	046	174.99
469SE-527SR ¹	6X1-1/2	2-1/4	1	4	046	174.99
469SE-528SR	6X2	2-1/4	1	4	046	174.99
469SE-529SR ¹	6X2-1/2	3	1	4	046	187.18
469SE-530SR	6X3	3	1	4	046	197.64
469SE-532SR	6X4	4	1	4	046	209.36
469SE-573SR ¹	8X1/2	4	1	0	046	247.54
469SE-574SR ¹	8X3/4	4	1	0	046	247.54
469SE-575SR ¹	8X1	4	1	0	046	247.54
469SE-576SR ¹	8X1-1/4	4	1	0	046	247.54
469SE-577SR ¹	8X1-1/2	4	1	0	046	247.54
469SE-578SR ¹	8X2	4	1	0	046	247.54
469SE-579SR ¹	8X2-1/2	4	1	0	046	272.31
469SE-580SR ¹	8X3	4	1	0	046	285.91
469SE-582SR	8X4	4	1	0	046	297.93
469SE-585SR	8X6	6	1	0	046	336.29
469SE-624SR	10X4	4	1	0	046	400.12
469SE-626SR	10X6	6	1	0	046	460.13
469SE-664SR	12X4	4	1	0	046	500.57
469SE-666SR	12X6	6	1	0	046	581.43

¹Outlet-sized with Bushing



PVC White Hot-Tap Saddle

EPDM Saddle x Soc (Spigot) Zinc Plated Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT2-248W	2X3/4 (1)	1	5	049	51.19
HT2-251W	2X1-1/2 (2)	1	5	049	105.76
HT2-288W	2-1/2X3/4 (1)	1	5	049	54.71
HT2-291W	2-1/2x1-1/2 (2)	1	5	049	109.28
HT2-334W	3X3/4 (1)	1	5	049	62.65
HT2-337W	3X1-1/2 (2)	1	5	049	120.45
HT2-416W	4X3/4 (1)	1	0	049	72.36
HT2-419W	4X1-1/2 (2)	1	0	049	127.36
HT2-524W	6X3/4 (1)	1	0	049	81.34
HT2-527W	6X1-1/2 (2)	1	0	049	135.60
HT2-574W	8X3/4 (1)	1	0	049	90.01
HT2-577W	8X1-1/2 (2)	1	0	049	144.58





Schedule 40 Fittings & Accessories

Clamp-On & Hot-Tap Saddles & Mechanical Clamp-On Transition Saddles

Clamp-On & Hot-Tap Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC White Hot-Tap Saddles EPDM Saddle x Soc (Spigot) SS316 Bolts



2" - 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT2S-248W	2X3/4 (1)	1	5	049	79.71
HT2S-251W	2X1-1/2 (2)	1	5	049	164.57
HT2S-288W	2-1/2X3/4 (1)	1	5	049	85.15
HT2S-291W	2-1/2X1-1/2 (2)	1	5	049	170.01
HT2S-334W	3X3/4 (1)	1	5	049	97.53
HT2S-337W	3X1-1/2 (2)	1	5	049	187.53

PVC White Hot-Tap Saddles (continued) EPDM Saddle x Soc (Spigot) SS316 Bolts

HT2S-416W	4X3/4 (1)	1	5	049	112.66
HT2S-419W	4X1-1/2 (2)	1	0	049	198.25
HT2S-524W	6X3/4 (1)	1	5	049	126.49
HT2S-527W	6X1-1/2 (2)	1	0	049	210.89
HT2S-574W	8X3/4 (1)	1	0	049	139.42
HT2S-577W	8X1-1/2 (2)	1	0	049	224.14

Mechanical Clamp-On Transition Saddles

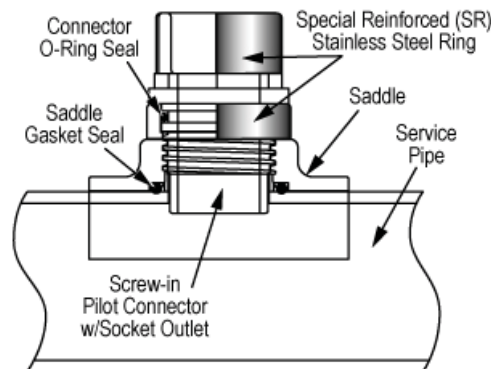
Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.



- Socket Outlet
- 315 psi Pressure Rating @ 73° F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength



Note: Mechanical Clamp Not Shown

Mechanical Clamp-on Transition Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. x Socket

For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions

865-419	4X1-1/2	2	0	086	733.37
865-420	4X2	1	0	086	743.42
865-527	6X1-1/2	1	0	086	804.53
865-528	6X2	1	0	086	838.42
865-577	8X1-1/2	1	0	086	941.68
865-578	8X2	1	0	086	978.32

Schedule 40 Fittings & Accessories Schedule 40 Tank Adapters



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Schedule 40 Tank Adapters with EPDM Gasket Socket(Male Pipe Thread)



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

4170E-005	1/2 Soc(1 MPT)	25	0	029	31.05
4170E-007	3/4 Soc(1-1/4 MPT)	25	0	029	36.49
4170E-010	1 Soc(1-1/2 MPT)	25	0	029	42.27
4170E-012	1-1/4 Soc(2 MPT)	20	0	029	52.42
4170E-015	1-1/2 Soc(2 MPT)	30	0	029	58.68
4170E-020	2 Soc(2-1/2 MPT)	15	0	029	75.77
4170E-025	2-1/2 Soc(3 MPT)	4	0	029	126.11

Note: These tank adapters have both Socket and size larger Male Pipe Thread connection on external end. Adapter Nut has left hand thread to prevent loosening when installing threaded connection. End lugs allow holding body when tightening Adapter Nut.



Schedule 40 Fittings & Accessories Pool & Spa Fittings

All Pool & Spa Specialty Fittings have a maximum use service pressure of 150 psi @ 73° F (22° C). Standard pressure de-ratings must be applied for use at elevated temperatures with a maximum service temperature of 140°F (60° C).

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Short Socket Tees

Socket Style Sch 40



Special short-socket end allows close connection at pumps, filters and other areas with minimum available space.

S401-249	2X2X1	25	0	015	7.88
S401-251	2x2x1-1/2	25	0	015	7.88

2" Spigot Tee

Spigot x Spigot x Spigot Sch 40



404A-020	2	30	0	015	8.22
----------	---	----	---	-----	------

Male Thread Tee (Branch)

Socket x Socket x Mipt



402B-010	1	50	0	040	3.46
----------	---	----	---	-----	------

2"x1-1/2" Reducing 90° Ell, Socket Style Sch 40

2"x2" 90° Street Ell, Socket x Spigot Sch 40



Handy dual-purpose configuration is 2"x1-1/2" Socket Reducing 90° Ell and also a 2" Socket x 2" Spigot 90° Street Ell.

406-251N	2X1-1/2	10	0	015	9.89
----------	---------	----	---	-----	------

1-1/2" 90° Spigot Elbow

Spigot x Spigot Sch 40



422-015	1-1/2	25	0	015	7.94
---------	-------	----	---	-----	------

2-1/2"x2" Reducing 90° Ell, Socket Style Sch 40

2-1/2"x2-1/2" 90° Street Ell, Socket x Spigot Sch 40



Handy dual-purpose configuration is 2-1/2" x 2" Socket Reducing 90° Ell and also a 2-1/2" Socket x 2-1/2" Spigot 90° Street Ell.

406-292N	2-1/2X2 (2-1/2 Spigot)	10	0	040	11.59
----------	------------------------	----	---	-----	-------

2" Short Spigot 45° Street Ell

Spigot x Socket Sch 40



Special short-spigot end allows close connection in extra-tight spaces.

S427-020	2	10	0	015	7.01
----------	---	----	---	-----	------

45° Street Ell

Spig x Soc



427-005	1/2	50	400	040	1.06
427-007	3/4	50	0	040	1.64
427-010	1	50	0	040	1.98
427-012	1-1/4	25	0	040	2.76
427-015	1-1/2	25	0	040	3.46
427-020	2	25	0	040	4.51
427-025	2-1/2	10	0	040	14.68
427-030	3	10	0	040	18.23
427-040	4	5	0	040	32.68
427-050	5	4	0	040	98.27
427-060	6	4	0	040	100.94
427-080	8	2	0	040	242.78
427-100	10	1	0	041	638.82
427-120	12	1	0	041	936.57

45° Street Ell (continued)

Spig x Soc

427-140F	14	1	0	047	697.99
427-160F	16	1	0	047	948.73
427-180F	18	1	0	047	1035.62
427-200F	20	1	0	047	1314.52
427-240F	24	1	0	047	2070.62

22-1/2° Street Ell

Spig x Soc



442-005	1/2	50	400	040	1.51
442-007	3/4	50	0	040	2.35
442-010	1	50	0	040	2.81
442-012	1-1/4	20	0	040	3.93
442-015	1-1/2	25	0	040	4.93
442-020	2	20	0	040	6.45
442-025F	2-1/2	1	18	047	36.53
442-030	3	5	0	040	37.68
442-040	4	4	0	040	58.15
442-060	6	4	0	040	143.56
442-060F	6	1	5	047	84.72
442-080	8	1	4	040	345.31
442-080F	8	1	4	047	127.60
442-100F	10	1	0	047	197.47
442-120F	12	1	0	047	296.41

2" Sch 40 Grated Coupling

Socket Style Sch 40



Specially designed internal grate at pipe stop gives extra protection to pumps, filters and equipment from damaging gravel and debris.

429GR-020	2	25	0	015	4.33
-----------	---	----	---	-----	------

1-1/2"x1"x1" 120° Wye

Spigot x Socket x Socket Sch 40



Unique spigot end take off with 120° branched wye pattern for special distribution connections.

475-21131T	1-1/2X1X1	25	0	015	11.12
------------	-----------	----	---	-----	-------

2" 120° Wye

Socket



475-020120	2	10	0	015	13.06
------------	---	----	---	-----	-------

Multi Configuration Venturied Tee - Socket Style Sch 40

1-1/2" Socket (2" Spigot) x 1-1/2" Socket x 3/4" Socket (1" Spigot)



Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

473-210	with 7/16" Nozzle	25	0	015	7.82
473-210-3/8	with 3/8" Nozzle	25	0	015	7.82
473-210-1/4	with 1/4" Nozzle	25	0	015	7.82

Schedule 40 Fittings & Accessories
Pool & Spa Fittings & True Union 2000 Standard Ball Valve - PVC White



Pool & Spa Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Multi Configuration Venturied Tee - Socket
Style Sch 40

1" Socket x 3/4" Socket (1" Spigot) x 3/4" Socket (1" Spigot)

Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

473-825	with 7/16" Nozzle	50	0	015	6.39
473-825-3/8	with 3/8" Nozzle	50	0	015	6.39
473-825-1/4	with 1/4" Nozzle	50	0	015	6.39

Multi Configuration Venturied Tee - Socket
Style Sch 40

Individual Nozzles Only

Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

473-1	7/16" Nozzle	100	600	015	2.06
473-2	1/4" Nozzle	100	600	015	2.06
473-3	3/8" Nozzle	100	600	015	2.06



Smooth Barb Adapter

1/2" Smooth Barb x 3/4" Spigot

Special adapter for making connections to 1/2" Vinyl Hose

432-007525	3/4X1/2	100	600	015	1.86
------------	---------	-----	-----	-----	------



Nesting Union

2" Socket x 1-1/2" Socket (2" Spigot) Buna-N O-ring

235 psi @ 73°F (23°C)

8057-251W	2X1-1/2 (2)	5	0	080	61.99
-----------	-------------	---	---	-----	-------



Nesting Union

2" Socket x 1-1/2" Socket (2" Spigot) EPDM O-ring

235 psi @ 73°F (23°C)

8097-251W	2X1-1/2 (2)	5	0	080	72.95
-----------	-------------	---	---	-----	-------



True Union 2000 Standard Ball Valve - PVC White

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC White True Union 2000 Standard Ball Valve

Socket Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi

Maximum Service Pressure = 140° F (60° C)

Temperature/Pressure De-ratings Apply

3622-015W	1-1/2	1	8	608	93.35
3622-020W	2	1	8	608	123.18

Check with Spears® for additional size availability



PVC White True Union 2000 Standard Ball Valves

SR Threaded Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi

Maximum Service Pressure = 140° F (60° C)

Temperature/Pressure De-ratings Apply

3621-015WSR	1-1/2	1	8	608	99.98
3621-020WSR	2	1	8	608	130.35

Check with Spears® for additional size availability





Schedule 40 Fittings & Accessories PVC Pool Butterfly Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

PVC White Butterfly Valve Lever Handle EPDM Seats



682311-015	1-1/2	1	0	260	163.68
682311-020	2	1	0	260	169.38
682311-025	2-1/2	1	0	260	175.07
682311-030	3	1	0	260	185.02
682311-040	4	1	0	260	206.37
682311-060	6	1	0	260	306.01
682311-080	8	1	0	260	540.85

PVC White Butterfly Valve Gear Operated EPDM Seats



682321-015	1-1/2	1	0	261	546.54
682321-020	2	1	0	261	596.36
682321-025	2-1/2	1	0	261	639.06
682321-030	3	1	0	261	644.76
682321-040	4	1	0	261	676.06
682321-060	6	1	0	261	724.45
682321-080	8	1	0	261	1000.82
682321-100	10	1	0	261	1201.26
682321-120	12	1	0	261	1458.88

Pressure Rating @ 73°F (23°C), Water 1-1/2" - 12" 150 psi
Maximum Service Temperature PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

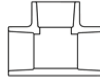
Schedule 40 Fittings & Accessories
UVR Sch 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee

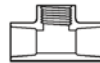
Soc x Soc x Soc



401-005UV	1/2	50	300	042	2.65
401-007UV	3/4	50	0	042	3.13
401-010UV	1	50	0	042	6.20
401-012UV	1-1/4	25	0	042	8.57
401-015UV	1-1/2	25	0	042	12.26
401-020UV	2	25	0	042	16.24
401-025UV	2-1/2	10	0	042	41.34
401-030UV	3	10	0	042	53.16
401-040UV	4	6	0	042	143.12

Tee

Soc x Soc x Fipt



402-005UV	1/2	50	300	042	2.95
402-007UV	3/4	50	0	042	3.36

Reducing Tee

Soc x Soc x Fipt



402-101UV	3/4X1/2	50	0	042	3.84
402-130UV	1X1/2	50	0	042	6.48
402-131UV	1X3/4	50	0	042	6.48
402-166UV	1-1/4X1/2	25	0	042	10.33
402-167UV	1-1/4X3/4	25	0	042	10.33
402-209UV	1-1/2X1/2	25	0	042	15.51
402-210UV	1-1/2X3/4	25	0	042	15.51
402-247UV	2X1/2	10	0	042	17.72
402-248UV	2X3/4	10	0	042	17.72

90° Ell

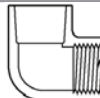
Soc x Soc



406-005UV	1/2	50	400	042	2.12
406-007UV	3/4	50	300	042	2.65
406-010UV	1	50	0	042	4.42
406-012UV	1-1/4	25	0	042	6.35
406-015UV	1-1/2	25	0	042	9.58
406-020UV	2	25	0	042	13.27
406-025UV	2-1/2	10	0	042	30.98
406-030UV	3	10	0	042	48.72
406-040UV	4	8	0	042	125.40

90° Ell

Soc x Fipt



407-005UV	1/2	50	400	042	2.78
407-007UV	3/4	50	300	042	3.13
407-101UV	3/4X1/2	50	300	042	4.08
407-131UV	1X3/4	50	0	042	5.60

90° Street Ell

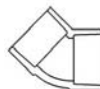
Mipt x Fipt



412-005UV	1/2	50	300	042	4.28
412-007UV	3/4	50	0	042	5.28

45° Ell

Soc x Soc



417-005UV	1/2	50	400	042	2.95
417-007UV	3/4	50	300	042	3.84
417-010UV	1	50	0	042	4.61

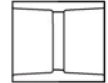
45° Ell (continued)

Soc x Soc

417-012UV	1-1/4	25	0	042	7.46
417-015UV	1-1/2	25	0	042	9.01
417-020UV	2	25	0	042	12.85
417-025UV	2-1/2	10	0	042	35.42
417-030UV	3	10	0	042	54.58
417-040UV	4	5	0	042	123.93

Coupling

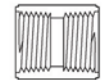
Soc x Soc



429-005UV	1/2	50	600	042	2.20
429-007UV	3/4	50	400	042	2.95
429-010UV	1	50	0	042	4.42
429-012UV	1-1/4	25	150	042	5.93
429-015UV	1-1/2	25	0	042	6.79
429-020UV	2	25	0	042	10.33
429-025UV	2-1/2	12	0	042	23.58
429-030UV	3	10	0	042	32.45
429-040UV	4	6	0	042	84.81

Coupling

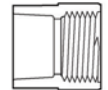
Fipt x Fipt



430-005UV	1/2	50	600	042	3.36
430-007UV	3/4	50	400	042	5.93

Female Adapter

Soc x Fipt



435-005UV	1/2	50	600	042	2.65
435-007UV	3/4	50	400	042	3.34

Male Adapter

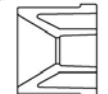
Mipt x Soc



436-074UV	1/2X3/4	50	200	042	5.76
436-005UV	1/2	50	300	042	2.00
436-007UV	3/4	50	400	042	2.34
436-010UV	1	50	300	042	2.95
436-012UV	1-1/4	25	0	042	4.14
436-015UV	1-1/2	25	0	042	5.02
436-020UV	2	25	0	042	8.11
436-025UV	2-1/2	10	0	042	20.65
436-030UV	3	10	0	042	26.53

Reducer Bushing

Spig x Soc Flush Style



437-101UV	3/4X1/2	50	300	042	2.34
437-130UV	1X1/2	50	200	042	3.36
437-131UV	1X3/4	50	300	042	3.36
437-167UV	1-1/4X3/4	25	300	042	4.87
437-168UV	1-1/4X1	25	300	042	4.87
437-210UV	1-1/2X3/4	25	200	042	5.77
437-211UV	1-1/2X1	25	200	042	5.77
437-212UV	1-1/2X1-1/4	25	200	042	5.77
437-249UV	2X1	10	80	042	7.09
437-250UV	2X1-1/4	10	120	042	7.09
437-251UV	2X1-1/2	25	0	042	7.09
437-288UV	2-1/2X3/4	10	0	042	13.27
437-289UV	2-1/2X1	10	0	042	13.27
437-290UV	2-1/2X1-1/4	10	0	042	13.27
437-292UV	2-1/2X2	10	0	042	13.27
437-335UV	3X1	10	0	042	16.97



Schedule 40 Fittings & Accessories UVR Sch 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Reducer Bushing (continued)

Spig x Soc Flush Style

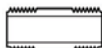
437-336UV	3X1-1/4	10	0	042	16.97
437-337UV	3X1-1/2	10	0	042	16.97
437-338UV	3X2	10	0	042	16.97
437-339UV	3X2-1/2	15	0	042	16.97
437-422UV	4X3	6	0	042	73.02

Reducer Bushing

Spig x Fipt Flush Style



438-130UV	1X1/2	50	200	042	3.36
438-131UV	1X3/4	50	200	042	3.36



Schedule 80 Nipple

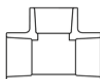
882-060UV	1/2X6	25	300	042	2.62
882-080UV	1/2X8	25	0	042	3.34
882-100UV	1/2X10	25	0	042	4.05
882-120UV	1/2X12	25	0	042	5.11
883-060UV	3/4X6	25	200	042	3.58
883-080UV	3/4X8	25	0	042	4.05
883-100UV	3/4X10	25	0	042	4.85
883-120UV	3/4X12	25	0	042	5.80

Schedule 40 Fittings & Accessories
PVC Gray Sch 40 Fittings



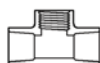
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee
Soc



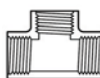
401-005G	1/2	50	300	043	.91
401-007G	3/4	50	0	043	1.02
401-010G	1	50	0	043	1.89
401-012G	1-1/4	25	0	043	2.99
401-015G	1-1/2	25	0	043	3.66
401-020G	2	25	0	043	5.26
401-025G	2-1/2	10	0	043	17.42
401-030G	3	10	0	043	22.85
401-040G	4	6	0	043	41.36
401-050G	5	5	0	043	99.96
401-060G	6	4	0	043	139.29
401-080G	8	2	0	043	323.08
401-100G	10	1	0	044	1070.48
401-120G	12	1	0	044	1581.68

Tee
Soc x Fipt



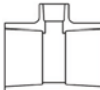
402-005G	1/2	50	300	043	1.18
402-007G	3/4	50	0	043	1.81
402-010G	1	50	0	043	3.40
402-012G	1-1/4	25	0	043	5.40

Tee
Fipt



405-005G	1/2	50	0	043	3.25
405-007G	3/4	50	0	043	5.11
405-010G	1	50	0	043	7.09
405-012G	1-1/4	25	0	043	9.81
405-015G	1-1/2	25	0	043	10.09
405-020G	2	10	0	043	13.37

Reducing Tee
Soc



401-101G	3/4X1/2	50	0	043	1.18
401-130G	1X1/2	50	0	043	2.00
401-131G	1X3/4	50	0	043	2.17
401-166G	1-1/4X1/2	25	0	043	3.26
401-167G	1-1/4X3/4	25	0	043	3.26
401-168G	1-1/4X1	25	0	043	3.26
401-209G	1-1/2X1/2	25	0	043	5.77
401-210G	1-1/2X3/4	25	0	043	5.77
401-211G	1-1/2X1	25	0	043	5.77
401-212G	1-1/2X1-1/4	25	0	043	5.77
401-247G	2X1/2	10	0	043	5.63
D401-247G	2X1/2	10	0	043	8.20
401-248G	2X3/4	10	0	043	5.63
401-249G	2X1	10	0	043	5.63
401-250G	2X1-1/4	10	0	043	5.63
401-251G	2X1-1/2	10	0	043	5.63
401-337G	3X1-1/2	10	0	043	24.88
401-338G	3X2	6	0	043	24.87
401-420G	4X2	10	0	043	41.36
401-422G	4X3	6	0	043	41.36
401-532G	6X4	2	0	043	139.29
401-585G	8X6	2	0	043	323.06

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee
Soc x Fipt



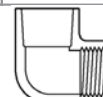
402-101G	3/4X1/2	50	0	043	1.54
402-130G	1X1/2	50	0	043	2.36
402-131G	1X3/4	50	0	043	3.40
402-166G	1-1/4X1/2	25	0	043	5.63
402-167G	1-1/4X3/4	25	0	043	5.63
402-168G	1-1/4X1	25	0	043	5.63
402-199G	1-1/2X1-1/4X1/2	25	0	043	6.99
402-209G	1-1/2X1/2	25	0	043	6.99
402-210G	1-1/2X3/4	25	0	043	6.99
402-211G	1-1/2X1-1/2X1	25	0	043	6.99
402-212G	1-1/2X1-1/4	25	0	043	6.99
402-247G	2X1/2	10	0	043	8.82
402-248G	2X3/4	10	0	043	8.82
402-249G	2X1	10	0	043	8.82
402-250G	2X1-1/4	10	0	043	8.82
402-251G	2X1-1/2	10	0	043	8.82

90° Ell
Soc



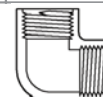
406-003G	3/8	50	600	043	3.58
406-005G	1/2	50	400	043	.72
406-007G	3/4	50	300	043	.80
406-010G	1	50	0	043	1.44
406-012G	1-1/4	25	0	043	2.54
406-015G	1-1/2	25	0	043	2.68
406-020G	2	25	0	043	4.33
406-025G	2-1/2	10	0	043	13.00
406-030G	3	10	0	043	15.58
406-040G	4	8	0	043	27.87
406-050G	5	4	0	043	72.05
406-060G	6	4	0	043	88.66
406-080G	8	2	0	043	228.33
406-100G	10	1	0	044	859.88
406-120G	12	1	0	044	1153.31

90° Ell
Soc x Fipt



407-005G	1/2	50	400	043	.91
407-007G	3/4	50	300	043	1.02
407-010G	1	50	0	043	1.89
407-012G	1-1/4	25	0	043	3.19
407-015G	1-1/2	25	0	043	3.54
407-020G	2	10	0	043	9.16

90° Ell
Fipt



408-005G	1/2	50	400	043	1.74
408-007G	3/4	50	0	043	2.58
408-010G	1	50	0	043	5.45
408-012G	1-1/4	25	0	043	5.84
408-015G	1-1/2	25	0	043	7.38
408-020G	2	10	0	043	11.21

Reducing 90° Ell
Soc



406-101G	3/4X1/2	50	0	043	1.44
406-130G	1X1/2	50	0	043	2.14

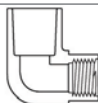


Schedule 40 Fittings & Accessories PVC Gray Sch 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing 90° Ell Soc x Fipt

407-101G	3/4X1/2	50	300	043	1.07
----------	---------	----	-----	-----	------



90° Street Ell Spig x Soc

409-005G	1/2	50	400	043	2.00
409-007G	3/4	50	0	043	2.47
409-010G	1	50	0	043	4.28
409-012G	1-1/4	25	0	043	5.11
409-015G	1-1/2	25	0	043	5.63



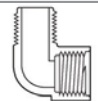
90° Street Ell Mipt x Soc

410-005G	1/2	50	400	043	1.54
410-007G	3/4	50	0	043	1.81



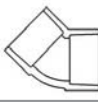
90° Street Ell Mipt x Fipt

412-005G	1/2	50	400	043	2.12
412-007G	3/4	50	0	043	2.58
412-010G	1	50	0	043	4.40
412-015G	1-1/2	25	0	043	5.93



45° Ell Soc

417-005G	1/2	50	400	043	1.19
417-007G	3/4	50	300	043	1.81
417-010G	1	50	0	043	2.17
417-012G	1-1/4	25	0	043	3.11
417-015G	1-1/2	25	0	043	3.85
417-020G	2	25	0	043	5.02
417-025G	2-1/2	10	0	043	13.01
417-030G	3	10	0	043	20.23
417-040G	4	5	0	043	36.35
417-050G	5	5	0	043	72.05
417-060G	6	8	0	043	89.73
417-080G	8	3	0	043	215.79



22-1/2° Ell Soc

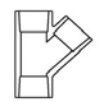
416-060GF	6	1	5	045	92.25
416-120GF	12	1	2	045	296.38



Wye Soc

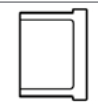
100 psi maximum internal pressure rating @ 73°F (23°C)

475-100G	10	1	0	044	1427.27
475-120G	12	0	0	044	2108.92



Plug Spig

449-005G	1/2	50	300	043	1.54
449-007G	3/4	50	300	043	1.81
449-010G	1	50	200	043	2.17
449-012G	1-1/4	25	150	043	2.95
449-015G	1-1/2	25	100	043	3.73

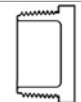


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Plug (continued)

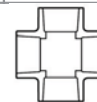
Spig

449-020G	2	10	120	043	4.64
449-030G	3	10	0	043	10.48



Plug Mipt

450-003G	3/8	50	300	043	1.99
450-005G	1/2	50	400	043	1.93
450-007G	3/4	50	300	043	2.11
450-010G	1	50	400	043	3.40
450-012G	1-1/4	25	300	043	3.55
450-015G	1-1/2	25	100	043	3.84
450-020G	2	10	120	043	4.92
450-025G	2-1/2	10	0	043	6.83
450-030G	3	10	0	043	10.37
450-040G	4	6	0	043	23.39



Cross Soc

420-005G	1/2	50	0	043	2.74
420-007G	3/4	50	0	043	4.52
420-010G	1	50	0	043	5.63
420-012G	1-1/4	25	0	043	7.46
420-015G	1-1/2	25	0	043	8.45
420-020G	2	10	0	043	12.48
420-025G	2-1/2	10	0	043	26.47
420-030G	3	5	0	043	32.45
420-040G	4	4	0	043	48.11



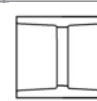
Cap Soc

447-003G	3/8	50	300	043	1.81
447-005G	1/2	50	300	043	.67
447-007G	3/4	50	300	043	.76
447-010G	1	50	200	043	1.19
447-012G	1-1/4	25	100	043	1.67
447-015G	1-1/2	25	0	043	1.81
447-020G	2	10	80	043	2.20
447-025G	2-1/2	10	0	043	7.02
447-030G	3	10	0	043	7.65
447-040G	4	6	0	043	17.42
447-050G	5	5	0	043	29.24
447-060G	6	4	0	043	41.75
447-080G	8	3	0	043	104.85



Cap Fipt

448-003G	3/8	50	300	043	2.47
448-005G	1/2	50	300	043	1.38
448-007G	3/4	50	300	043	1.55
448-010G	1	50	200	043	2.36
448-012G	1-1/4	25	100	043	2.81
448-015G	1-1/2	25	100	043	2.95
448-020G	2	10	120	043	5.21
448-030G	3	10	0	043	10.02
448-040G	4	6	0	043	17.55



Coupling Soc

429-005G	1/2	50	600	043	.48
----------	-----	----	-----	-----	-----

Schedule 40 Fittings & Accessories
PVC Gray Sch 40 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling (continued)

Soc

429-007G	3/4	50	400	043	.67
429-010G	1	50	0	043	1.15
429-012G	1-1/4	25	150	043	1.54
429-015G	1-1/2	25	0	043	1.67
429-020G	2	25	0	043	2.61
429-025G	2-1/2	12	0	043	5.63
429-030G	3	10	0	043	8.84
429-040G	4	6	0	043	12.78
429-050G	5	5	0	043	23.41
429-060G	6	5	0	043	40.47
429-080G	8	8	0	043	75.54

Coupling

Fipt



430-005G	1/2	50	300	043	.92
430-007G	3/4	50	400	043	1.69
430-010G	1	50	0	043	2.17

Reducer Coupling

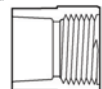
Soc



429-101G	3/4X1/2	50	200	043	1.18
429-131G	1X3/4	50	0	043	2.00
429-168G	1-1/4X1	25	0	043	3.40
429-212G	1-1/2X1-1/4	25	0	043	3.58
429-251G	2X1-1/2	10	80	043	5.69
429-338G	3X2	8	0	043	29.09
429-422G	4X3	4	0	043	38.35

Female Adapter

Soc x Fipt



435-005G	1/2	50	600	043	.80
435-007G	3/4	50	400	043	1.02
435-010G	1	50	0	043	1.19
435-012G	1-1/4	25	0	043	1.81
435-015G	1-1/2	25	0	043	2.12
435-020G	2	10	80	043	2.83
435-025G	2-1/2	10	0	043	7.13
435-030G	3	5	0	043	9.57
435-040G	4	6	0	043	15.85
435-050G	5	5	0	043	41.02
435-060G	6	5	0	043	58.26

Spigot Female Adapter

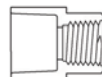
Spig x Fipt



478-005G	1/2	50	600	043	.92
478-007G	3/4	25	300	043	1.06
478-010G	1	50	0	043	1.71
478-012G	1-1/4	25	0	043	2.34
478-015G	1-1/2	20	0	043	2.92
478-020G	2	20	0	043	4.28
478-030G	3	10	0	043	14.53
478-040G	4	5	0	043	24.06

Reducing Female Adapter

Soc x Fipt

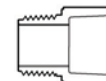


435-073G	1/2X3/8	50	600	043	1.44
435-101G	3/4X1/2	50	400	043	1.44
435-131G	1X3/4	50	0	043	1.89

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Male Adapter

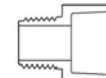
Mipt x Soc



436-005G	1/2	50	300	043	.63
436-007G	3/4	50	400	043	.72
436-010G	1	50	300	043	1.27
436-012G	1-1/4	25	200	043	1.54
436-015G	1-1/2	25	0	043	2.12
436-020G	2	25	0	043	2.74
436-025G	2-1/2	10	0	043	8.09
436-030G	3	10	0	043	11.87
436-040G	4	5	0	043	15.11
436-050G	5	5	0	043	24.91
436-060G	6	5	0	043	39.45

Reducing Male Adapter

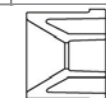
Mipt x Soc



436-074G	1/2X3/4	50	200	043	1.27
436-101G	3/4X1/2	50	300	043	1.18

Reducer Bushing Flush Style

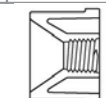
Spig x Soc



437-101G	3/4X1/2	50	300	043	.75
437-130G	1X1/2	50	200	043	1.38
437-131G	1X3/4	50	300	043	1.38
437-166G	1-1/4X1/2	25	300	043	1.81
437-167G	1-1/4X3/4	25	300	043	1.81
437-168G	1-1/4X1	25	300	043	1.81
437-209G	1-1/2X1/2	25	200	043	1.93
437-210G	1-1/2X3/4	25	200	043	1.93
437-211G	1-1/2X1	25	200	043	1.93
437-212G	1-1/2X1-1/4	25	200	043	1.93
437-247G	2X1/2	10	120	043	3.19
437-248G	2X3/4	10	120	043	3.19
437-249G	2X1	10	80	043	3.19
437-250G	2X1-1/4	10	120	043	3.19
437-251G	2X1-1/2	25	0	043	3.19
437-290G	2-1/2X1-1/4	10	0	043	5.12
437-291G	2-1/2X1-1/2	10	0	043	5.12
437-292G	2-1/2X2	10	80	043	5.12
437-334G	3X3/4	10	0	043	7.58
437-335G	3X1	10	0	043	7.58
437-336G	3X1-1/4	10	0	043	7.58
437-337G	3X1-1/2	10	0	043	7.58
437-338G	3X2	10	0	043	7.58
437-339G	3X2-1/2	10	0	043	7.58
437-420G	4X2	6	0	043	16.94
437-421G	4X2-1/2	6	0	043	16.94
437-422G	4X3	6	0	043	16.94
437-490G	5X4	5	0	043	23.79
437-532G	6X4	5	0	043	41.88
437-534G	6X5	5	0	043	41.94
437-582G	8X4	4	0	043	146.13
437-585G	8X6	4	0	043	146.13

Reducer Bushing Flush Style

Spig x Fipt



438-072G	1/2X1/4	50	300	043	1.54
438-073G	1/2X3/8	50	300	043	1.54
438-098G	3/4X1/4	50	300	043	1.54
438-101G	3/4X1/2	50	300	043	1.18
438-130G	1X1/2	50	200	043	1.89
438-131G	1X3/4	50	300	043	1.89



Schedule 40 Fittings & Accessories PVC Gray Sch 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style (continued)

Spig x Fipt

438-166G	1-1/4X1/2	25	100	043	2.95
438-167G	1-1/4X3/4	25	100	043	2.95
438-168G	1-1/4X1	25	100	043	2.95
438-209G	1-1/2X1/2	25	100	043	3.40
438-210G	1-1/2X3/4	25	100	043	3.40
438-211G	1-1/2X1	25	100	043	3.40
438-212G	1-1/2X1-1/4	25	100	043	3.40
438-247G	2X1/2	10	80	043	4.52
438-248G	2X3/4	10	80	043	4.52
438-249G	2X1	10	80	043	4.52
438-250G	2X1-1/4	10	120	043	4.52
438-251G	2X1-1/2	10	120	043	4.52
438-291G	2-1/2X1-1/2	10	0	043	6.56
438-292G	2-1/2X2	10	40	043	6.56
438-338G	3X2	10	0	043	7.58
438-420G	4X2	6	0	043	16.89
438-422G	4X3	6	0	043	16.89
438-490G	5X4	4	0	043	32.93
438-532G	6X4	5	0	043	61.85

T.T. Bushing

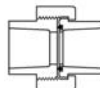
Mipt x Fipt



439-101G	3/4X1/2	50	300	043	2.12
439-130G	1X1/2	50	300	043	2.95
439-131G	1X3/4	50	200	043	2.95
439-166G	1-1/4X1/2	25	300	043	4.37
439-167G	1-1/4X3/4	25	300	043	4.37
439-168G	1-1/4X1	25	150	043	4.37
439-210G	1-1/2X3/4	25	100	043	5.26
439-211G	1-1/2X1	25	100	043	5.26
439-212G	1-1/2X1-1/4	25	100	043	5.26
439-249G	2X1	10	120	043	5.63
439-250G	2X1-1/4	10	120	043	5.63
439-251G	2X1-1/2	10	60	043	5.63

Union

Soc with Buna-N O-ring Seal



150 psi @ 73°F (23°C)

457-005G	1/2	20	120	043	6.99
457-007G	3/4	15	90	043	8.02
457-010G	1	10	40	043	8.20
457-012G	1-1/4	5	20	043	26.45
457-015G	1-1/2	5	20	043	27.57
457-020G	2	5	0	043	37.16

Union

Soc with EPDM O-ring Seal



150 psi @ 73°F (23°C)

497-005G	1/2	20	120	043	7.71
497-007G	3/4	15	90	043	8.82
497-010G	1	10	60	043	9.01
497-012G	1-1/4	5	30	043	29.08
497-015G	1-1/2	5	20	043	30.34
497-020G	2	5	0	043	40.88

Union

Fipt with Buna-N O-ring Seal



150 psi @ 73°F (23°C)

458-005G	1/2	20	120	043	7.85
458-007G	3/4	15	90	043	13.12

Union (continued)

Fipt with Buna-N O-ring Seal

458-010G	1	10	40	043	17.89
458-012G	1-1/4	5	20	043	30.75
458-015G	1-1/2	5	30	043	31.42
458-020G	2	5	0	043	38.58

Union

Fipt with EPDM O-ring Seal



150 psi @ 73°F (23°C)

498-005G	1/2	10	60	043	8.62
498-007G	3/4	15	90	043	14.43
498-010G	1	10	60	043	19.66
498-012G	1-1/4	5	20	043	33.73
498-015G	1-1/2	5	30	043	34.63
498-020G	2	5	0	043	42.45

Schedule 40 Fittings & Accessories
PVC Black Schedule 40 Pipe & Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Black Schedule 40 Pipe
20' Lengths, Price Per Foot



List Price Per Foot

PD-400-005B	1/2	20	0	744	1.78
PD-400-007B	3/4	20	0	744	2.37
PD-400-010B	1	20	0	744	3.46

Tee
Soc



401-005B	1/2	50	300	011	.85
401-007B	3/4	50	0	011	.96
401-010B	1	50	0	011	1.82
401-012B	1-1/4	25	0	011	2.84
401-015B	1-1/2	25	0	011	3.46
401-020B	2	25	0	011	5.03
401-030B	3	10	0	011	22.88

Tee
Fipt



405-005B	1/2	50	0	011	3.11
405-007B	3/4	50	0	011	4.87
405-010B	1	50	0	011	6.77
405-012B	1-1/4	25	0	011	9.36
405-015B	1-1/2	25	0	011	9.64
405-020B	2	10	0	011	12.77

Reducing Tee
Soc x Fi



402-101B	3/4X1/2	50	0	011	1.47
----------	---------	----	---	-----	------

90° Ell
Soc



406-005B	1/2	50	400	011	.69
406-007B	3/4	50	300	011	.76
406-010B	1	50	0	011	1.38
406-012B	1-1/4	25	0	011	2.43
406-015B	1-1/2	25	0	011	2.60
406-020B	2	25	0	011	4.07

90° Ell
Soc x Fi



407-005B	1/2	50	400	011	.85
407-007B	3/4	50	300	011	.96
407-010B	1	50	0	011	1.82
407-012B	1-1/4	25	0	011	3.05
407-015B	1-1/2	25	0	011	3.37
407-020B	2	10	0	011	8.74

90° Ell
Fipt



408-005B	1/2	50	400	011	1.64
408-007B	3/4	50	0	011	2.45
408-010B	1	50	0	011	5.21

90° Street Ell
Spig x Soc

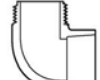


409-015B	1-1/2	25	0	011	5.39
----------	-------	----	---	-----	------

90° Street Ell (continued)
Spig x Soc

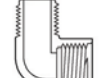
409-020B	2	10	0	011	10.39
----------	---	----	---	-----	-------

90° Street Ell
Mipt x Soc



410-005B	1/2	50	400	011	1.47
410-007B	3/4	50	0	011	1.75
410-010B	1	50	0	011	2.92
410-012B	1-1/4	25	0	011	4.07
410-015B	1-1/2	25	0	011	4.26
410-020B	2	10	0	011	10.49

90° Street Ell
Mipt x Fi



412-005B	1/2	50	400	011	2.00
----------	-----	----	-----	-----	------

45° Ell
Soc



417-005B	1/2	50	400	011	1.12
417-007B	3/4	50	300	011	1.75
417-010B	1	50	0	011	2.09
417-012B	1-1/4	25	0	011	2.92
417-015B	1-1/2	25	0	011	3.66
417-020B	2	25	0	011	4.77

45° Street Ell
Spig x Soc



427-020B	2	25	0	011	4.77
----------	---	----	---	-----	------

Cross
Soc



420-015B	1-1/2	25	0	011	8.06
420-020B	2	10	0	011	11.91

Coupling
Soc



429-005B	1/2	50	600	011	.45
429-007B	3/4	50	400	011	.62
429-010B	1	50	0	011	1.07
429-012B	1-1/4	25	150	011	1.47
429-015B	1-1/2	25	0	011	1.58
429-020B	2	25	0	011	2.45

Reducer Coupling
Soc



429-422B	4X3	4	0	011	36.53
----------	-----	---	---	-----	-------

Female Adapter
Soc x Fi



435-005B	1/2	50	600	011	.76
435-007B	3/4	50	400	011	.96
435-010B	1	50	0	011	1.12
435-012B	1-1/4	25	0	011	1.75
435-015B	1-1/2	25	0	011	2.00
435-020B	2	10	80	011	2.66

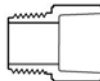


Schedule 40 Fittings & Accessories PVC Black Schedule 40 Pipe & Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Male Adapter

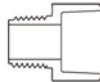
Mipt x Soc



436-005B	1/2	50	300	011	.62
436-007B	3/4	50	400	011	.69
436-010B	1	50	300	011	1.22
436-012B	1-1/4	25	0	011	1.47
436-015B	1-1/2	25	0	011	2.00
436-020B	2	25	0	011	2.62
436-030B	3	10	0	011	11.29

Reducing Male Adapter

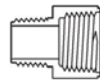
Mipt x Soc



436-101B	3/4X1/2	50	300	011	1.12
436-251B	2X1-1/2	10	80	011	6.34

IPT Adapter

Mipt x Fipt



446-074B	1/2X3/4	50	200	011	2.62
----------	---------	----	-----	-----	------

Reducer Bushing

Spig x Soc



437-251B	2X1-1/2	25	0	011	3.05
437-335B	3X1	10	0	011	7.22
437-337B	3X1-1/2	10	0	011	7.22

Reducer Bushing

Spig x Fipt



438-072B	1/2X1/4	50	350	011	1.47
----------	---------	----	-----	-----	------

Cap

Soc



447-005B	1/2	50	300	011	.62
447-007B	3/4	50	300	011	.71
447-010B	1	50	200	011	1.12
447-012B	1-1/4	25	100	011	1.58
447-015B	1-1/2	25	0	011	1.75
447-020B	2	10	80	011	2.09
447-040B	4	6	0	011	16.60
447-060B	6	4	0	011	39.79

Cap

Fipt



448-005B	1/2	50	300	011	1.29
448-007B	3/4	50	300	011	1.52

Plug

Mipt



450-005B	1/2	50	300	011	1.83
450-007B	3/4	50	300	011	1.98
450-010B	1	50	400	011	3.22
450-012B	1-1/4	25	300	011	3.38

Schedule 40 Fittings & Accessories PVC Clear Sch 40 Pipe & Fittings



PIPE SPECIFICATIONS Standard Length of pipe is 10 Feet. Custom lengths and sizes are available on special order from the pipe manufacturer. All pipe is packed in poly bags and boxed. This material complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations, and is safe for use in food contact applications. Pipe has a UL 94 V-0 rating. Standard threading or grooving of Schedule 40 Clear pipe is not recommended due to insufficient wall thickness. Use specialty clear transition fittings for threaded assemblies or standard PVC transition fittings where applicable.

Part Number	Size	Avg. O.D.	Avg. I.D.	Min. Wall	Max. W.P. psi*	Lbs./Ft.
PL-002	1/4	.540	.354	.088	390	.081
PL-003	3/8	.675	.483	.091	310	.109
PL-005	1/2	.840	.608	.109	300	.161
PL-007	3/4	1.050	.810	.113	240	.214
PL-010	1	1.315	1.033	.133	220	.315
PL-012	1-1/4	1.660	1.364	.140	180	.426
PL-015	1-1/2	1.900	1.592	.145	170	.509
PL-020	2	2.375	2.049	.154	140	.682
PL-025	2-1/2	2.875	2.445	.203	150	1.076
PL-030	3	3.500	3.042	.216	130	1.409
PL-040	4	4.500	3.998	.237	110	2.006
PL-060	6	6.625	6.031	.280	90	3.535
PL-080	8	8.625	7.943	.322	80	5.305

* For water at 73.4°F with solvent welded joints.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Clear Schedule 40 Pipe 10' Lengths, Price Per Foot



List Price Per Foot

PL-002	1/4	190	0	038	1.02
PL-003	3/8	100	0	038	1.38
PL-005	1/2	90	0	038	2.06
PL-007	3/4	100	0	038	2.77
PL-010	1	90	0	038	4.09
PL-012	1-1/4	30	0	038	5.55
PL-015	1-1/2	50	0	038	6.64
PL-020	2	10	0	038	8.95
PL-025	2-1/2	10	0	038	14.14
PL-030	3	10	0	038	18.46
PL-040	4	10	0	038	27.80
PL-060	6	10	0	038	50.82
PL-080	8	10	0	038	76.21
PL-100	10	10	0	038	122.68
PL-120	12	10	0	038	162.05

Tee Soc



401-002L	1/4	25	150	039	11.29
401-003L	3/8	50	200	039	7.27
401-005L	1/2	50	300	039	8.52
401-007L	3/4	50	0	039	9.71
401-010L	1	50	0	039	18.17
401-012L	1-1/4	25	0	039	28.56
401-015L	1-1/2	25	0	039	34.63
401-020L	2	10	0	039	50.33
401-025L	2-1/2	10	0	039	165.89
401-030L	3	10	0	039	217.58
401-040L	4	6	0	039	393.88
401-060L	6	4	0	039	709.01
401-080L	8	2	0	039	1276.20

90° EII Soc



406-002L	1/4	25	150	039	9.19
406-003L	3/8	50	300	039	9.19
406-005L	1/2	50	200	039	6.94
406-007L	3/4	50	300	039	7.59
406-010L	1	50	0	039	13.78
406-012L	1-1/4	25	0	039	24.26
406-015L	1-1/2	25	0	039	25.77
406-020L	2	25	0	039	40.84
406-025L	2-1/2	10	0	039	123.92

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° EII (continued) Soc

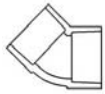
406-030L	3	10	0	039	148.26
406-040L	4	8	0	039	265.47
406-060L	6	5	0	039	477.86
406-080L	8	2	0	039	860.15

90° Street EII Spig x Soc



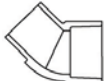
409-005L	1/2	50	400	039	6.94
409-007L	3/4	50	0	039	7.59
409-010L	1	50	0	039	13.78
409-012L	1-1/4	25	0	039	24.26
409-015L	1-1/2	25	0	039	25.77
409-020L	2	10	0	039	40.84
409-025L	2-1/2	10	0	039	123.92

45° EII Soc



417-002L	1/4	25	150	039	14.75
417-003L	3/8	25	150	039	14.75
417-005L	1/2	50	400	039	11.20
417-007L	3/4	50	300	039	17.29
417-010L	1	50	0	039	20.77
417-012L	1-1/4	25	0	039	29.37
417-015L	1-1/2	25	0	039	36.63
417-020L	2	10	0	039	47.75
417-025L	2-1/2	10	0	039	124.09
417-030L	3	10	0	039	192.64
417-040L	4	5	0	039	346.01
417-060L	6	8	0	039	622.81
417-080L	8	3	0	039	1121.06

45° Street EII Spig x Soc



427-005L	1/2	50	400	039	11.20
427-007L	3/4	50	0	039	17.29
427-010L	1	50	0	039	20.77
427-012L	1-1/4	25	0	039	29.37
427-015L	1-1/2	25	0	039	36.63
427-020L	2	25	0	039	47.75
427-025L	2-1/2	10	0	039	124.09
427-030L	3	10	0	039	192.64
427-040L	4	5	0	039	346.01



Schedule 40 Fittings & Accessories PVC Clear Sch 40 Pipe & Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling Soc



429-002L	1/4	25	150	039	6.17
429-003L	3/8	50	300	039	6.17
429-005L	1/2	50	300	039	4.59
429-007L	3/4	50	200	039	6.18
429-010L	1	50	0	039	10.74
429-012L	1-1/4	25	150	039	14.62
429-015L	1-1/2	25	0	039	15.74
429-020L	2	10	60	039	24.53
429-025L	2-1/2	10	0	039	53.75
429-030L	3	10	0	039	84.33
429-040L	4	6	0	039	121.74
429-060L	6	5	0	039	219.15
429-080L	8	6	0	039	394.44

Female Adapter Soc x SR Fipt



435-002SRL	1/4	25	450	039	12.95
435-003SRL	3/8	25	300	039	12.95
435-005SRL	1/2	25	300	039	7.67
435-007SRL	3/4	25	300	039	9.60
435-010SRL	1	25	200	039	11.09
435-012SRL	1-1/4	10	80	039	17.04
435-015SRL	1-1/2	10	80	039	19.99
435-020SRL	2	10	0	039	26.92
435-025SRL	2-1/2	5	0	039	55.95
435-030SRL	3	10	0	039	91.33
435-040SRL	4	6	0	039	151.06

Male Adapter Mipt x Soc



436-003L	3/8	50	300	039	8.28
436-005L	1/2	50	300	039	6.18
436-007L	3/4	50	400	039	6.94
436-010L	1	50	300	039	12.18
436-012L	1-1/4	25	0	039	14.71
436-015L	1-1/2	25	0	039	19.97
436-020L	2	25	0	039	26.04
436-025L	2-1/2	10	0	039	77.24
436-030L	3	10	0	039	112.84
436-040L	4	5	0	039	143.91

Reducer Bushing Spig x Soc



437-101L	3/4X1/2	50	300	039	7.14
437-131L	1X3/4	50	200	039	13.13
437-168L	1-1/4X1	25	150	039	17.29
437-211L	1-1/2X1	25	100	039	18.26
437-212L	1-1/2X1-1/4	25	100	039	18.26
437-251L	2X1-1/2	10	80	039	30.24
437-292L	2-1/2X2	10	40	039	48.64
437-338L	3X2	10	0	039	72.17
437-339L	3X2-1/2	10	0	039	72.17
437-422L	4X3	6	0	039	161.25
437-532L	6X4	5	0	039	324.51
437-585L	8X6	4	0	039	522.47

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cap Soc



447-002L	1/4	25	150	039	8.28
447-003L	3/8	50	300	039	8.28
447-005L	1/2	50	300	039	6.18
447-007L	3/4	50	300	039	7.14
447-010L	1	50	200	039	11.31
447-012L	1-1/4	25	100	039	15.74
447-015L	1-1/2	25	0	039	17.29
447-020L	2	10	80	039	20.84
447-025L	2-1/2	10	0	039	66.68
447-030L	3	10	0	039	65.65
447-040L	4	6	0	039	149.31
447-060L	6	4	0	039	268.76
447-080L	8	3	0	039	483.75

Wyes & Reducing Wyes Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-015L	1-1/2	20	0	039	45.67
475-020L	2	10	0	039	67.23
475-030L	3	4	0	039	280.03
475-040L	4	4	0	039	509.85
475-060L	6	3	0	039	871.62
475-532L	6X4	5	0	039	871.62

Schedule 40 Fittings & Accessories
Clear Ultra Violet Resistant (UVR) PVC Pipe



Designed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe. This specialty pipe can be joined with Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Produced in both Thin Walled UVR pipe down to 0.135" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Use Spears® PVC Clear Solvent Cements and Primers for joining.

UV Resistant Clear Pipe Dimensions & Pressure Ratings

Thin Walled UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
2"	2.375	2.173	0.091	0.456	80
3"	3.500	3.210	0.135	0.966	80
4"	4.500	4.134	0.172	1.569	80
6"	6.625	6.251	0.172	2.391	70
8"	8.625	8.251	0.172	3.134	53
10"	10.750	10.376	0.172	3.923	43
12"	12.750	12.376	0.172	4.666	36

De-rating Factors @ Elevated Temperature

Operating Temp °F	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Schedule 40 UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
1/2"	0.840	0.602	0.109	0.170	300
3/4"	1.050	0.804	0.113	0.226	240
1"	1.315	1.029	0.133	0.333	220
1-1/4"	1.660	1.360	0.140	0.450	180
1-1/2"	1.900	1.590	0.145	0.537	170
2"	2.375	2.047	0.154	0.720	140
2-1/2"	2.875	2.445	0.203	1.136	150
3"	3.500	3.042	0.216	1.488	130
3-1/2"	4.000	3.521	0.226	1.789	120
4"	4.500	3.998	0.237	2.118	110
6"	6.625	6.031	0.280	3.733	90

Maximum Service Temperature = 140 °F

The temperature de-rating factors shown in table at left can be multiplied by the pressure ratings listed for each pipe size to determine the maximum pressure rating of the pipe at the specified elevated Operating temperatures.

* Pressure Rating @ 73 °F

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Thin Walled Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

PL091-020UVR-10	2	10	0	038	4.75
PL135-030UVR-10	3	10	0	038	10.06
PL172-040UVR-10	4	20	0	038	17.38
PL172-060UVR-10	6	10	0	038	27.45
PL172-080UVR-10	8	10	0	038	35.96
PL172-100UVR-10	10	10	0	038	51.04
PL172-120UVR-10	12	10	0	038	60.71

See application information above
 Custom lengths available, contact Spears®

Schedule 40 Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

PL400-005UVR-10	1/2	90	0	038	1.73
PL400-007UVR-10	3/4	100	0	038	2.32
PL400-010UVR-10	1	90	0	038	2.44
PL400-012UVR-10	1-1/4	30	0	038	4.66
PL400-015UVR-10	1-1/2	50	0	038	5.58
PL400-020UVR-10	2	10	0	038	7.51
PL400-025UVR-10	2-1/2	80	0	038	11.86
PL400-030UVR-10	3	10	0	038	15.50
PL400-035UVR-10	3-1/2	10	0	038	19.69

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Schedule 40 Clear UVR PVC Pipe (continued)

10' Lengths, Price Per Foot

PL400-040UVR-10	4	50	0	038	23.33
PL400-060UVR-10	6	10	0	038	42.66

See application information above
 Custom lengths available, contact Spears®



Schedule 40 Fittings & Accessories Schedule 40 Repair Fittings

Schedule 40 Pipe Repair Fittings
Allows Difficult Broken Pipe Repair To Be Made Easily

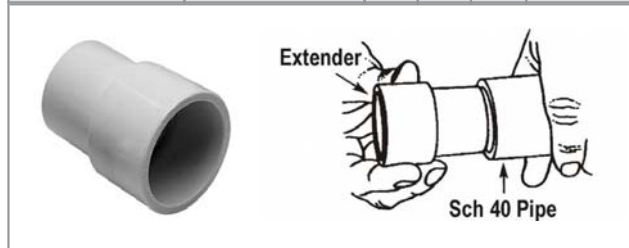
Pipe Extenders

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. Spigot x Pipe I.D. Spigot

* Fabricated, Non-Pressure Rated

S0301-05	1/2	100	600	894	1.63
S0301-07	3/4	50	300	894	2.68
S0301-10	1	50	200	894	3.40
S0301-12	1-1/4	50	0	894	4.07
S0301-15	1-1/2	50	0	894	4.64
S0301-20	2	25	0	894	5.14
S0301-25	2-1/2	25	0	894	6.12
S0301-30	3	25	0	894	14.31
S0301-40	4	20	0	894	16.86
S0301-60F*	6	1	10	392	69.63
S0301-80F*	8	1	2	392	139.88
S0301-100F*	10	1	0	392	217.07
S0301-120F*	12	1	0	392	314.77



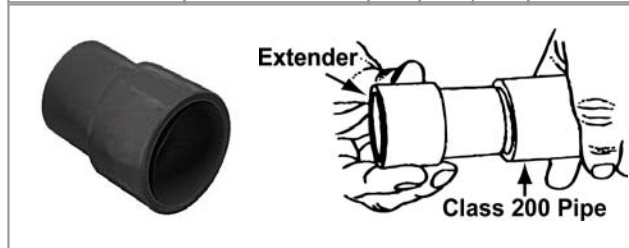
Pipe Extenders, Class 200

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. Spigot x Pipe I.D. Spigot

Fits Class 200 Pipe I.D.

S0304-10	1	48	0	894	3.76
S0304-12	1-1/4	48	0	894	4.12
S0304-15	1-1/2	48	0	894	4.48
S0304-20	2	25	0	894	5.02



Inside Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

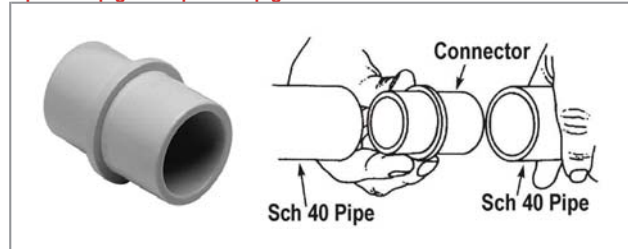
Pipe I.D. Spigot x Pipe I.D. Spigot

S0302-10	1	50	300	894	3.40
S0302-15	1-1/2	50	0	894	4.64
S0302-20	2	20	0	894	5.14
S0302-30	3	25	0	894	16.13
S0302-40	4	5	0	894	19.15

Inside Connectors (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe I.D. Spigot x Pipe I.D. Spigot



Schedule 40 Fitting Extender

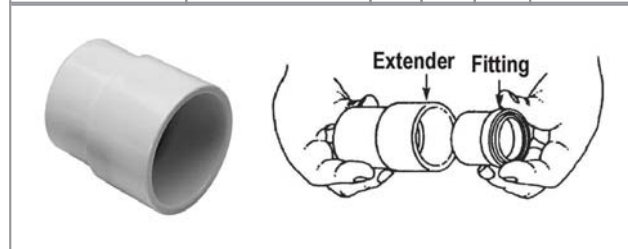
Extender Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Soc O.D. x Soc

Spigot End also functions as next size down Socket

S0303-15	1-1/2	25	0	894	6.45
S0303-20	2	25	0	894	7.99



Schedule 40 Fittings & Accessories Repair Couplings



(S119) Socket x Socket



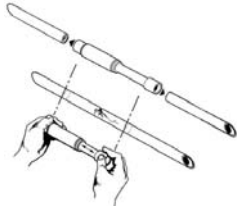
- Multi-function Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use

- Available in PVC White and PVC Gray
- Double O-ring Seal in EPDM or high-grade FKM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

(S118) Spigot x Socket

Versatile Repair Capability

Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket configurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket configurations are excellent for lateral and riser add-ons, damaged fitting replacement, or for installing valves in existing piping systems. Order the wrong configuration? Simply cut coupling from Socket shaft end to function as a spigot or add a coupling to Spigot shaft end for Socket connections.



**Pipe Damage Repair
Or Use as Expansion Joint**



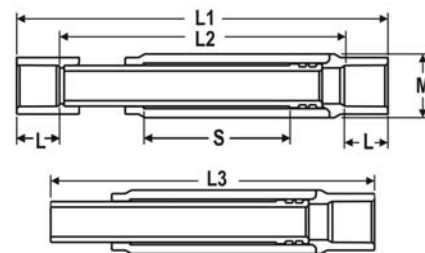
Lateral Add-on Or Fitting Replacement



Valve Retrofit Installation

Dimensions

Size	L	L1	L2	L3	S	M
1/2	7/8	7-5/8	5-7/8	6-3/4	3	1-7/16
3/4	1	9-3/8	7-3/8	8-1/4	4	1-3/4
1	1-1/8	10-1/8	7-7/8	8-7/8	4	2-1/16
1-1/4	1-1/4	10-7/8	8-3/8	9-5/8	4	2-7/16
1-1/2	1-3/8	11-3/8	8-5/8	9-7/8	4	2-11/16
2	1-1/2	12-1/4	9-1/4	10-5/8	4	3-3/16
2-1/2	1-3/4	15-7/8	12-3/8	13-7/8	6	3-15/16
3	1-7/8	16-1/8	12-3/8	14-1/8	6	4-9/16
4	2-1/4	17-3/4	13-1/4	15-1/4	6	5-11/16
6	3	22	16	18-3/4	6	8-3/8



INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC - Spig x Soc PVC White with EPDM O-ring



Can be used as short-stroke Expansion Joint

S118-05	1/2	25	0	025	5.56
S118-07	3/4	30	0	025	6.32
S118-10	1	15	0	025	7.29
S118-12	1-1/4	23	0	025	13.74
S118-15	1-1/2	25	0	025	14.96
S118-20	2	12	0	025	23.14
S118-25	2-1/2	5	0	025	33.57
S118-30	3	4	0	025	41.94
S118-40	4	2	0	025	73.40
S118-60	6	1	0	025	179.60

PVC - Soc x Soc PVC White with EPDM O-ring



Can be used as short-stroke Expansion Joint

S119-05	1/2	30	0	025	5.56
S119-07	3/4	24	0	025	6.32
S119-10	1	20	0	025	7.29
S119-12	1-1/4	10	0	025	13.74
S119-15	1-1/2	16	0	025	14.96
S119-20	2	10	0	025	23.14

PVC - Soc x Soc (continued) PVC White with EPDM O-ring

S119-25	2-1/2	5	0	025	33.57
S119-30	3	4	0	025	41.94
S119-40	4	2	0	025	73.40
S119-60	6	1	0	025	179.60

Fabricated Repair Coupling Gasket x Gasket



428-020F	2	1	10	047	62.31
428-030F	3	1	8	047	80.73
428-040F	4	1	4	047	93.48
428-060F	6	1	3	047	126.72
428-080F	8	1	2	047	173.78
428-100F	10	1	0	047	260.34
428-120F	12	1	0	047	338.97
428-140F	14	1	0	047	663.36
428-160F	16	1	0	047	928.27
428-180F	18	1	0	047	1428.76
428-200F	20	1	0	047	1705.29
428-240F	24	1	0	047	2380.68



Schedule 40 Fittings & Accessories Short Repair Couplings

Space Saving, Compact Version of Standard Repair Coupling
Requires 1/3 less Space

(SH119) Socket x Socket



(SH118) Spigot x Socket

- Compact Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White, Sizes 1/2" - 2"
- EPDM Double O-ring Seal
- Pressure Rated to 235 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC - Spig x Soc

PVC White with EPDM O-ring



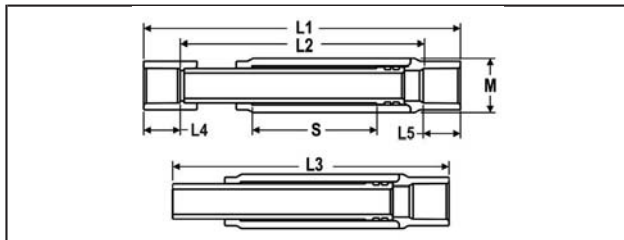
SH118-05	1/2	36	0	025	5.56
SH118-07	3/4	30	0	025	6.32
SH118-10	1	35	0	025	7.29
SH118-12	1-1/4	25	0	025	13.74
SH118-15	1-1/2	32	0	025	14.96
SH118-20	2	15	0	025	23.14

PVC - Soc x Soc

PVC White with EPDM O-ring



SH119-05	1/2	40	0	025	5.56
SH119-07	3/4	30	0	025	6.32
SH119-10	1	30	0	025	7.29
SH119-12	1-1/4	20	0	025	13.74
SH119-15	1-1/2	21	0	025	14.96
SH119-20	2	12	0	025	23.14



Size	L1	L2	L3	L4	L5	S	M
1/2	5-7/8	4-5/16	4-15/16	7/8	3/4	2	1-7/16
3/4	6-9/16	4-3/4	5-7/16	1	13/16	2-1/4	1-3/4
1	6-13/16	4-3/4	5-9/16	1-1/8	15/16	2-3/16	2-1/16
1-1/4	7-15/16	5-11/16	6-5/8	1-1/4	1	2-1/2	2-7/16
1-1/2	8-1/4	5-13/16	6-3/4	1-3/8	1-1/8	2-13/16	2-11/16
2	10-1/16	7-3/8	8-5/16	1-1/2	1-3/16	3-1/8	3-1/4

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

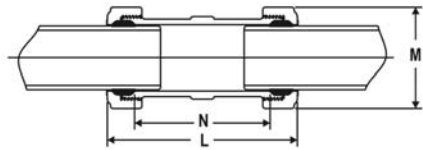
Schedule 40 Fittings & Accessories Compression Couplings



- Designed for Quick Connections, System Modifications or Repairs
- Completely Redesigned for Improved Versatility
- PVC White plus New Industrial PVC Gray
- Easy-Thread Compression Nut
- New Spigot Conversion Capability
- Full Service 200 PSI Pressure Rating
- NSF® Certified for Potable Water Use

Basic Dimensions

Part Number	Size (in.)	L	M	N
S110-05	1/2	5-3/16	1-3/16	3-3/8
S110-07	3/4	5-7/16	2-1/16	3-9/16
S110-10	1	5-11/16	2-7/16	3-3/4
S110-12	1-1/4	6-1/4	2-15/16	4-1/8
S110-15	1-1/2	6-1/2	3-5/16	4-5/8
S110-20	2	7-1/8	3-3/4	5-1/16
S110-25	2-1/2	8-11/16	4-11/16	5-7/8
S110-30	3	9-1/2	5-1/2	6-3/16
S110-40	4	11-5/16	6-3/4	7-3/8
S110-60	6	11-5/8	9-5/16	7-9/16



N = Maximum allowable space between pipe ends.

NOTE: Decreasing distance between pipe ends improves stability and is recommended.

PVC White

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N Gasket					
S110-05	1/2	28	0	024	3.86
S110-07	3/4	24	0	024	5.22
S110-10	1	20	0	024	6.77
S110-12	1-1/4	10	0	024	10.38
S110-15	1-1/2	16	0	024	10.72
S110-20	2	12	0	024	13.94
S110-25	2-1/2	6	0	024	26.21
S110-30	3	4	0	024	34.32
S110-40	4	4	0	024	56.44
S110-60	6	1	0	024	128.36

PVC Gray

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

EPDM Gasket

S110E-05G	1/2	28	0	024	4.60
S110E-07G	3/4	24	0	024	6.17
S110E-10G	1	15	0	024	7.96
S110E-12G	1-1/4	10	0	024	12.27
S110E-15G	1-1/2	16	0	024	12.67
S110E-20G	2	12	0	024	16.44
S110E-25G	2-1/2	6	0	024	30.96
S110E-30G	3	4	0	024	40.48
S110E-40G	4	4	0	024	66.60
S110E-60G	6	1	0	024	151.46

Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-005	1/2	1	50	299	11.93
CCW-007	3/4	1	50	299	12.14
CCW-010	1	1	50	299	12.65
CCW-012	1-1/4	1	50	299	14.32
CCW-015	1-1/2	1	50	299	15.44
CCW-020*	2	1	50	299	17.25
CCW-030**	3	1	25	299	21.22
CCW-060	6	8	0	299	31.92

* CCW-20 - Wrench also fits 2-1/2" Coupling Body

**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Set

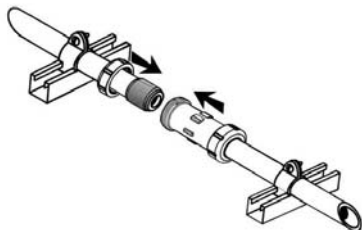
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	Set	1	50	299	99.68
Complete Set of Wrenches, Sizes 1/2 - 3					



Schedule 40 Fittings & Accessories Compression Couplings

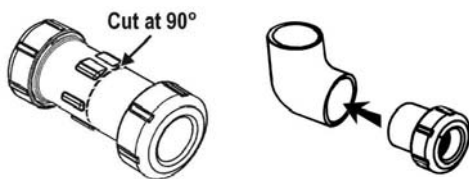
Easy Installation

Spears® Compression Couplings easily install by simply sliding nut over pipe, slip on gasket, then insert into body and tighten nuts.



Convert Fittings to Compression Outlet

Socket-type fittings 3/4" through 3" can be easily converted to compression outlet sizes 1/2" through 2-1/2" by simply cutting the Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.



Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2
2-1/2	3

Important Installation Note

WARNING: The compression joints provide a positive seal but do not restrain pipe from thrusts and movement under pressure. Use of compression joint requires blocking connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

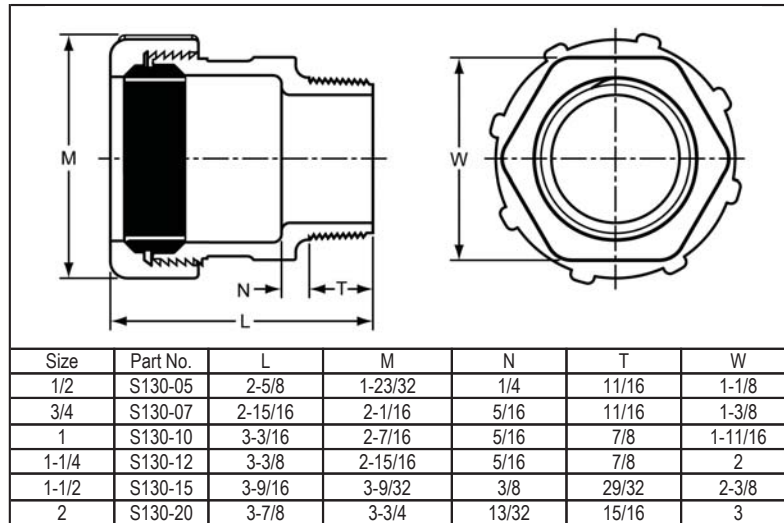
Schedule 40 Fittings & Accessories Compression Male Adapters



- Quickly Adapts Pipe to MIPT Thread
- Easy-Thread Compression Nut
- PVC White with Buna-N Gasket
- 200 psi Pressure Rating
- NSF® Certified for Potable Water Use

Uses same Nut Wrench sets available for Compression Couplings

Basic Dimensions



PVC Compression Male Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N Gasket					
S130-05	1/2	25	150	024	3.14
S130-07	3/4	25	200	024	3.79
S130-10	1	25	0	024	4.81
S130-12	1-1/4	25	0	024	7.39
S130-15	1-1/2	25	0	024	7.58
S130-20	2	25	0	024	9.45



Schedule 40 Fittings & Accessories Filters

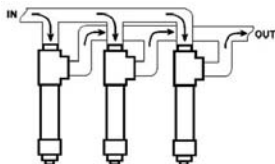
Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.



- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install

- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



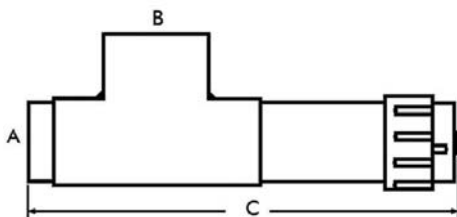
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM					
FL-16"	2-1/2 /3 x 4	1	0	020	555.11
FL-32"	2-1/2 /3 x 4	1	0	020	567.73
FL-50	2-1/2 /3 x 4	1	0	020	643.40
FL-76	2-1/2 /3 x 4	1	0	020	777.14
FL-100	2-1/2 /3 x 4	1	0	020	706.48
FL-150	2-1/2 /3 x 4	1	0	020	731.74
FL-200	2-1/2 /3 x 4	1	0	020	794.81

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.

50 GPM

MFL-16"	2-1/2 /3 x 2	1	0	020	466.82
MFL-32"	2-1/2 /3 x 2	1	0	020	474.37
MFL-50	2-1/2 /3 x 2	1	0	020	489.48
MFL-76	2-1/2 /3 x 2	1	0	020	592.98
MFL-100	2-1/2 /3 x 2	1	0	020	517.27
MFL-150	2-1/2 /3 x 2	1	0	020	542.49
MFL-200	2-1/2 /3 x 2	1	0	020	605.57

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.

Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FL-50-1	50 Mesh	3	0	020	479.42

Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.

50 GPM (12" Length)

MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.

Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM Filter Body					
FL-11	2-1/2 /3 X 4	1	0	020	378.46
50 GPM Filter Body					
MFL-11	2-1/2 /3 X 2	1	0	020	290.17
Components for Old-Style Filters w/3" Bottom Cap					
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-4A	3X1-1/4	70	0	020	31.55
FL-5A	3X1/4	70	0	020	31.55



Filters

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Cap Gasket Only					
FCG-5	3	2	0	020	10.04

Components for New-Style Filters w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-4B	4X1-1/4	25	0	020	57.97

Components for New-Style Filters w/4" Bottom Cap (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-5B	4X1/4	1	0	020	93.78
Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)					
Cap O-Ring Only					
B-242	- - -	100	0	901	.83
Filter Bushing O-Rings					
B-335-60	- - -	100	0	901	3.66
Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals					

Reverse Flow Filters



100 GPM



50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

100 GPM Reverse Flow Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
FLR-16"	4X2-1/2 /3	1	0	020	555.11
FLR-32"	4X2-1/2 /3	1	0	020	567.73
FLR-50	4X2-1/2 /3	1	0	020	643.40
FLR-76	4X2-1/2 /3	1	0	020	777.14
FLR-100	4X2-1/2 /3	1	0	020	706.48
FLR-150	4X2-1/2 /3	1	0	020	731.74
FLR-200	4X2-1/2 /3	1	0	020	794.81

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
MFLR-16"	2X2-1/2 /3	1	0	020	466.82
MFLR-32"	2X2-1/2 /3	1	0	020	474.37
MFLR-50	2X2-1/2 /3	1	0	020	489.48
MFLR-76	2X2-1/2 /3	1	0	020	592.98
MFLR-100	2X2-1/2 /3	1	0	020	517.27
MFLR-150	2X2-1/2 /3	1	0	020	542.49
MFLR-200	2X2-1/2 /3	1	0	020	605.57

*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Reverse Flow Filter Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52

100 GPM Reverse Flow Filter Replacement Screens (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53

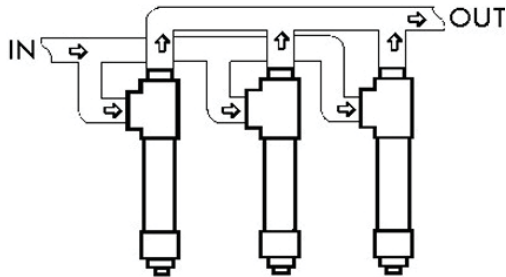


Schedule 40 Fittings & Accessories Reverse Flow Filters

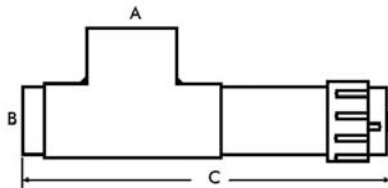
Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: FLR-50 = 50 Mesh

Typical Reverse Flow Application



- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in direct sunlight, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



Series	A Inlet	B Outlet		C Overall Length	Screen Length	Filter Approx. Weight
		Socket	Spigot			
FLR	4	2-1/2	3	28	24	8
MFLR	4	2-1/2	3	16	12	4-3/4

Schedule 40 Fittings & Accessories
In-line Tee Style Filters and Reverse In-line Tee Style Filters



100 GPM and 50 GPM • PVC White • Buna O-ring Seal



100 GPM



50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

100 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	555.11
TF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	567.73
TF-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	643.40
TF-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	777.14
TF-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	706.48
TF-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	731.74
TF-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	794.81

50 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MTF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	466.82
MTF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	474.37
MTF-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	489.48
MTF-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	592.98
MTF-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	517.27
MTF-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	542.49
MTF-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	605.57

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
 Example: TF-50 = 50 Mesh

100 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	555.11
TF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	567.73
TFR-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	643.40
TFR-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	777.14
TFR-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	706.48
TFR-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	731.74
TFR-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	794.81

50 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MTF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	466.82
MTF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	474.37
MTFR-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	489.48
MTFR-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	592.98
MTFR-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	517.27

50 GPM PVC White Reverse Tee Filter (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MTFR-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	542.49
MTFR-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	605.57

*Standard TF-16, TF-32, MTF-16 & MTF-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FL-50-1	50 Mesh	3	0	020	479.42
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14



Schedule 40 Fittings & Accessories
In-line Tee Style Filters and Reverse In-line Tee Style Filters

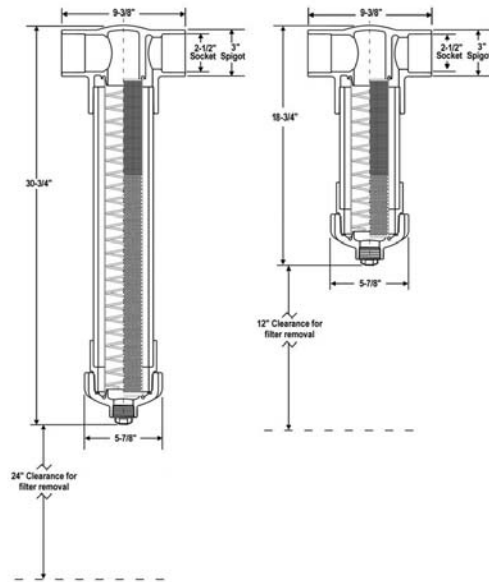
**50 GPM Reverse Flow Filter Replacement Screens for
MTFR Filters (12" Length) (continued)**

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53

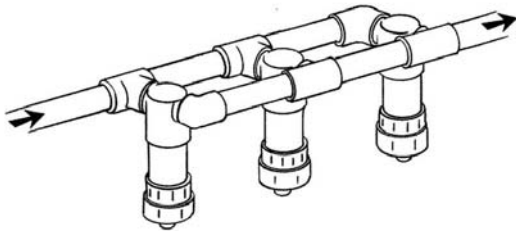
IN-LINE TECHNICAL INFORMATION

Dimensions

Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

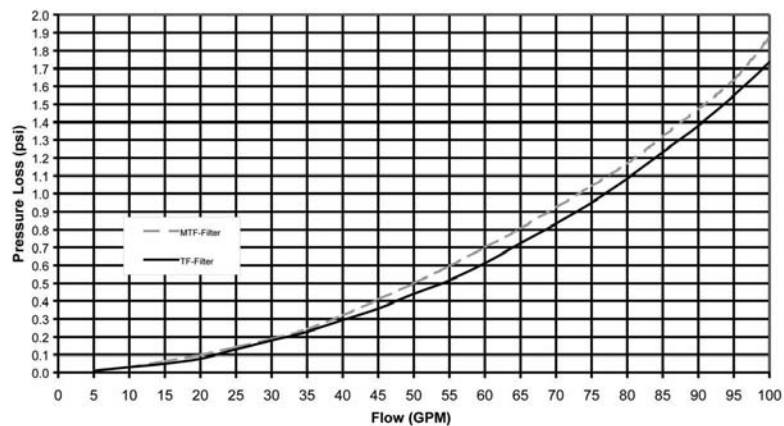


Parallel Filter Installation



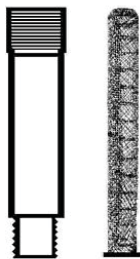
- When more than 100 gpm is required, filters may be installed in parallel.
- When installing filter, allow space for removing filter screen for cleaning.
- Remove stainless steel filter screen before solvent welding filter to pipe manifold to avoid cement contact with screen.
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance.
- Installation in a shaded area is preferred.

Pressure Loss

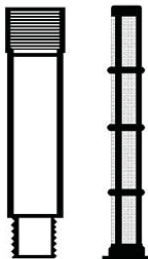




Schedule 40 Fittings & Accessories Hose Filters



7 GPM Steel



7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

7 GPM Hose Filter Assembly

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
with Stainless Steel Screen					
HF-20	3/4	10	60	020	18.71
HF-30	3/4	10	60	020	18.71
HF-50	3/4	10	60	020	18.71
HF-80	3/4	10	60	020	18.71
HF-100	3/4	10	60	020	19.43
HF-150	3/4	10	60	020	19.67
HF-200	3/4	10	60	020	20.20

with Plastic/Nylon Screen

HF-150N	3/4	10	60	020	19.67
---------	-----	----	----	-----	-------

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Stainless Steel Screen					
HF-20-1W	5	25	150	020	6.84
HF-30-1W	5	25	150	020	6.84
HF-50-1W	5	25	150	020	6.84
HF-80-1W	5	25	150	020	6.84
HF-100-1W	5	25	150	020	10.11
HF-150-1W	5	25	150	020	10.11
HF-200-1W	5	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	4-3/4	25	150	020	10.11

7 GPM Hose Filter Body Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Hose Filter Body w/o screen					
HF	3/4	10	60	020	14.07
Hose Washer					
W-100	3/4	50	1500	020	.04
Screen Washer					
S-W	- - -	600	0	901	.21



• Hose Fittings • Solvent Weld For Flexible PVC Hose

FHT = Female Hose Thread
 Fipt = Female Iron Pipe Thread
 HS = Hose Socket
 Ins = Male Insert Barb

MHT = Male Hose Thread
 Mipt = Male Iron Pipe Thread
 Soc = IPS Solvent Weld Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Hose Coupling



C-44	1/2	200	0	020	.93
C-55	5/8	100	0	020	1.23
C-66	3/4	100	0	020	2.35

**90° EII
MHT x Soc**



EHP-007	3/4	50	0	020	2.62
EHP-101	3/4X1/2	50	0	020	2.24

Hose Tee

MHT x MHT x FHT Swivel with Washer



AP-101	3/4	50	0	020	4.54
--------	-----	----	---	-----	------



W-100



W-101

Hose Washer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Washer Only

W-100	3/4	50	1500	020	.04
W-101	3/4	400	2400	020	1.21

Swivel Adapter

Fipt x FHT Swivel with Washer



AP-105	1/2X3/4	50	200	020	2.95
AP-106	3/4	50	200	020	2.95

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Swivel Adapter

Mipt x FHT Swivel with Washer



AP-109	3/4	50	200	020	2.95
AP-112	1/2X3/4	50	200	020	2.95

Swivel Adapter

FHT Swivel x FHT Swivel with Washer



AP-110	3/4	50	200	020	2.95
--------	-----	----	-----	-----	------

Female Adapter

FHT Swivel x HS with Washer



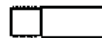
F-64	3/4X1/2	100	0	020	2.28
F-65	3/4X5/8	100	0	020	2.43
F-66	3/4	100	0	020	2.51

FHT Swivel x Soc

F-64-P	3/4X1/2	100	0	020	2.28
F-66-P	3/4	100	0	020	2.51

Male Adapter

Mipt x HS



M-44	1/2X1/2	50	300	020	1.27
------	---------	----	-----	-----	------

MHT x HS

M-64	3/4X1/2	50	300	020	1.29
M-65	3/4X5/8	50	200	020	2.06
M-66	3/4	50	200	020	2.39

MHT x Soc

M-64-P	3/4X1/2	50	200	020	1.27
M-66-P	3/4	50	200	020	2.39

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Female Compression Adapter

FHT x Poly Adapter with Insert Expander



F-64B	3/4X1/2	50	600	020	2.06
-------	---------	----	-----	-----	------

Male Compression Adapter

MHT x Poly Adapter with Insert Expander



M-64B	3/4X1/2	100	0	020	1.58
-------	---------	-----	---	-----	------

Hose Tee

Ins x Ins x FHT Swivel



AP-101B	1/2X3/4	50	0	020	3.54
---------	---------	----	---	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Transition Tee

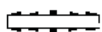
Soc x Soc x Ins



1102-007	3/4	50	0	040	3.22
1102-130	1X1/2	200	0	040	3.61
1102-250	2X1-1/4	10	0	040	5.08

Insert Coupling

Ins x Ins



1429-005A	1/2	200	0	140	.98
-----------	-----	-----	---	-----	-----

Insert Male Adapter

Ins x Mipt



1436-005A	1/2	200	0	140	.82
-----------	-----	-----	---	-----	-----



Schedule 40 Fittings & Accessories
• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose & Hose Adapters

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Plug
MHT



HPL-6	3/4	100	600	020	2.06
-------	-----	-----	-----	-----	------

Cap
FHT with Washer



AP-100	3/4	200	0	020	1.72
--------	-----	-----	---	-----	------

Hose Closure
For 1/2" Poly Hose



S-HC-1	1/2	200	0	020	.91
--------	-----	-----	---	-----	-----

Hose Adapters

For Solid Set Or Moveable Aluminum Systems

Fipt = Female Iron Pipe Thread
MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Rebar = Accepts 1/2" Rebar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cross
MHT x MHT x Fipt x MHT



P-101	3/4X3/4X1/2X3/4	125	0	020	8.91
-------	-----------------	-----	---	-----	------

MHT x MHT x Fipt x Mipt

P-100	3/4	125	0	020	8.91
P-102	3/4X3/4X1/2X3/4	100	0	020	8.91
P-103	3/4X3/4X1/2X1/2	125	0	020	8.91

Rebar Cross
MHT x MHT x Fipt x Rebar



PR-101	3/4X1/2	50	0	020	9.58
PR-103	3/4X3/4X1/2X1/2	50	0	020	9.58

Rebar Ell
MHT x Fipt x Rebar



PR-100	3/4X1/2X1/2	100	0	020	5.04
PR-102	3/4X3/4X1/2	100	0	020	5.04

Schedule 40 Fittings & Accessories Irrigation Accessories & Sprinkler Accessories



Irrigation Accessories

Spears® PVC Adapter System offers a unique method for expanding field irrigation systems that lends versatility and economy to your project. These adapters are designed to use 1/2", 5/8" or 3/4" vinyl hose, and the Rebar fittings and crosses accept a 1/2" or 3/4" sprinkler base. Transition to the existing system can be accomplished with any one of the threaded outlets offered.

New Installation — Spears® PVC Adapter System is designed with threaded or swivel thread connections which simplify the initial installation and minimize material, manpower and installation costs. Additional savings accrue through a reduction of the number of laterals required.

Improving Existing Systems — The Spears® Adapter System is ideal for updating existing systems because it readily adapts to aluminum or PVC mains and laterals. Expansion or refinement of the irrigation system is easily accomplished through the versatility afforded the user in the location of the new sprinkler heads.

BSW	=	British Standard Whitworth Thread
FHT	=	Female Hose Thread
Fipt	=	Female Iron Pipe Thread
MHT	=	Male Hose Thread
Mipt	=	Male Iron Pipe Thread

NFT	=	National Fine Thread
Rebar	=	Accepts 1/2" Rebar
Soc	=	IPS Solvent Weld Socket
Spig	=	Spigot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Hose System Riser

Soc x Mipt



RM-64	1/2	75	0	020	5.04
RM-66	3/4	75	0	020	5.04

Hose System Riser

Soc x MHT



RM-66-H	3/4	75	0	020	5.04
---------	-----	----	---	-----	------

Hose System Riser

Soc x Fipt



RF-64	1/2	75	0	020	6.28
RF-66	3/4	70	0	020	6.28

Trickle Irrigation Hex Cap

Fipt (Less Holes)



T-1	1/2	800	0	020	1.64
-----	-----	-----	---	-----	------

Shrub Adapter

Fipt x NFT



PA2010-01	1/2X10-32	50	300	020	1.27
PA2010-03	1/2X5/16	50	300	020	1.27

Fipt x Fipt

PA2010-02	1/2X1/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Fipt x BSW

PA2010-04	1/2X3/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Shrub Adapter

Soc x NFT



PA2020-01	1/2X10-32	50	300	020	1.27
-----------	-----------	----	-----	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Shrub Adapter (continued)

Soc x NFT

PA2020-03	1/2X5/16	50	300	020	1.27
-----------	----------	----	-----	-----	------

Soc x Fipt

PA2020-02	1/2X1/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Soc x BSW

PA2020-04	1/2X3/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Transition Nipple

Mipt x MHT (1.790 Length)



N-1	3/4X3/4	50	300	020	1.35
-----	---------	----	-----	-----	------

Mipt x Mipt (1.410 Length)

N-2	3/8X1/2	50	300	020	1.35
-----	---------	----	-----	-----	------

Mipt x MHT (1.872 Length)

N-3	1/2X3/4	50	300	020	1.35
-----	---------	----	-----	-----	------

Mipt x Mipt Polypropylene (1.480 Length)

N-4	3/4X1/2	50	300	020	1.35
-----	---------	----	-----	-----	------

Pipe Support (90° Clip to Body)

Without Nail Holes



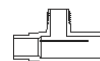
PS4-90	1/2	750	0	020	.60
--------	-----	-----	---	-----	-----

With Nail Holes

PS4-90N	1/2	750	0	020	.76
---------	-----	-----	---	-----	-----

Manifold Tee

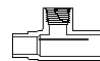
Spig x Soc x Mipt



476-010	1	20	0	020	5.98
---------	---	----	---	-----	------

Manifold Tee

Spig x Soc x Fipt



477-010	1	25	0	020	5.98
---------	---	----	---	-----	------

Sprinkler Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Standard Sprinkler Stand

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet



Shown without adapters

ES-443†	1/2X3/8	100	0	020	7.82
ES-444†	1/2X1/2	100	0	020	7.82
ES-543*	5/8X1/2X3/8	75	0	020	9.08

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Standard Sprinkler Stand (continued)

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

ES-544*	5/8X1/2X1/2	75	0	020	9.08
ES-553*	5/8X3/8	75	0	020	10.11
ES-554*	5/8X1/2	75	0	020	10.11
ES-653*	3/4X5/8X3/8	75	0	020	11.07
ES-654*	3/4X5/8X1/2	75	0	020	11.07
ES-663*	3/4X3/8	75	0	020	11.59

Made in the U.S.A.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Page 62



Schedule 40 Fittings & Accessories Sprinkler Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Standard Sprinkler Stand (continued)

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

ES-664*	3/4X1/2	75	0	020	11.59
---------	---------	----	---	-----	-------

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the ES-443 or ES-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Easy Pull Sled

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet



Shown without adapters

EP-443†	1/2X3/8	20	0	020	18.93
EP-444†	1/2	20	0	020	18.93
EP-543*	5/8X1/2X3/8	20	0	020	20.20
EP-544*	5/8X1/2X1/2	20	0	020	20.20
EP-553*	5/8X3/8	20	0	020	21.43
EP-554*	5/8X1/2	20	0	020	21.43
EP-653*	3/4X5/8X3/8	20	0	020	21.71
EP-654*	3/4X5/8X1/2	20	0	020	21.71
EP-663*	3/4X3/8	20	0	020	22.20
EP-664*	3/4X1/2	20	0	020	22.20

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the EP-443 or EP-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Tow-Line Tee

Soc



Assembled as shown

TL-112	1X1X1/2	15	0	020	12.61
TL-123	2X2X1/2	25	0	020	15.12

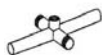
Soc x Soc x Fipt

TL-112-1	1X1X1/2	30	0	020	13.62
TL-116-1	1-1/4X1-1/4X1/2	30	0	020	13.88
TL-120-1	1-1/2X1-1/2X1/2	25	0	020	14.39
TL-123-1	2X2X1/2	25	0	020	15.64

NOTE: The Tow-Line Tee is used in conjunction with PVC Schedule 40 Pipe with solvent weld connection.

Hose Cross - with Legs

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet



Shown without adapters

HC-443†	1/2X3/8	60	0	020	9.08
HC-444†	1/2X1/2	60	0	020	9.08
HC-543*	5/8X1/2X3/8	60	0	020	10.35
HC-544*	5/8X1/2X1/2	60	0	020	10.35
HC-553*	5/8X3/8	60	0	020	11.59
HC-554*	5/8X1/2	60	0	020	11.59
HC-653*	3/4X5/8X3/8	60	0	020	12.36
HC-654*	3/4X5/8X1/2	60	0	020	12.36
HC-663*	3/4X3/8	60	0	020	13.12
HC-664*	3/4X1/2	60	0	020	13.12

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the HC-443 or HC-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

NOTE: Hose Crosses are standard with 4" legs. 8" legs are available upon request. Add "-8" at the end of above Part Numbers for 8" legs (for example: HC-443-8). Contact your servicing Regional Distribution Center for pricing.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Hose Cross - Less Legs

Hose Socket Inlet x Hose Socket Inlet x IPS Riser Outlet



Shown without adapters

HC-443-1†	1/2X3/8	220	0	020	4.54
HC-444-1†	1/2X1/2	200	0	020	4.54
HC-543-1*	5/8X1/2X3/8	60	0	020	6.28
HC-544-1*	5/8X1/2X1/2	60	0	020	6.28
HC-553-1*	5/8X3/8	50	0	020	8.32
HC-554-1*	5/8X1/2	50	0	020	8.32
HC-653-1*	3/4X5/8X3/8	60	0	020	8.59
HC-654-1*	3/4X5/8X1/2	60	0	020	8.59
HC-663-1*	3/4X3/8	60	0	020	9.08
HC-664-1*	3/4X1/2	60	0	020	9.08

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the HC-443-1 or HC-444-1 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Schedule 40 Fittings & Accessories Dri-Splice Wire Connectors

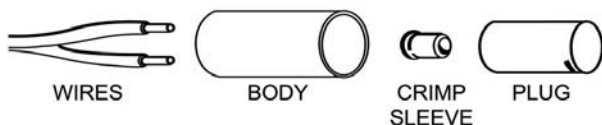


For use in electrical systems with 30v or less.

The Spears® Dri-Splice Seal designed into each wire hole enables you to stock one connector for all applications. The Dri-Splice Seal features an interference webbing which expands to accommodate #18 through #6 gauge wire sizes. In the event only two holes are used, the Dri-Splice Seal prevents sealant from leaking out through the third hole.

SOLD IN STANDARD PACK QUANTITIES ONLY

DS-100/DS-150 & DS-400/DS-450 Dri-Splice Wire Connector Installation Information



1. Insert wires through holes in base of body.
2. Twist stripped wires together and apply crimp sleeve with an indent type crimping tool. Trim excess bare wire.
3. DS-100 & DS-150 ONLY — Fill Plug to brim with DS-300 sealant.
4. Invert body and insert plug into body until it snaps tight.
5. Push wires all the way into the plug to completely seal the crimp sleeve.
6. DS-100 & DS-150 ONLY — Be certain sealant has formed into all holes in body.



allows easy insertion of wire, expands to appropriate wire size and seals any unused holes to prevent sealant run out

DS-100 & DS-150 Dri-Splice

- DS-100 fits AWG #18, #14, #12, or #10
- DS-150 fits AWG #14, #12, #10, #8, or #6
- Designed to insure waterproof connections
- Easily installed in the field without special tools
- Permanent protection for underground wire splices
- Requires the use of DS-300 Sealant

DS-400 & DS-450 Pre-Filled Dri-Splice

- All the features of the DS-100 or DS-150, plus the added benefit of being pre-filled with Dielectric Silicone Sealant
- Reduced inventory requirements
- Insures proper amount and type of Sealant every time
- Eliminates costly waste and clean-up
- Makes installations quick, clean and efficient

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DS-100	AWG #18, #14, #12, #10	25	400	020	1.46
DS-150	AWG #14, #12, #10, #8, #6	25	400	020	1.75

Pre-Filled Dri-Splice Wire Connector with Crimp Sleeve

DS-400	AWG #18, #14, #12, #10	25	400	020	3.19
DS-450	AWG #14, #12, #10, #8, #6	25	400	020	3.47

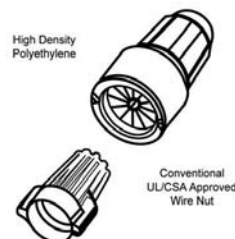
Crimp Sleeves

DS-200	AWG #18, #14, #12, #10	25	15000	901	.25
DS-250	AWG #14, #12, #10, #8, #6	25	12500	901	.53

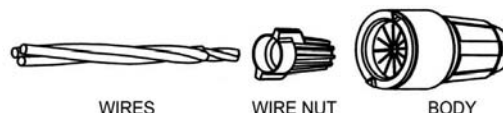
Dri-Splice Sealant For DS-100 and DS-150

(Approx. 30 connections per 5 oz. tube)

DS-300	AWG #18, #14, #12, #10	24	0	022	15.29
--------	------------------------	----	---	-----	-------



DS-500 Dri-Splice Wire Connector Installation Information



1. Strip wires and install wire nut.
2. wire nut wings with arrows and insert fully into body.

Sealant:

Dri-Splice Wire Connector General Information

DS-300 Sealant* (for DS-100 & DS-150) -MSDS available upon request.

DS-400 & DS-450 Dielectric Silicone Sealant*-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.

DS-500 Dielectric Silicone Sealant*-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.

Shelf Life:

DS-300 (unopened tube)— One Year*

DS-400 & DS-450 — Indefinite at 73°F (23°C)*

DS-500— Indefinite at 73°F (23°C)*

Electrical Systems:

For use in electrical systems with 30v or less. UL Listing NOT required in most areas.

DS-100/DS-150 &

Plug— PVC

Body— PVC

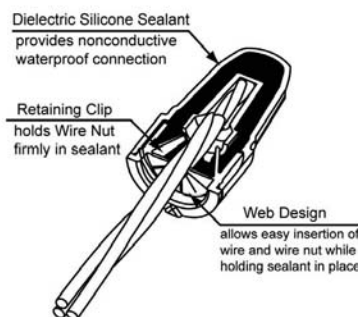
Components:

Crimp Sleeve— UL and CSA Listed for 18 - 10 awg solid or stranded copper conductors.

DS-500 Components: **Body**— Polyethylene

Wire Nut— Twist-On Spring Type - UL/CSA Listed for 22 - 10 awg solid or stranded copper wire.

* Information developed and furnished by the Sealant Manufacturers. For additional information, please contact Spears® Technical Services Department.



DS-500 Dri-Splice Wire Connector For use in electrical systems with 30v or less.

Spears® NEW DS-500 Dri Splice Wire Connector is the fast, reliable and clean way of making positive, waterproof connections you can depend on. Simply twist Wire Nut on and insert into Dielectric Silicone Sealant Cartridge. The DS-500 is specially designed for irrigation systems and low voltage lighting, marine and security systems and suitable for direct burial.

- Allows full assembly and check of connection prior to sealing
- Accepts wire combinations from 3 #22 to 3 #10 AWG solid or stranded copper wire
- Special "No-Mess" cartridge design fully encloses sealant
- Internal interlock prevents disengagement of wire nut from sealant cartridge

Dri-Splice Wire Connectors

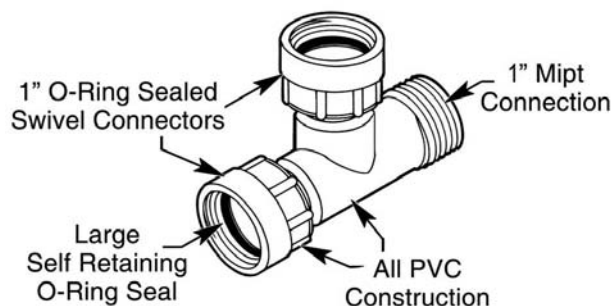
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DS-500	3 AWG #22-#10	25	500	020	3.19

Pre-Filled Dri-Splice Wire Connector with Wire Nut



Schedule 40 Fittings & Accessories PVC Irrigation Manifold Systems

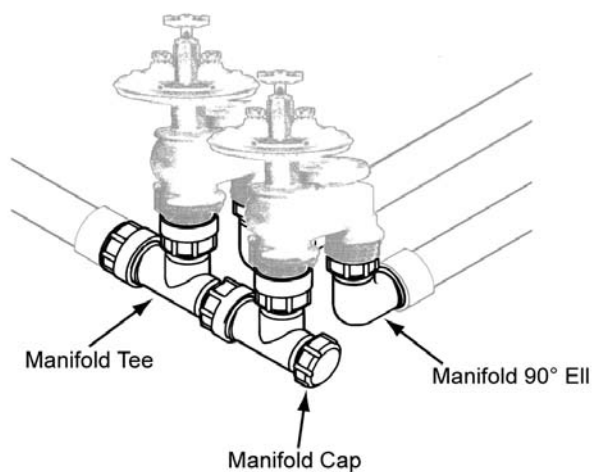
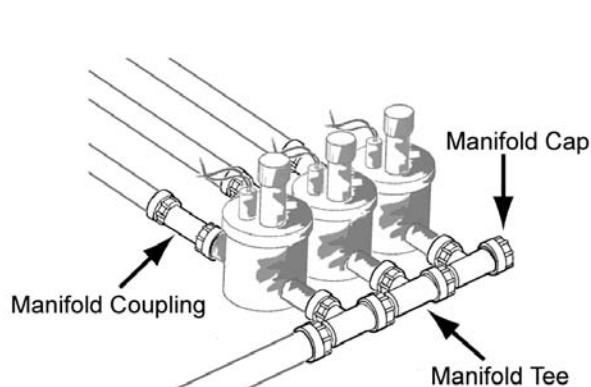
1" Manifold Tees & Companion Fitting Configurations Designed For Uniform Irrigation Control Valve Installations



- O-ring Sealed Swivel Connections Require No Thread Sealants - Large Cross-section O-ring Allows Hand Tight Assembly for Positive Seal
- Compatible with all 1" IPS Pipe Thread Outlets
- Pressure Rated to 150 psi @ 73°F (23°C)

Manifold Tee
(1" Swivel x 1" Mipt x 1" Swivel)

Typical Application Hundreds of Variation Possibilities



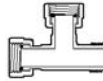
Schedule 40 Fittings & Accessories High Strength 1" Manifold Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Manifold Tee

Swivel x Mipt x Swivel with O-ring Seal



MA0101-010	1	25	0	019	9.91
------------	---	----	---	-----	------

2 - Port Manifold Tee

Swivel x Mipt x Swivel Branch with O-ring Seal



MA0101-010-2	1	25	0	019	14.38
--------------	---	----	---	-----	-------

3 - Port Manifold Tee

Swivel x Mipt x Swivel Branch with O-ring Seal



MA0101-010-3	1	25	0	019	19.80
--------------	---	----	---	-----	-------

4 - Port Manifold Tee

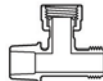
Swivel x Mipt x Swivel Branch with O-ring Seal



MA0101-010-4	1	25	0	019	25.26
--------------	---	----	---	-----	-------

Manifold Tee

Soc(Spig) x Mipt x Swivel with O-ring Seal

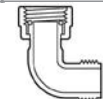


For Solvent Cement Connection

MA0109-010	1 (1-1/4)	25	0	019	8.81
------------	-----------	----	---	-----	------

Manifold 90° Street El

Mipt x Swivel with O-ring Seal



MA0602-010	1	25	0	019	8.46
------------	---	----	---	-----	------

Manifold 90° El

Swivel x Swivel with O-ring Seal



MA0603-010	1	20	0	019	9.34
------------	---	----	---	-----	------

Manifold Cross

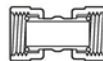
Swivel x Mipt x Swivel x Swivel with O-ring Seal



MA2004-010	1	25	0	019	13.15
------------	---	----	---	-----	-------

Manifold Swivel Coupling

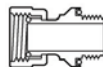
Swivel x Swivel with O-ring Seal



MA2903-010	1	25	200	019	7.01
------------	---	----	-----	-----	------

Manifold Nipple Coupling

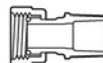
Swivel x Mipt with O-ring Seal



MA2907-010	n/a	25	200	019	5.12
------------	-----	----	-----	-----	------

Manifold Socket (Spig) Coupling

Swivel x Soc (Spig) with O-ring Seal

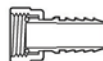


For Solvent Cement Connection

MA2908-010	1 (1-1/4)	25	0	019	5.12
------------	-----------	----	---	-----	------

Manifold Insert Coupling

Swivel x Barbed Insert with O-ring Seal



MA3505-007	1X3/4	25	200	019	5.09
MA3505-010	1	25	200	019	5.43

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Manifold Cap

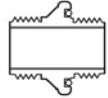
Fipt with O-ring Seal



MA4800-010	1	50	600	019	2.14
------------	---	----	-----	-----	------

Manifold Nipple

Mipt x Mipt with O-ring Seal



1" Nipple End Uses MA-218 O-ring

3/4" Nipple End Uses MA-214 O-ring

MA8306-010	1	25	200	019	2.29
MA8306-131	1X3/4	25	200	019	2.01

Manifold Replacement O-ring

For All 1" Cap/Swivel Connectors & For 3/4" Nipple End



MA-214	1 & 3/4	50	500	901	.49
--------	---------	----	-----	-----	-----

Manifold Nipple Replacement O-ring

For 1" Nipple & For 1" Nipped Coupling End



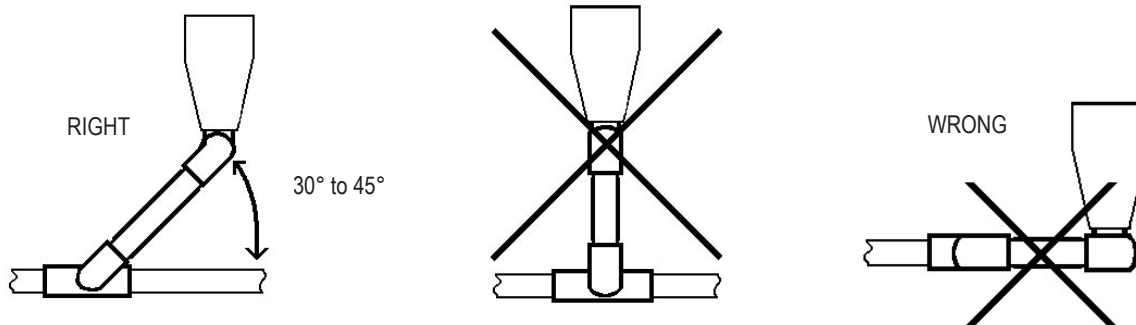
MA-218	1	50	500	901	.53
--------	---	----	-----	-----	-----



Schedule 40 Fittings & Accessories Turf Swivel Joints

Turf Swivel Joints, Compact Turf Swivel Joints and Turf Swivel Joint Kits are designed for open discharge systems and are not to be used with valve-in-head sprinklers or quick coupler valves. Can be used with bottom or side sprinklers. Provides 360° adjustment in three planes to place sprinklers at desired locations.

Turf Swivel Joint Assemblies should NOT be installed perpendicular or parallel to the supply line.



Turf Swivel Joint and Compact Turf Swivel Joints are pre-assembled from the factory with O-ring threaded joints. Turf Swivel Joint Kits are provided as two assemblies for use with user supplied pipe in solvent welded field assembly. These joints are pre-lubricated and should not be disassembled, as dirt, sand or other foreign objects could damage the O-ring or threads and cause leakage.

Prior to beginning installation, tighten each O-ring thread joint completely, and then back out the male part one full turn to allow the joint to swivel a full 360°.

Schedule 40 Fittings & Accessories Turf Swivel Kits

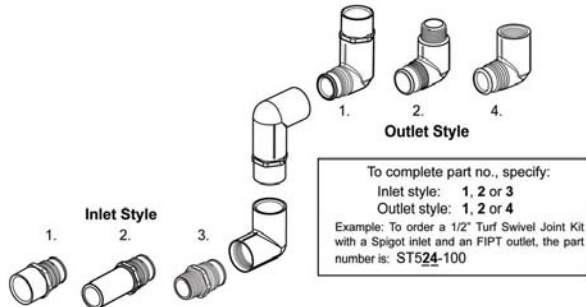


3-Elb Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



Turf Swivel Joint Kit

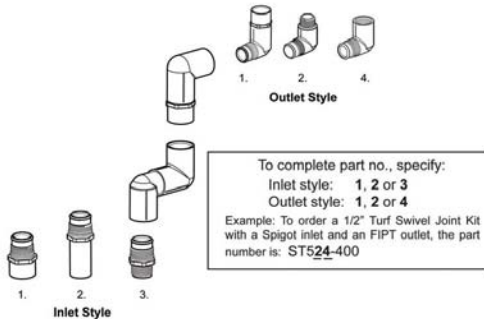
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Elb Swivel Joint Kits					
ST5_-100	1/2	10	0	030	19.61
ST7_-100	3/4	10	0	030	22.14
ST9_-100	1	10	0	030	25.77

4-Elb Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



4-Elb Swivel Joint Kits

ST5_-400	1/2	10	0	030	20.82
ST7_-400	3/4	10	0	030	23.38
ST9_-400	1	10	0	030	28.21



Schedule 40 Fittings & Accessories Turf Swivel Joints

Complete Factory Assembly. Available in sizes 1/2", 3/4" and 1" with the following Lay Length Options:

8" = 8L
12" = 12L
15" = 15L
19" = 19L

Choice of the following Inlet & Outlet Options:

Inlet Code
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code
1 = Socket
2 = Mipt
4 = Fipt

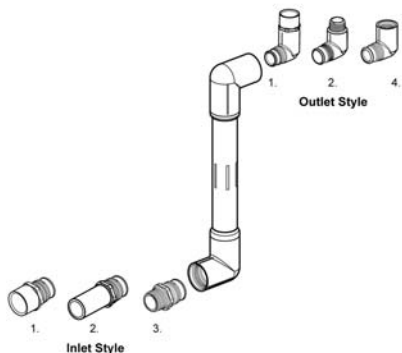
To complete part no., specify:

Inlet style: 1, 2, or 3

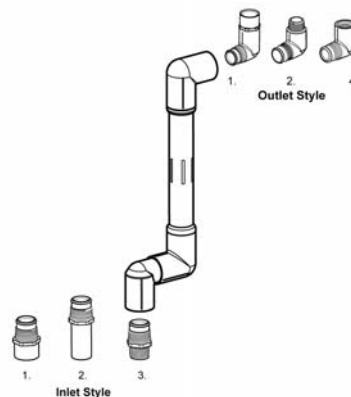
Outlet style: 1, 2, or 4

Example: To order a 1/2" 3-Elb Turf Swivel Joint with an 8" lay length, a Spigot inlet and an FIPT outlet, the part number is: ST524-208

3-Elb Turf Swivel Joint



4-Elb Turf Swivel Joint



Turf Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Elb Turf Swivel Joints					
ST5_-208	1/2X8L	10	0	030	30.74
ST5_-212	1/2X12L	10	0	030	31.11
ST5_-215	1/2X15L	10	0	030	32.06
ST5_-219	1/2X19L	10	0	030	33.09
ST7_-208	3/4X8L	10	0	030	33.14
ST7_-212	3/4X12L	10	0	030	34.71
ST7_-215	3/4X15L	10	0	030	35.38
ST7_-219	3/4X19L	10	0	030	36.22
ST9_-208	1X8L	10	0	030	36.49
ST9_-212	1X12L	10	0	030	37.64
ST9_-215	1X15L	10	0	030	38.62
ST9_-219	1X19L	10	0	030	39.95
ST57_-208	1/2X3/4X8L	10	0	030	30.74
ST57_-212	1/2X3/4X12L	10	0	030	31.11
ST57_-215	1/2X3/4X15L	10	0	030	32.06
ST57_-219	1/2X3/4X19L	10	0	030	33.09
ST75_-208	3/4X1/2X8L	10	0	030	33.14
ST75_-212	3/4X1/2X12L	10	0	030	34.71
ST75_-215	3/4X1/2X15L	10	0	030	35.38
ST75_-219	3/4X1/2X19L	10	0	030	35.38

4-Elb Turf Swivel Joints

ST5_-408	1/2X8L	10	0	030	31.40
ST5_-412	1/2X12L	10	0	030	31.77
ST5_-415	1/2X15L	10	0	030	32.65
ST5_-419	1/2X19L	10	0	030	33.61
ST7_-408	3/4X8L	10	0	030	33.80
ST7_-412	3/4X12L	10	0	030	35.29
ST7_-415	3/4X15L	10	0	030	35.97
ST7_-419	3/4X19L	10	0	030	36.74
ST9_-408	1X8L	10	0	030	38.39
ST9_-412	1X12L	10	0	030	39.45
ST9_-415	1X15L	10	0	030	40.41
ST9_-419	1X19L	10	0	030	41.67
ST57_-408	1/2X3/4X8L	10	0	030	31.40
ST57_-412	1/2X3/4X12L	10	0	030	31.77
ST57_-415	1/2X3/4X15L	10	0	030	32.65
ST57_-419	1/2X3/4X19L	10	0	030	33.61
ST75_-408	3/4X1/2X8L	10	0	030	35.38
ST75_-412	3/4X1/2X12L	10	0	030	36.74

Turf Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4-Elb Turf Swivel Joints					
ST75_-415	3/4X1/2X15L	10	0	030	36.74
ST75_-419	3/4X1/2X19L	10	0	030	36.74

Schedule 40 Fittings & Accessories Compact Turf Swivel Joints



Factory Assembled
All Inlets are Swivel Male Threads
Three Outlet Choices:
Series ST11 & ST41 = Female Pipe Threads
Series ST12 & ST42 = Swivel Male Pipe Threads
Series ST13 & ST43 = Male Pipe Threads

Also available in 1" MBSP inlet x 1" MBSP outlet. Contact Spears® for pricing and availability.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

3-El Compact Swivel Joints

Swivel Mipt x Fipt



ST1105	1/2	10	0	030	19.61
ST1107	3/4	10	0	030	22.14
ST1110	1	10	0	030	25.78

3-El Compact Swivel Joints

Swivel Mipt x Swivel Mipt



ST1205	1/2	10	0	030	19.61
ST1207	3/4	10	0	030	22.14
ST1210	1	10	0	030	25.78

3-El Compact Swivel Joints

Swivel Mipt x Mipt



ST1305	1/2	10	0	030	19.61
ST1307	3/4	10	0	030	22.14
ST1310	1	10	0	030	25.78

4-El Compact Swivel Joints

Swivel Mipt x Fipt



ST4105	1/2	10	0	030	20.82
ST4107	3/4	10	0	030	23.38
ST4110	1	10	0	030	28.21

4-El Compact Swivel Joints

Swivel Mipt x Swivel Mipt



ST4205	1/2	10	0	030	20.82
ST4207	3/4	10	0	030	23.38
ST4210	1	10	0	030	28.21

4-El Compact Swivel Joints

Swivel Mipt x Mipt



ST4305	1/2	10	0	030	20.82
ST4307	3/4	10	0	030	23.38
ST4310	1	10	0	030	28.21

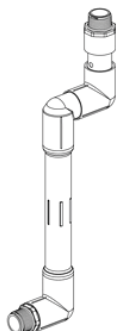


Schedule 40 Fittings & Accessories

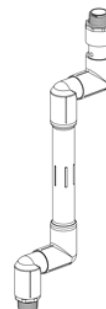
Pressure Regulated Swivel Joints & Turf Swivel Joint Replacement Parts

Pressure Regulated Swivel Joints

3-El Pressure Regulated Swivel Joint



4-El Pressure Regulated Swivel Joint



Pressure Regulated Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

3-El - Mipt x Mipt

ST73PR-208	3/4X8L	10	0	030	61.38
ST73PR-212	3/4X12L	10	0	030	63.05
ST73PR-215	3/4X15L	10	0	030	63.78
ST73PR-219	3/4X19L	10	0	030	64.64
ST93PR-208	1X8L	10	0	030	66.36
ST93PR-212	1X12L	10	0	030	67.57
ST93PR-215	1X15L	10	0	030	68.62
ST93PR-219	1X19L	10	0	030	70.02

4-El - Mipt x Mipt

ST73PR-408	3/4X8L	10	0	030	64.78
ST73PR-412	3/4X12L	10	0	030	66.47
ST73PR-415	3/4X15L	10	0	030	67.18
ST73PR-419	3/4X19L	10	0	030	68.06
ST93PR-408	1X8L	10	0	030	71.80

Pressure Regulated Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

4-El - Mipt x Mipt

ST93PR-412	1X12L	10	0	030	73.00
ST93PR-415	1X15L	10	0	030	74.05
ST93PR-419	1X19L	10	0	030	75.44

Complete Factory Assembly. Available in sizes 3/4" and 1" with Mipt Inlet x Mipt Outlet and the following Lay Length Options:

8"	=	8L
12"	=	12L
15"	=	15L
19"	=	19L

Maintains constant, uniform pressure to sprinkler at the following pre-set nominal values:
45 psi for 3/4" Turf Swivel Joint
70 psi for 1" Turf Swivel Joint

Not recommended for use in systems with pressures equal to or less than regulated pressures above.

Pressure Rating @ 73°F (23°C), Water 315 psi

Turf Swivel Joint Replacement Parts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling FAT x FAT



ST430-007	3/4	1	200	030	6.47
ST430-010	1	1	250	030	8.60

90° Elbow FAT x FAT



ST1101-005	1/2	1	300	030	3.74
ST1101-007	3/4	1	250	030	4.32
ST1101-101	3/4X1/2	1	270	030	3.94
ST1101-010	1	1	175	030	7.12

90° Elbow FAT x SOC



ST1102-005	1/2	1	350	030	3.74
ST1102-007	3/4	1	250	030	4.32
ST1102-010	1	1	160	030	7.12

90° Street El MAT x FAT



ST425-005	1/2	1	200	030	5.44
ST425-007	3/4	1	300	030	5.81
ST425-010	1	1	200	030	8.08

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Socket Inlet #1 SOC x MAT



ST436-005	1/2	1	350	030	3.49
ST436-007	3/4	1	50	030	3.86
ST436-010	1	1	330	030	7.24

Spigot Inlet #2 SPG x MAT



ST105-035	1/2	1	350	030	3.72
ST107-035	3/4	1	50	030	4.16
ST110-040	1	1	140	030	7.58

Male Thread Inlet #3 Mipt x MAT



ST205-020	1/2	1	25	030	3.29
ST207-020	3/4	1	350	030	3.86
ST210-020	1	1	150	030	4.19

Socket Outlet #1 MAT x SOC



ST410-005	1/2	1	50	030	7.42
ST410-007	3/4	1	200	030	8.13
ST410-010	1	1	25	030	8.52

**Schedule 40 Fittings & Accessories
Turf Swivel Joint Replacement Parts**



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Male Thread Outlet #2

MAT x Mipt



ST408-005	1/2	1	250	030	5.44
ST408-007	3/4	1	25	030	5.81
ST408-010	1	1	150	030	8.60

Female Thread Outlet #4

MAT x Fipt



ST412-005	1/2	1	250	030	5.44
ST412-007	3/4	1	300	030	5.81
ST412-010	1	1	200	030	8.08

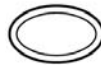
Molded Nipples

MAT x MAT



ST207-065	3/4X6-1/2	1	200	030	7.69
ST207-105	3/4X10-1/2	1	115	030	17.73
ST210-065	1X6-1/2	1	120	030	9.89
ST210-105	1X10-1/2	1	25	030	23.44

O-ring Seal



B-113	1/2	100	0	901	.07
B-115	3/4	100	0	901	.07
B-120	1	100	0	901	.18



Schedule 40 Fittings & Accessories Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style

Flange x PIP Soc



125 psi Maximum Internal Pressure Rating @ 73°F (23°C)

354-060F	6X6.140	1	4	320	133.67
354-080F	8X8.160	1	2	320	202.42
354-100F	10X10.200	1	2	320	284.61
354-120F	12X12.240	1	2	320	412.21
354-150F	14X15.300	1	0	320	1098.76
354-151F	16X15.300	1	0	320	1253.46
354-181F	18X18.701	1	0	320	1904.21
354-182F	18X18.360	1	0	320	1904.21
354-201F	20X22.047	1	0	320	2900.51
354-241F	24X24.803	1	0	320	4247.72

For more information, refer to 80, 100 & 125 psi PIP Fabrication Fittings.

PIP = Plastic Irrigation Pipe (dimensions are NOT the same as IPS dimensions)

Sizes 6" - 16" are furnished with plastic ring.
Sizes 18" - 24" are furnished with steel ring.

Flange One Piece

Soc



1/2" - 16" 150 psi Maximum Internal Pressure Rating @73°F (23°C)

18" - 24" 50 psi Maximum Internal Pressure Rating @73°F (23°C)

851-005	1/2	25	0	080	18.11
851-007	3/4	25	0	080	19.35
851-010	1	15	0	080	21.55
851-012	1-1/4	15	0	080	22.20
851-015	1-1/2	20	0	080	22.68
851-020	2	10	0	080	30.19
851-025	2-1/2	10	0	080	46.60
851-030	3	10	0	080	51.46
851-040	4	5	0	080	65.16
851-050	5	5	0	080	102.45
851-060	6	5	0	080	102.45
851-080	8	2	0	080	183.33
851-100F	10	1	2	083	498.18
851-120F	12	1	0	083	604.96
851-140F	14	1	0	083	1112.65
851-160F	16	1	0	083	1526.99
851-180F	18	1	0	083	3230.20
851-200F	20	1	0	083	3955.61
851-240F	24	1	0	083	5253.52

Flange One Piece

Fipt



150 psi Maximum Internal Pressure Rating @73°F (23°C)

852-005	1/2	25	0	080	21.67
852-007	3/4	25	0	080	25.39
852-010	1	15	0	080	27.80
852-012	1-1/4	15	0	080	38.33
852-015	1-1/2	20	0	080	41.83
852-020	2	10	0	080	42.78
852-025	2-1/2	10	0	080	98.36
852-030	3	10	0	080	101.24
852-040	4	5	0	080	190.22
852-060F	6	1	5	083	228.52
852-080F	8	1	2	083	573.52

Special Reinforced Flange One Piece Threaded

SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @73°F (23°C)

852-005SR	1/2	25	0	086	11.91
-----------	------------	----	---	-----	-------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Flange One Piece Threaded

(continued)

SR Fipt - Stainless Steel Collar

852-007SR	3/4	25	0	086	13.99
852-010SR	1	15	0	086	15.29
852-012SR	1-1/4	15	0	086	21.07
852-015SR	1-1/2	15	0	086	23.06
852-020SR	2	10	0	086	23.62
852-025SR	2-1/2	10	0	086	54.09
852-030SR	3	10	0	086	55.69
852-040SR	4	5	0	086	104.69



Blind Flange

1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

853-005	1/2	25	0	080	25.38
853-007	3/4	25	0	080	30.23
853-010	1	15	0	080	41.29
853-012	1-1/4	20	0	080	50.68
853-015	1-1/2	15	0	080	50.68
853-020	2	10	0	080	75.73
853-025	2-1/2	10	0	080	123.38
853-030	3	10	0	080	148.89
853-040	4	8	0	080	185.48
853-050F	5	1	5	083	464.95
853-060	6	5	0	080	225.40
853-080	8	5	0	080	282.13
853-100	10	3	0	081	471.77
853-120	12	2	0	081	734.75
853-140F	14	1	0	083	1397.79
853-160F	16	1	0	083	1657.51
853-180F	18	1	0	083	1864.09
853-200F	20	1	0	083	3013.01
853-240F	24	1	0	083	4016.97



Flange Van Stone Style with PVC Ring

Soc

1/2" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005	1/2	25	0	080	18.08
854-007	3/4	25	0	080	19.34
854-010	1	15	0	080	21.54
854-012	1-1/4	15	0	080	22.18
854-015	1-1/2	20	0	080	22.63
854-020	2	10	0	080	30.14
854-025	2-1/2	10	0	080	46.55
854P-030	3	10	0	080	51.44
854P-040	4	5	0	080	65.07
854P-050	5	5	0	080	102.36
854P-060	6	5	0	080	102.36
854P-080	8	2	0	080	166.68
854P-100	10	2	0	081	215.79
854P-120	12	2	0	081	232.66
854P-140	14	1	0	081	898.21
854P-160	16	1	0	081	1201.40
854P-180	18	1	0	081	1937.69
854-180FP	18	1	0	083	3065.76
854-200FP	20	1	0	083	3749.88
854-240FP	24	1	0	083	5101.07

Schedule 40 Fittings & Accessories Pipe Flanges



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with Glass Filled PVC Ring

Soc

3" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

854-030	3	10	0	080	51.44
854-040	4	5	0	080	65.07
854-050	5	5	0	080	102.36
854-060	6	5	0	080	102.36
854-080	8	2	0	080	166.68
854-100	10	2	0	081	215.79
854-120	12	2	0	081	232.66
854-140	14	1	0	081	898.21
854-160	16	1	0	081	1201.40
854-180	18	1	0	081	1937.69

18" flange has 4-section ring



Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring

Soc

1/2" - 16" molded with fab ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)

18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005CL300	1/2	1	25	083	148.64
854-007CL300	3/4	1	25	083	172.71
854-010CL300	1	1	15	083	271.37
854-012CL300	1-1/4	1	15	083	277.09
854-015CL300	1-1/2	1	20	083	287.83
854-020CL300	2	10	0	083	303.05
854-025CL300	2-1/2	1	10	083	332.76
854-030CL300	3	1	10	083	365.45
854-040CL300	4	1	3	083	619.67
854-060CL300	6	1	4	083	1180.24
854-080CL300	8	1	3	083	1343.43
854-100CL300	10	1	2	083	1581.60
854-120CL300	12	1	0	083	2026.35
854-140CL300	14	1	0	083	2234.24
854-160CL300	16	1	0	083	2326.72
854-180CL300	18	1	0	083	3253.11
854-200CL300	20	1	0	083	4224.02
854-240CL300	24	1	0	083	5354.88



Flange Van Stone Style with PVC Ring

Spig

1/2" - 12" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

20" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

856-005	1/2	25	0	080	18.18
856-007	3/4	25	0	080	19.48
856-010	1	15	0	080	21.72
856-012	1-1/4	15	0	080	22.40
856-015	1-1/2	15	0	080	22.85
856-020	2	10	0	080	30.37
856-025	2-1/2	10	0	080	46.94
856P-030	3	10	0	080	51.85
856P-040	4	5	0	080	65.61
856P-060	6	4	0	080	103.20
856P-080	8	2	0	080	184.61
856P-100	10	2	0	081	215.79
856P-120	12	2	0	081	232.66
856-200FP	20	1	0	083	3749.88
856-240FP	24	1	0	083	5101.07



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with Glass Filled PVC Ring

Spig

3" - 12" molded, 14" - 18" molded/fabricated - 150 psi = maximum internal pressure rating @ 73°F (23°C)

856-030	3	10	0	080	51.85
856-040	4	5	0	080	65.61
856-060	6	4	0	080	103.20
856-080	8	2	0	080	184.61
856-100	10	2	0	081	215.79
856-120	12	2	0	081	232.66
856-140FP**	14	1	0	083	1926.95
856-160FP**	16	1	0	083	2337.92
856-180FP**	18	1	0	083	3065.76

** Fabricated from molded socket flanges with pipe spigot.

18" flange uses 4-piece ring



Flange Van Stone Style with Steel Ring

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

854-180FS	18	1	0	083	1809.89
854-200FS	20	1	0	083	2193.19
854-240FS	24	1	0	083	2951.69



Flange Van Stone Style with Steel Ring

Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

856-140FS	14	1	0	083	975.22
856-160FS	16	1	0	083	1192.01
856-180FS	18	1	0	083	1350.67
856-200FS	20	1	0	083	1626.87
856-240FS	24	1	0	083	2209.11



Flange Van Stone Style PVC with Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

S854-020	2	10	0	080	37.68
S854-030	3	10	0	080	64.32
S854-040	4	5	0	080	81.36



Flange Van Stone Style PVC with Glass Filled PVC Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

S854-060	6	5	0	080	127.97
S854-080	8	2	0	080	208.35
S854-100	10	2	0	081	269.73
S854-120	12	2	0	081	290.80



Flange Van Stone Style with PVC Ring

ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-020	2	10	0	080	30.14
----------	---	----	---	-----	-------

* Hubs fit 2", 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.





Schedule 40 Fittings & Accessories Pipe Flanges & Flange Bolt Kits

Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with Glass Filled PVC Ring

ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-060	6	5	0	080	102.36
M854-080	8	2	0	080	166.68

* Hubs fit 2", 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.



Flange Van Stone Style with PVC Ring

ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-020	2	10	0	080	30.37
----------	---	----	---	-----	-------

* Spigots fit 2", 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.



Flange Van Stone Style with Glass Filled PVC Ring

ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-060	6	4	0	080	103.20
M856-080	8	2	0	080	167.94

* Spigots fit 2", 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with PVC Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-005	1/2	25	0	080	21.63
855-007	3/4	25	0	080	25.38
855-010	1	15	0	080	27.76
855-012	1-1/4	15	0	080	38.26
855-015	1-1/2	20	0	080	41.79
855-020	2	10	0	080	42.76
855-025	2-1/2	10	0	080	98.29



Flange Van Stone Style with Glass Filled PVC Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-030	3	10	0	080	101.11
855-040	4	5	0	080	183.83
855-060	6	1	4	080	289.09
855-060F	6	1	4	083	256.97
855-080	8	2	0	080	358.24
855-080F	8	1	2	083	318.82
855-100F	10	1	2	083	359.19



Flange Bolt Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------



Bolt Kit Selection Guide

Order Gaskets & Bolt Kits Separately

- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

Flange Size	Bolts* Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120

*Each Bolt Includes Nut & Two (2) Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Zinc Plated Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK-005	1/2	1	10	017	10.03
HK-010	3/4 & 1	1	10	017	12.54
HK-015	1-1/4 & 1-1/2	1	10	017	18.85
HK-020	2	1	10	017	25.23
HK-025	2-1/2	1	10	017	30.25
HK-030	3	1	10	017	34.81
HK-040	4	1	5	017	72.12
HK-060	5 & 6	1	5	017	80.21
HK-080	8	1	0	017	94.00
HK-120	10 & 12	1	0	017	127.18



Type 316 Stainless Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK1-005	1/2	1	10	017	30.11
HK1-010	3/4 & 1	1	10	017	43.37
HK1-015	1-1/4 & 1-1/2	1	10	017	47.78
HK1-020	2	1	10	017	57.46
HK1-025	2-1/2	1	10	017	61.59
HK1-030	3	1	10	017	81.26
HK1-040	4	1	5	017	162.96
HK1-060	5 & 6	1	5	017	212.54
HK1-080	8	1	0	017	266.69
HK1-120	10 & 12	1	0	017	542.58



Schedule 40 Fittings & Accessories
Flange Bolt Kits & Full-Faced Flange Gaskets

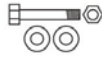


Flange Bolt Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Type 304 Stainless Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers



HK2-005	1/2	1	10	017	26.34
HK2-010	3/4 & 1	1	10	017	37.57
HK2-015	1-1/4 & 1-1/2	1	10	017	44.26
HK2-020	2	1	10	017	52.06
HK2-025	2-1/2	1	10	017	55.20

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

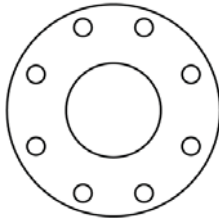
Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK2-030	3	1	10	017	68.55
HK2-040	4	1	5	017	137.09
HK2-060	5 & 6	1	5	017	144.51
HK2-080	8	1	0	017	190.02
HK2-120	10 & 12	1	0	017	336.78

Full-Faced Flange Gaskets

Gasket Selection Guide



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	1/2	1	25	017	3.22
GK1-007	3/4	1	25	017	3.69
GK1-010	1	1	25	017	3.80
GK1-012	1-1/4	1	25	017	3.89
GK1-015	1-1/2	1	25	017	4.18
GK1-020	2	1	25	017	4.67
GK1-025	2-1/2	1	25	017	5.14
GK1-030	3	1	25	017	7.91
GK1-040	4	1	25	017	8.84
GK1-050	5	1	25	017	10.48
GK1-060	6	1	25	017	10.77
GK1-080	8	1	25	017	14.20
GK1-100	10	1	25	017	18.02
GK1-120	12	1	25	017	24.31
GK1-140	14	1	25	017	47.02
GK1-160	16	1	25	017	226.21
GK1-180	18	1	25	017	257.63
GK1-240	24	1	25	017	311.31

EPDM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-060	6	1	25	017	17.24
GK2-080	8	1	25	017	22.97
GK2-100	10	1	25	017	29.93
GK2-120	12	1	25	017	41.18
GK2-140	14	1	25	017	100.45
GK2-160	16	1	25	017	178.22
GK2-180	18	1	25	017	208.16
GK2-200	20	1	25	017	241.60
GK2-240	24	1	25	017	364.73

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	1/2	1	25	017	15.25
GK3-007	3/4	1	25	017	18.11
GK3-010	1	1	25	017	20.01
GK3-012	1-1/4	1	5	017	22.59
GK3-015	1-1/2	1	25	017	28.49
GK3-020	2	1	25	017	39.83
GK3-025	2-1/2	1	25	017	53.27
GK3-030	3	1	25	017	119.04
GK3-040	4	1	25	017	137.42
GK3-050	5	1	25	017	160.20
GK3-060	6	1	25	017	181.75
GK3-080	8	1	25	017	258.94
GK3-100	10	1	25	017	344.42
GK3-120	12	1	25	017	485.28
GK3-140	14	1	25	017	711.26
GK3-160	16	1	25	017	810.63
GK3-180	18	1	25	017	912.00
GK3-240	24	1	25	017	1160.91

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	1/2	1	25	017	4.27
GK2-007	3/4	1	25	017	4.55
GK2-010	1	1	25	017	4.75
GK2-012	1-1/4	1	25	017	4.99
GK2-015	1-1/2	1	25	017	5.36
GK2-020	2	1	25	017	6.54
GK2-025	2-1/2	1	25	017	7.85
GK2-030	3	1	25	017	11.54
GK2-040	4	1	25	017	13.14
GK2-050	5	1	25	017	16.43



Schedule 40 Fittings & Accessories

True Union 2000 Standard Ball Valve - PVC White & True Union 2000 Standard Ball Valves

True Union 2000 Standard Ball Valve - PVC White

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC White True Union 2000 Standard Ball Valve

Socket Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi

Maximum Service Pressure = 140° F (60° C)

Temperature/Pressure De-ratings Apply

3622-015W	1-1/2	1	8	608	93.35
3622-020W	2	1	8	608	123.18

Check with Spears® for additional size availability



PVC White True Union 2000 Standard Ball Valves

SR Threaded Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi

Maximum Service Pressure = 140° F (60° C)

Temperature/Pressure De-ratings Apply

3621-015WSR	1-1/2	1	8	608	99.98
3621-020WSR	2	1	8	608	130.35

Check with Spears® for additional size availability



True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2" = 235 psi

2-1/2" - 4" = 150 psi

Flanged = 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1/2	3629-005 39.77	3639-005 44.23	1	18	608
3/4	3629-007 47.03	3639-007 52.32	1	18	608
1	3629-010 56.02	3639-010 62.40	1	12	608
1-1/4	3629-012 77.48	3639-012 98.91	1	8	608
1-1/2	3629-015 93.35	3639-015 103.62	1	8	608
2	3629-020 123.18	3639-020 135.62	1	4	608

Socket Ends

2-1/2	3622-025 235.95	3632-025 320.80	1	0	609
3	3622-030 312.14	3632-030 346.81	1	0	609
4	3622-040 527.23	3632-040 586.01	1	0	609

Threaded Ends

2-1/2	3621-025 235.95	3631-025 320.80	1	0	609
3	3621-030 312.14	3631-030 346.81	1	0	609
4	3621-040 527.23	3631-040 586.01	1	0	609

SR Threaded Ends

1/2	3621-005SR 40.63	3631-005SR 45.08	1	18	608
3/4	3621-007SR 49.06	3631-007SR 54.39	1	18	608
1	3621-010SR 58.06	3631-010SR 64.44	1	18	608
1-1/4	3621-012SR 83.67	3631-012SR 105.08	1	12	608
1-1/2	3621-015SR 99.98	3631-015SR 110.24	1	8	608
2	3621-020SR 130.35	3631-020SR 142.81	1	8	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

SR Threaded Ends

2-1/2	3621-025SR 256.11	3631-025SR 340.14	1	0	609
3	3621-030SR 331.52	3631-030SR 366.17	1	0	609
4	3621-040SR 550.00	3631-040SR 608.60	1	0	609

Spigot Ends

1/2	3627-005 39.77	3637-005 44.23	1	18	608
3/4	3627-007 47.03	3637-007 52.32	1	18	608
1	3627-010 56.02	3637-010 62.40	1	12	608
1-1/4	3627-012 77.48	3637-012 98.91	1	12	608
1-1/2	3627-015 93.35	3637-015 103.62	1	8	608
2	3627-020 123.18	3637-020 135.62	1	8	608
2-1/2	3627-025 236.74	3637-025 320.80	1	0	609
3	3627-030 312.14	3637-030 346.81	1	0	609
4	3627-040 527.23	3637-040 586.01	1	0	609

Flanged Ends

1/2	3623-005 56.87	3633-005 60.65	1	8	608
3/4	3623-007 72.05	3633-007 78.36	1	8	608
1	3623-010 87.18	3633-010 93.75	1	8	608
1-1/4	3623-012 102.35	3633-012 113.76	1	4	608
1-1/2	3623-015 128.93	3633-015 140.29	1	4	608
2	3623-020 205.28	3633-020 217.74	1	0	608

Schedule 40 Fittings & Accessories
True Union 2000 Standard Ball Valves



PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	-----------	------------	--------------

Flanged Ends

2-1/2	3623-025 379.14	3633-025 385.41	1	0	609
3	3623-030 392.87	3633-030 520.28	1	0	609
4	3623-040 842.57	3633-040 976.66	1	0	609



Schedule 40 Fittings & Accessories CWV Ball Valves & Utility Ball Valves

CWV Ball Valves



**A Combination of Economy & Quality - Made in the U.S.A.
For Greater Value in a General Purpose Cold Water Valve**

Pressure Rating @ 73°F (23°C), Water = 125 psi

You don't have to go overseas to find an economical general purpose ball valve! Spears® CWV BALL VALVES are produced in the U.S.A. with Spears® high quality construction and NSF® Certified for potable water service. Designed for use with cold water, these PVC valves may be suitable for some applications previously handled by Spears® Utility Valves. Available in IPS sizes 1/2" through 2" with a Full 1-Year Warranty.

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket Ends					
8722-005	1/2	50	0	204	8.43
8722-007	3/4	25	0	204	10.00
8722-010	1	25	0	204	13.60
8722-012	1-1/4	20	0	204	18.03
8722-015	1-1/2	20	0	204	27.52
8722-020	2	10	0	204	34.78

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded Ends					
8721-005	1/2	50	0	204	10.41
8721-007	3/4	25	0	204	12.35
8721-010	1	25	0	204	16.80
8721-012	1-1/4	20	0	204	22.25
8721-015	1-1/2	20	0	204	33.97
8721-020	2	10	0	204	42.94

Utility Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 6"
150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC White					
1/2	2621-005 9.37	2622-005 9.37	50	0	215
3/4	2621-007 11.12	2622-007 11.12	25	0	215
1	2621-010 15.12	2622-010 15.12	25	0	215
1-1/4	2621-012 20.03	2622-012 20.03	20	0	215
1-1/2	2621-015 30.57	2622-015 30.57	20	0	215
2	2621-020 38.64	2622-020 38.64	8	0	215
2-1/2	2621-025 66.14	2622-025 66.14	6	0	214
3	2621-030 118.62	2622-030 118.62	1	4	214
4	2621-040 217.41	2622-040 217.41	1	0	214
6 (Lever Handle)	---	2622-060 350.76	1	0	214
PVC Gray					
1/2	2621-005G 9.37	2622-005G 9.37	50	0	215

PVC w/EPDM O-ring Seal (continued)

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC Gray					
3/4	2621-007G 11.12	2622-007G 11.12	25	0	215
1	2621-010G 15.12	2622-010G 15.12	25	0	215
1-1/4	2621-012G 20.03	2622-012G 20.03	20	0	215
1-1/2	2621-015G 30.57	2622-015G 30.57	20	0	215
2	2621-020G 38.64	2622-020G 38.64	8	0	215
2-1/2	2621-025G 66.14	2622-025G 66.14	6	0	214
3	2621-030G 118.62	2622-030G 118.62	1	4	214
4	2621-040G 217.41	2622-040G 217.41	1	0	214

Schedule 40 Fittings & Accessories Single Entry Ball Valves



PVC White – Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 3" - 4" 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.
 See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC White

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	-----------	------------	--------------

Threaded Ends

1/2	2411-005W 19.02	2421-005W 21.09	2431-005W 23.46	10	120	240
3/4	2411-007W 25.75	2421-007W 26.55	2431-007W 29.51	10	80	240
1	2411-010W 28.11	2421-010W 31.22	2431-010W 34.72	10	0	240
1-1/4	2411-012W 39.08	2421-012W 43.46	2431-012W 48.28	6	0	240
1-1/2	2411-015W 50.66	2421-015W 58.82	2431-015W 63.78	5	0	240
2	2411-020W 57.03	2421-020W 63.31	2431-020W 70.37	5	0	240
3	2411-030W 207.42	2421-030W 257.32	2431-030W 296.68	1	0	240
4	2411-040W 438.47	2421-040W 483.08	2431-040W 525.14	1	0	240

Socket Ends

1/2	2412-005W 19.02	2422-005W 21.09	2432-005W 23.46	10	120	240
3/4	2412-007W 25.75	2422-007W 26.55	2432-007W 29.51	10	80	240
1	2412-010W 28.11	2422-010W 31.22	2432-010W 34.72	10	0	240
1-1/4	2412-012W 39.08	2422-012W 43.46	2432-012W 48.28	6	0	240
1-1/2	2412-015W 50.66	2422-015W 58.82	2432-015W 63.79	5	0	240
2	2412-020W 57.03	2422-020W 63.31	2432-020W 70.37	5	0	240
3	2412-030W 207.42	2422-030W 257.32	2432-030W 296.68	1	0	240
4	2412-040W 438.47	2422-040W 483.08	2432-040W 525.14	1	0	240



Schedule 40 Fittings & Accessories

Electro Actuated True Union 2000 Standard Ball Valve & Electro Actuated Compact 2000 Ball Valve



General Purpose True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- PTFE/HDPE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated True Union 2000 Standard Ball Valve

O-ring Joint	EPDM			FKM			Disc Code
	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005 469.73	E1451-005SR 470.59	E1457-005 577.91	E1454-005 517.58	E1452-005SR 518.55	E1458-005 636.74	500
3/4	E1453-007 479.98	E1451-007SR 481.93	E1457-007 606.21	E1454-007 536.13	E1452-007SR 538.09	E1458-007 675.55	500
1	E1453-010 494.41	E1451-010SR 494.41	E1457-010 632.88	E1454-010 548.11	E1452-010SR 550.23	E1458-010 701.72	500
1-1/4	E1553-012 506.39	E1551-012SR 512.47	E1557-012 658.42	E1554-012 584.32	E1552-012SR 590.29	E1558-012 759.53	500
1-1/2	E1553-015 535.73	E1551-015SR 542.20	E1557-015 691.06	E1554-015 599.61	E1552-015SR 606.21	E1558-015 773.62	500
2	E1553-020 567.65	E1551-020SR 574.68	E1557-020 760.69	E1554-020 631.15	E1552-020SR 637.77	E1558-020 845.79	500



General purpose industrial grade sealed unit design, 1/4-turn shutoff. Basic On-Off operation.

- Maintenance-free
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Compact 2000 Ball Valve

O-ring Joint	EPDM			FKM			Disc Code
	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1404-005 452.61	E1406-005 452.61	E1408-005 557.42	E1405-005 498.81	E1407-005 498.81	E1409-005 587.83	496
3/4	E1404-007 463.71	E1406-007 463.71	E1408-007 586.16	E1405-007 515.36	E1407-007 515.36	E1409-007 616.72	496
1	E1404-010 472.03	E1406-010 472.03	E1408-010 604.24	E1405-010 523.54	E1407-010 523.54	E1409-010 635.27	496
1-1/4	E1504-012 488.69	E1506-012 488.69	E1508-012 636.49	E1505-012 552.26	E1507-012 552.26	E1509-012 670.07	496
1-1/2	E1504-015 502.61	E1506-015 502.61	E1508-015 648.42	E1505-015 563.01	E1507-015 563.01	E1509-015 686.42	496
2	E1504-020 524.78	E1506-020 524.78	E1508-020 705.54	E1505-020 585.32	E1507-020 585.32	E1509-020 744.75	496

Schedule 40 Fittings & Accessories

Utility Swing Check Valves & True Union Utility Swing Check Valves



Utility Swing Check Valves



Socket/Threaded



Compression End



Socket/Threaded

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520-05 16.68	S1520-05F 16.68	S1520-05FSR 19.46	35	0	026
3/4	S1520-07 17.22	S1520-07F 17.22	S1520-07FSR 21.18	35	0	026
1	S1520-10 17.94	S1520-10F 17.94	S1520-10FSR 23.45	20	0	026
1-1/4	S1520-12 18.63	S1520-12F 18.63	S1520-12FSR 27.48	12	0	026
1-1/2	S1520-15 19.75	S1520-15F 19.75	S1520-15FSR 34.86	12	0	026
2	S1520-20 30.65	S1520-20F 30.65	S1520-20FSR 47.05	15	0	026
2-1/2	S1520-25 50.99	S1520-25F 50.99	S1520-25FSR 67.39	5	0	026
3	S1520-30 56.66	S1520-30F 56.66	S1520-30FSR 100.49	4	0	026
4	S1520-40 80.22	S1520-40F 80.22	S1520-40FSR 125.64	2	0	026
6	S1520-60 168.56	S1520-60F 168.56	S1520-60FSR 222.33	1	0	026
8	S1520-80 313.13	---	---	1	0	026

PVC Clear Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520C05 22.68	S1520C05F 22.68	S1520C05FSR 25.45	35	0	026
3/4	S1520C07 23.13	S1520C07F 23.13	S1520C07FSR 27.12	35	0	026
1	S1520C10 23.57	S1520C10F 23.57	S1520C10FSR 29.09	20	0	026
1-1/4	S1520C12 24.75	S1520C12F 24.75	S1520C12FSR 33.57	12	0	026
1-1/2	S1520C15 26.89	S1520C15F 26.89	S1520C15FSR 42.03	12	0	026
2	S1520C20 38.72	S1520C20F 38.72	S1520C20FSR 55.12	15	0	026
2-1/2	S1520C25 64.54	S1520C25F 64.54	S1520C25FSR 89.97	5	0	026
3	S1520C30 71.72	S1520C30F 71.72	S1520C30FSR 115.54	4	0	026
4	S1520C40 96.54	S1520C40F 96.54	S1520C40FSR 141.93	2	0	026
6	S1520C60 199.53	S1520C60F 199.53	S1520C60FSR 253.31	1	0	026
8	S1520C80 333.29	---	---	1	0	026

True Union Utility Swing Check Valves

PVC White True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720-05 18.97	S1720-05F 18.97	S1720-05FSR 21.73	35	0	026
3/4	S1720-07 19.55	S1720-07F 19.55	S1720-07FSR 23.54	30	0	026
1	S1720-10 20.37	S1720-10F 20.37	S1720-10FSR 25.89	18	0	026
1-1/4	S1720-12 21.44	S1720-12F 21.44	S1720-12FSR 30.27	12	0	026
1-1/2	S1720-15 23.57	S1720-15F 23.57	S1720-15FSR 38.71	10	0	026
2	S1720-20 35.41	S1720-20F 35.41	S1720-20FSR 51.74	10	0	026
2-1/2	S1720-25 59.04	S1720-25F 59.04	S1720-25FSR 84.44	2	0	026
3	S1720-30 75.38	S1720-30F 75.38	S1720-30FSR 119.23	2	0	026
4	S1720-40 101.75	S1720-40F 101.75	S1720-40FSR 146.72	1	0	026

PVC Clear True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
3/4	S1720C07 24.98	S1720C07F 24.98	S1720C07FSR 28.96	30	0	026
1	S1720C10 27.29	S1720C10F 27.29	S1720C10FSR 32.80	18	0	026
1-1/4	S1720C12 28.75	S1720C12F 28.75	S1720C12FSR 37.57	12	0	026
1-1/2	S1720C15 30.83	S1720C15F 30.83	S1720C15FSR 45.96	10	0	026
2	S1720C20 43.37	S1720C20F 43.37	S1720C20FSR 59.78	10	0	026
2-1/2	S1720C25 71.22	S1720C25F 71.22	S1720C25FSR 96.64	2	0	026
3	S1720C30 81.97	S1720C30F 81.97	S1720C30FSR 125.80	2	0	026
4	S1720C40 109.29	S1720C40F 109.29	S1720C40FSR 154.64	1	0	026

PVC Clear True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720C05 24.57	S1720C05F 24.57	S1720C05FSR 27.33	35	0	026



Schedule 40 Fittings & Accessories

Compression Utility Swing Check Valves & Utility Spring Check Valves

Compression Utility Swing Check Valves

PVC White Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500-05	1/2	20	0	026	22.17
S1500-07	3/4	35	0	026	23.33
S1500-10	1	20	0	026	24.31
S1500-12	1-1/4	12	0	026	28.55
S1500-15	1-1/2	12	0	026	31.85
S1500-20	2	10	0	026	50.24
S1500-25	2-1/2	5	0	026	83.91
S1500-30	3	4	0	026	108.93
S1500-40	4	2	0	026	167.34

PVC Clear Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500C05	1/2	35	0	026	24.38
S1500C07	3/4	20	0	026	26.24
S1500C10	1	20	0	026	26.78
S1500C12	1-1/4	12	0	026	30.06
S1500C15	1-1/2	12	0	026	33.88
S1500C20	2	10	0	026	50.58
S1500C25	2-1/2	5	0	026	84.84

PVC Clear Compression End Swing Check (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500C30	3	4	0	026	123.92
S1500C40	4	2	0	026	170.74

Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-005	1/2	1	50	299	11.93
CCW-007	3/4	1	50	299	12.14
CCW-010	1	1	50	299	12.65
CCW-012	1-1/4	1	50	299	14.32
CCW-015	1-1/2	1	50	299	15.44
CCW-020*	2	1	50	299	17.25
CCW-030**	3	1	25	299	21.22

* CCW-20 - Wrench also fits 2-1/2" Coupling Body

**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Sets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	Set	1	50	299	99.68
Complete Set of Wrenches, Sizes 1/2" - 3"					

Utility Spring Check Valves

PVC White Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580-05 32.84	S1580-05F 32.84	S1580-05FSR 35.62	20	0	026
3/4	S1580-07 37.17	S1580-07F 37.17	S1580-07FSR 41.13	20	0	026
1	S1580-10 38.72	S1580-10F 38.72	S1580-10FSR 44.22	20	0	026
1-1/4	S1580-12 40.32	S1580-12F 40.32	S1580-12FSR 49.17	12	0	026
1-1/2	S1580-15 42.92	S1580-15F 42.92	S1580-15FSR 58.02	12	0	026
2	S1580-20 44.99	S1580-20F 44.99	S1580-20FSR 61.39	15	0	026
2-1/2	S1580-25 79.85	S1580-25F 79.85	S1580-25FSR 105.28	4	0	026
3	S1580-30 83.28	S1580-30F 83.28	S1580-30FSR 127.12	4	0	026
4	S1580-40 118.19	S1580-40F 118.19	S1580-40FSR 163.61	2	0	026

PVC Clear Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580C05 33.84	S1580C05F 33.84	S1580C05FSR 36.65	20	0	026
3/4	S1580C07 38.31	S1580C07F 38.31	S1580C07FSR 42.31	20	0	026
1	S1580C10 39.94	S1580C10F 39.94	S1580C10FSR 45.43	20	0	026
1-1/4	S1580C12 41.58	S1580C12F 41.58	S1580C12FSR 50.41	12	0	026
1-1/2	S1580C15 44.05	S1580C15F 44.05	S1580C15FSR 59.19	12	0	026
2	S1580C20 45.72	S1580C20F 45.72	S1580C20FSR 62.11	15	0	026
2-1/2	S1580C25 82.33	S1580C25F 82.33	S1580C25FSR 107.72	5	0	026
3	S1580C30 85.73	S1580C30F 85.73	S1580C30FSR 170.57	4	0	026
4	S1580C40 121.80	S1580C40F 121.80	S1580C40FSR 167.21	2	0	026



True Union Utility Spring Check Valves

PVC White True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780-05 43.67	S1780-05F 43.67	S1780-05FSR 46.44	20	0	026
3/4	S1780-07 49.54	S1780-07F 49.54	S1780-07FSR 53.52	30	0	026
1	S1780-10 51.63	S1780-10F 51.63	S1780-10FSR 57.12	18	0	026
1-1/4	S1780-12 53.78	S1780-12F 53.78	S1780-12FSR 62.57	12	0	026
1-1/2	S1780-15 57.29	S1780-15F 57.29	S1780-15FSR 72.44	10	0	026
2	S1780-20 59.65	S1780-20F 59.65	S1780-20FSR 76.03	10	0	026
2-1/2	S1780-25 106.46	S1780-25F 106.46	S1780-25FSR 131.83	2	0	026
3	S1780-30 111.06	S1780-30F 111.06	S1780-30FSR 154.89	2	0	026
4	S1780-40 157.59	S1780-40F 157.59	S1780-40FSR 203.04	1	0	026

PVC Clear True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780C05 45.05	S1780C05F 45.05	S1780C05FSR 47.82	20	0	026
3/4	S1780C07 51.09	S1780C07F 51.09	S1780C07FSR 55.07	30	0	026
1	S1780C10 53.22	S1780C10F 53.22	S1780C10FSR 58.76	18	0	026
1-1/4	S1780C12 55.41	S1780C12F 55.41	S1780C12FSR 64.21	12	0	026
1-1/2	S1780C15 58.76	S1780C15F 58.76	S1780C15FSR 74.21	10	0	026
2	S1780C20 60.47	S1780C20F 60.47	S1780C20FSR 77.83	10	0	026
2-1/2	S1780C25 109.76	S1780C25F 109.76	S1780C25FSR 135.19	2	0	026
3	S1780C30 114.48	S1780C30F 114.48	S1780C30FSR 158.31	2	0	026
4	S1780C40 162.48	S1780C40F 162.48	S1780C40FSR 207.93	1	0	026

PVC In-line Adjustable Spring Check Valves



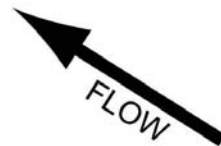
Fipt x Mipt



Mipt x Fipt



Fipt x Fipt



Pressure Rating @ 73°F (23°C), Water
200 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

2 - 14 lbs. Adjustable Spring Tension
(5 to 32 feet of head)
Factory Preset to Approx. 5 psi
(12 feet of head)
Each full turn of adjustment nut = 1 psi
(2.3 feet of head)
Stainless Steel Adjustment Hardware
EPDM Seat

Standard Unit - Female Inlet x Male Outlet

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S1102-05	1/2	30	180	026	10.95
S1102-07	3/4	25	150	026	11.20
S1102-10	1	25	150	026	18.59
S1102-05-07	1/2X3/4	25	150	026	15.98

Male Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S1101-05	1/2	30	180	026	10.95

Female Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S1100-07	3/4	25	150	026	11.57



Turf & Irrigation EverTUFF® TURF™ Fittings For Golf Course & Turf Applications



Spears® EverTUFF® TURF™ Fittings are specifically engineered to meet the demanding system requirements of today's golf course and turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

- Over 50% Stronger than Any Other Solvent Weld Turf Fitting
- Full Class 315 Pressure Rating
- Patented Special Reinforced (SR) Threads on All Female Threaded Fittings
- Produced in Standard Configurations
- Optional CPVC for Higher Temperatures
- NSF® Certified

Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI												
Application Temperature	73° F (23° C)	90° F (32° C)	100° F (38° C)	110° F (43° C)	120° F (49° C)	130° F (54° C)	140° F (60° C)	150° F (66° C)	160° F (71° C)	170° F (77° C)	180° F (82° C)	200° F (99° C)
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Tee Soc



Class 315

401-010T	1	50	0	031	2.58
401-012T	1-1/4	25	0	031	4.03
401-015T	1-1/2	25	0	031	4.89
401-020T	2	25	0	031	7.13
401-025T	2-1/2	10	0	031	23.52
401-030T	3	10	0	031	30.89
401-040T	4	8	0	031	55.89

PVC Reducing Tee Soc



Class 315

401-168T	1-1/4X1	25	0	031	4.42
401-212T	1-1/2X1-1/4	25	0	031	7.76
401-251T	2X1-1/2	10	0	031	9.84
401-292T	2-1/2X2	10	0	031	23.45
401-338T	3X2	6	0	031	33.55
401-422T	4X3	6	0	031	55.89

PVC 90° Elbow Soc



Class 315

406-010T	1	50	0	031	1.95
406-012T	1-1/4	25	0	031	3.43
406-015T	1-1/2	25	0	031	3.69
406-020T	2	25	0	031	5.78
406-025T	2-1/2	10	0	031	17.59
406-030T	3	10	0	031	21.05
406-040T	4	8	0	031	37.65

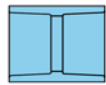
PVC 45° Elbow Soc



Class 315

417-010T	1	50	0	031	2.98
417-012T	1-1/4	25	0	031	4.14
417-015T	1-1/2	25	0	031	5.20
417-020T	2	25	0	031	6.75
417-025T	2-1/2	10	0	031	17.62
417-030T	3	10	0	031	27.35
417-040T	4	5	0	031	49.04

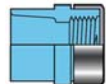
PVC Couplings Soc



Class 315

429-010T	1	50	0	031	1.53
429-012T	1-1/4	25	0	031	2.12
429-015T	1-1/2	25	0	031	2.25
429-020T	2	25	0	031	3.44
429-025T	2-1/2	12	0	031	7.62
429-030T	3	10	0	031	11.95
429-040T	4	5	0	031	17.26

PVC Special Reinforced Female Adapter Soc x SR Fipt - Stainless Steel Collar



Class 315

435-010SRT	1	25	200	031	10.07
435-012SRT	1-1/4	10	60	031	16.29
435-015SRT	1-1/2	10	80	031	20.05
435-020SRT	2	10	0	031	34.97
435-025SRT	2-1/2	5	0	031	55.18
435-030SRT	3	10	0	031	62.18
435-040SRT	4	5	0	031	106.86

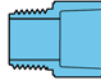
Turf & Irrigation
EverTUFF® TURF™ Fittings For Golf Course & Turf Applications



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Male Adapter

Mipt x Soc



Class 315

436-010T	1	50	0	031	1.73
436-012T	1-1/4	25	0	031	2.12
436-015T	1-1/2	25	0	031	2.82
436-020T	2	25	0	031	3.72
436-025T	2-1/2	10	0	031	10.94
436-030T	3	10	0	031	16.01
436-040T	4	5	0	031	20.41

PVC Reducer Bushing Flush Style

Spig x Soc

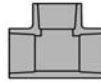


Class 315

437-250T	2X1-1/4	10	120	031	4.32
437-251T	2X1-1/2	25	0	031	4.32
437-292T	2-1/2X2	15	0	031	6.94
437-338T	3X2	10	0	031	10.20
437-422T	4X3	6	0	031	21.47

CPVC Tee

Soc



Class 315

401-010TC	1	50	0	032	5.14
401-012TC	1-1/4	25	0	032	8.06
401-015TC	1-1/2	25	0	032	9.78
401-020TC	2	25	0	032	14.24
401-025TC	2-1/2	10	0	032	47.03
401-030TC	3	10	0	032	61.78
401-040TC	4	8	0	032	111.77

CPVC Reducing Tee

Soc



Class 315

401-168TC	1-1/4X1	25	0	032	8.83
401-212TC	1-1/2X1-1/4	25	0	032	15.52
401-251TC	2X1-1/2	10	0	032	23.83
401-292TC	2-1/2X2	10	0	032	46.89
401-338TC	3X2	6	0	032	67.08
401-422TC	4X3	6	0	032	111.77

CPVC 90° Elbow

Soc

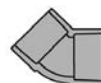


Class 315

406-010TC	1	50	0	032	3.89
406-012TC	1-1/4	25	0	032	6.85
406-015TC	1-1/2	25	0	032	7.39
406-020TC	2	25	0	032	11.56
406-025TC	2-1/2	10	0	032	35.17
406-030TC	3	10	0	032	42.09
406-040TC	4	8	0	032	75.28

CPVC 45° Elbow

Soc



Class 315

417-010TC	1	50	0	032	5.96
417-012TC	1-1/4	25	0	032	8.26
417-015TC	1-1/2	25	0	032	10.38
417-020TC	2	25	0	032	10.38

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

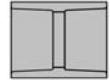
CPVC 45° Elbow (continued)

Soc

417-025TC	2-1/2	10	0	032	35.24
417-030TC	3	10	0	032	54.69
417-040TC	4	5	0	032	98.06

CPVC Couplings

Soc

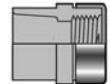


Class 315

429-010TC	1	50	0	032	3.05
429-012TC	1-1/4	25	0	032	4.23
429-015TC	1-1/2	25	0	032	4.51
429-020TC	2	25	0	032	6.88
429-025TC	2-1/2	12	0	032	15.25
429-030TC	3	10	0	032	23.88
429-040TC	4	5	0	032	34.54

CPVC Special Reinforced Female Adapter

Soc x SR Fipt - Stainless Steel Collar

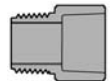


Class 315

435-010SRTC	1	25	200	032	20.16
435-012SRTC	1-1/4	10	60	032	32.59
435-015SRTC	1-1/2	10	80	032	40.12
435-020SRTC	2	10	0	032	69.95
435-025SRTC	2-1/2	5	0	032	110.36
435-030SRTC	3	10	0	032	124.37
435-040SRTC	4	5	0	032	213.73

CPVC Male Adapter

Mipt x Soc

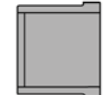


Class 315

436-010TC	1	50	0	032	3.46
436-012TC	1-1/4	25	0	032	4.23
436-015TC	1-1/2	25	0	032	5.64
436-020TC	2	25	0	032	7.42
436-025TC	2-1/2	10	0	032	21.87
436-030TC	3	5	0	032	32.01
436-040TC	4	5	0	032	40.82

CPVC Reducer Bushing Flush Style

Spig x Soc



Class 315

437-250TC	2X1-1/4	10	200	032	8.63
437-251TC	2X1-1/2	25	0	032	8.63
437-292TC	2-1/2X2	15	0	032	13.87
437-338TC	3X2	10	0	032	20.39
437-422TC	4X3	6	0	032	42.95



Turf & Irrigation EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles

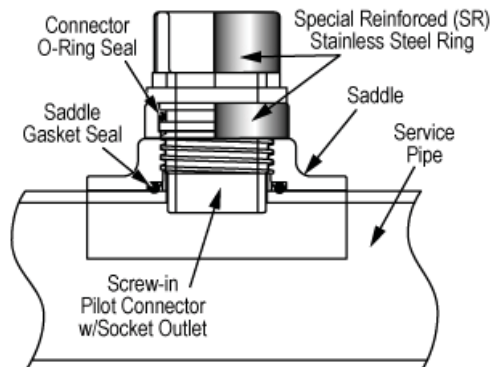
Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.



- Socket Outlet
- 315 psi Pressure Rating @ 73° F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength



Note: Mechanical Clamp Not Shown

Mechanical Clamp-on Transition Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. x Socket

For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions

865-419	4X1-1/2	2	0	086	733.37
865-420	4X2	1	0	086	743.42
865-527	6X1-1/2	1	0	086	804.53
865-528	6X2	1	0	086	838.42
865-577	8X1-1/2	1	0	086	941.68
865-578	8X2	1	0	086	978.32

Turf & Irrigation
EverTUFF® TURF™ Swing Joint Riser Assemblies



Many Configurations may be created and furnished by using the following Swing Joint Riser Numbering System.

X X | X X - X X X | X X

Code	Swing Arm Riser Style
58	Male Buttress Threaded Riser Style
59	Cut & Solvent Cemented Riser Style

Code	Inlet x Outlet Style Combination
01	Soc x Soc
02	Spig x Soc
03	Mipt x Soc
04	Tee x Soc
05	Soc x Mipt
06	Spig x Mipt
07	Mipt x Mipt
08	Tee x Mipt
09	Soc x Mat
10	Spig x Mat
11	Mipt x Mat
12	Tee x Mat
13	Soc x Fipt
14	Spig x Fipt
15	Mipt x Fipt
16	Tee x Fipt
17	Soc x SR Fipt
18	Spig x SR Fipt
19	Mipt x SR Fipt
20	Tee x SR Fipt
21†	Gmpt 2-1/2" Npl x Mat
22	Mat x Mat
23	Mat x Mpt
24	Mat x Fipt
25	Mat x SR Fipt
26	Spig x Fbt
27	Spig x Fat
28	Extended Spig x Fipt
29	Extended Spig x Mipt
30	Open
31†	Mipt x Gmpt 2-1/2" Npl
32†	Gmpt 2-1/2" Npl x Fipt
33†	Gmpt 2-1/2" Npl x Soc
34†	Gmpt 2-1/2" Npl x SR Fipt
35†	Soc x Gmpt 2-1/2" Npl
36†	Spig x Gmpt 2-1/2" Npl
37†	Gmpt x Gmpt 2-1/2" Npl
38†	Tee x Gmpt 2-1/2" Npl
39†	Gmpt 2-1/2" Npl x Mipt
40†	Open
41†	Mipt x Gmpt 3" Npl
42†	Gmpt 3" Npl x Fipt
43†	Gmpt 3" Npl x Soc
44†	Gmpt 3" Npl x SR Fipt
45†	Soc x Gmpt 3" Npl
46†	Spig x Gmpt 3" Npl
47†	Gmpt x Gmpt 3" Npl
48†	Tee x Gmpt 3" Npl
49†	Gmpt 3" Npl x Mipt
50†	Gmpt 3" Npl x Mat

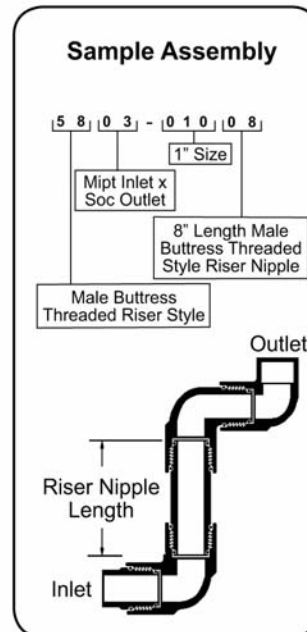
Code	Inlet x Outlet Style Combination
51‡	Soc x Soc Multi-Ell
52‡	Spig x Soc Multi-Ell
53‡	Mipt x Soc Multi-Ell
54‡	Tee x Soc Multi-Ell
55‡	Soc x Mipt Multi-Ell
56‡	Spig x Mipt Multi-Ell
57‡	Mipt x Mipt Multi-Ell
58‡	Tee x Mipt Multi-Ell
59‡	Soc x Mat Multi-Ell
60‡	Spig x Mat Multi-Ell
61‡	Mipt x Mat Multi-Ell
62‡	Tee x Mat Multi-Ell
63‡	Soc x Fipt Multi-Ell
64‡	Spig x Fipt Multi-Ell
65‡	Mipt x Fipt Multi-Ell
66‡	Tee x Fipt Multi-Ell
67‡	Soc x SR Fipt Multi-Ell
68‡	Spig x SR Fipt Multi-Ell
69‡	Mipt x SR Fipt Multi-Ell
70‡	Tee x SR Fipt Multi-Ell
71†‡	Soc x Gmpt 2-1/2" Npl Multi-Ell
72†‡	Spig x Gmpt 2-1/2" Npl Multi-Ell
73†‡	Mipt x Gmpt 2-1/2" Npl Multi-Ell
74†‡	Tee x Gmpt 2-1/2" Npl Multi-Ell
75†‡	Soc x Gmpt 3" Npl Multi-Ell
76†‡	Spig x Gmpt 3" Npl Multi-Ell
77†‡	Mipt x Gmpt 3" Npl Multi-Ell
78†‡	Tee x Gmpt 3" Npl Multi-Ell
79†‡	Gmpt 3" Npl x Mipt Multi-Ell
80†‡	Gmpt 3" Npl x Soc Multi-Ell
81†‡	Gmpt 3" Npl x Gmpt 3" Npl Multi-Ell
82‡	Mat x Mat Multi-Ell
83	Mipt x Mat Top Mount
84	Open
85	Open
86	Open
87	Open
88	Bsp x Bsp Multi-Ell
89	Bsp x Bsp Top Mount
90	Bsp x Mat
91	Bsp x Mipt
92	Mipt x Bsp
93	Bsp x Bsp
94	Astm Soc x Bsp
95	Astm Spig x Bsp
96	Din Spig x Bsp
97	Din Spig x Mipt
98	Jis Spig x Jis Mipt
99	Jis Spig x Mipt

Code	Size
010	1"
132	1" x 1-1/4"
133	1" x 1-1/2"
012	1-1/4"
015	1-1/2"
168	1-1/4" x 1"
169	1-1/4" x 1-1/2"
211	1-1/2" x 1"
212	1-1/2" x 1-1/4"
249	2" x 1" (Tee)
250	2" x 1-1/4" (Tee)
251	2" x 1-1/2" (Tee)

Riser Nipple Length	
Code	Size
5800 Series* Male Buttress Threaded Style	
08	8"
10	10"
12	12"
14	14"
16	16"
18	18"
20	20"
24	24"

5900 Series** Cut & Solvent Cemented Style	
Code	Size
00	(No Nipple)
06	6"
07	7"
08	8"
10	10"
11	11"
12	12"
13	13"
14	14"
15	15"
16	16"
17	17"
18	18"
19	19"
20	20"
21	21"
22	22"
23	23"
24	24"

* Buttress Threaded Riser Lengths may be extended with the use of Riser Extension Couplings.
** Additional Nipple lengths are available. Please contact your servicing Spears® Regional Distribution Center.



† Gmpt - A 2-1/2" Toe Nipple is solvent cemented in place. If a 3" Nipple is required, change the first digit from a "3" to a "4".

EXAMPLE:

38 = Tee x 2-1/2" Gmpt

48 = Tee x 3" Gmpt

‡ Multi-Ell - Two additional Elbows are located at the outlet of the Swing Joint Riser to allow 360° adjustment.



Turf & Irrigation EverTUFF® TURF™ Swing Joint Riser Assemblies

Most common configurations of Swing Joint Risers appear on the following pages. For those not shown, you may use the following worksheet to create various configurations. For assistance, please contact your servicing Spears® Regional Distribution Center.

Ordering Male Buttress Thread Riser Nipple Lengths Not Listed in Catalog

Swing Joint Risers on the following pages are shown with 8", 10", and 12" Nipple Lengths (LG). Additional standard Nipple lengths of 14", 16", 18", 20" and 24", plus virtually any custom lengths are available.

To order desired standard riser nipple length, replace the last two digits of the listed part number with the desired length in inches.

Example: 5805-01016 = 16" Nipple Length
5805-01018 = 18" Nipple Length

Contact your servicing Spears® Regional Distribution Center for pricing on these additional standard lengths or for custom produced nipple lengths.

Sample

SWING ARM RISER STYLE CODE		INLET x OUTLET STYLE COMBINATION CODE		—	SIZE CODE			RISER NIPPLE LENGTH CODE	
5	8	0	3	—	0	1	0	1	6
Male Buttress Threaded Riser Style		MIPT Inlet x SOC Outlet		—	1" Size			16" Length Male Buttress Threaded Style Riser Nipple	

Worksheet

SWING ARM RISER STYLE CODE		INLET x OUTLET STYLE COMBINATION CODE		—	SIZE CODE			RISER NIPPLE LENGTH CODE	
				—					
				—					
				—					
				—					
				—					
				—					
				—					
				—					
				—					
				—					

Turf & Irrigation
EverTUFF® TURF™ Swing Joint Riser Assemblies



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

SOC Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5805-01008	1X8LG	25	0	030	51.80
5805-01010	1X10LG	25	0	030	54.58
5805-01012	1X12LG	25	0	030	57.56
5805-01208	1-1/4X8LG	20	0	030	68.81
5805-01210	1-1/4X10LG	20	0	030	72.43
5805-01212	1-1/4X12LG	20	0	030	76.22
5805-16808	1-1/4X1X8LG	20	0	030	68.81
5805-16810	1-1/4X1X10LG	20	0	030	72.43
5805-16812	1-1/4X1X12LG	20	0	030	76.22
5805-16908	1-1/4X1-1/2X8LG	20	0	030	68.81
5805-16910	1-1/4X1-1/2X10LG	20	0	030	72.43
5805-16912	1-1/4X1-1/2X12LG	20	0	030	76.22
5805-01508	1-1/2X8LG	15	0	030	83.80
5805-01510	1-1/2X10LG	15	0	030	88.05
5805-01512	1-1/2X12LG	15	0	030	92.64

SOC Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5809-01008	1X8LG	25	0	030	51.80
5809-01010	1X10LG	25	0	030	54.58
5809-01012	1X12LG	25	0	030	57.56
5809-01208	1-1/4X8LG	20	0	030	68.81
5809-01210	1-1/4X10LG	20	0	030	72.43
5809-01212	1-1/4X12LG	20	0	030	76.22
5809-01508	1-1/2X8LG	15	0	030	83.80
5809-01510	1-1/2X10LG	15	0	030	88.05
5809-01512	1-1/2X12LG	15	0	030	92.64

SPIG Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5806-01008	1X8LG	25	0	030	51.80
5806-01010	1X10LG	25	0	030	54.58
5806-01012	1X12LG	25	0	030	57.56
5806-01208	1-1/4X8LG	20	0	030	68.81
5806-01210	1-1/4X10LG	20	0	030	72.43
5806-01212	1-1/4X12LG	20	0	030	76.22
5806-16808	1-1/4X1X8LG	20	0	030	68.81
5806-16810	1-1/4X1X10LG	20	0	030	72.43
5806-16812	1-1/4X1X12LG	20	0	030	76.22
5806-16908	1-1/4X1-1/2X8LG	20	0	030	68.81
5806-16910	1-1/4X1-1/2X10LG	20	0	030	72.43
5806-16912	1-1/4X1-1/2X12LG	20	0	030	76.22
5806-01508	1-1/2X8LG	15	0	030	83.80
5806-01510	1-1/2X10LG	15	0	030	88.05
5806-01512	1-1/2X12LG	15	0	030	92.64

SPIG Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5810-01008	1X8LG	25	0	030	51.80
5810-01010	1X10LG	25	0	030	54.58
5810-01012	1X12LG	25	0	030	57.56

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

SPIG Inlet x MAT Outlet (continued)

5810-01208	1-1/4X8LG	20	0	030	68.81
5810-01210	1-1/4X10LG	20	0	030	72.43
5810-01212	1-1/4X12LG	20	0	030	76.22
5810-01508	1-1/2X8LG	15	0	030	83.80
5810-01510	1-1/2X10LG	15	0	030	88.05
5810-01512	1-1/2X12LG	15	0	030	92.64

MIPT Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5807-01008	1X8LG	25	0	030	51.80
5807-01010	1X10LG	25	0	030	54.58
5807-01012	1X12LG	25	0	030	57.56
5807-01208	1-1/4X8LG	20	0	030	68.81
5807-01210	1-1/4X10LG	20	0	030	72.43
5807-01212	1-1/4X12LG	20	0	030	76.22
5807-16808	1-1/4X1X8LG	20	0	030	68.81
5807-16810	1-1/4X1X10LG	20	0	030	72.43
5807-16812	1-1/4X1X12LG	20	0	030	76.22
5807-16908	1-1/4X1-1/2X8LG	20	0	030	68.81
5807-16910	1-1/4X1-1/2X10LG	20	0	030	72.43
5807-16912	1-1/4X1-1/2X12LG	20	0	030	76.22
5807-01508	1-1/2X8LG	15	0	030	83.80
5807-01510	1-1/2X10LG	15	0	030	88.05
5807-01512	1-1/2X12LG	15	0	030	92.64

MIPT Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5811-01008	1X8LG	25	0	030	51.80
5811-01010	1X10LG	25	0	030	54.58
5811-01012	1X12LG	25	0	030	57.56
5811-01208	1-1/4X8LG	20	0	030	68.81
5811-01210	1-1/4X10LG	20	0	030	72.43
5811-01212	1-1/4X12LG	20	0	030	76.22
5811-01508	1-1/2X8LG	15	0	030	83.80
5811-01510	1-1/2X10LG	15	0	030	88.05
5811-01512	1-1/2X12LG	15	0	030	92.64

SOC TEE Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5808-24908	2X1 X8LG	15	0	030	73.94
5808-24910	2X1 X10LG	15	0	030	77.91
5808-24912	2X1 X12LG	15	0	030	82.05
5808-25008	2X1-1/4X8LG	15	0	030	90.28
5808-25010	2X1-1/4X10LG	15	0	030	95.04
5808-25012	2X1-1/4X12LG	10	0	030	100.03
5808-25108	2X1-1/2X8LG	10	0	030	119.38
5808-25110	2X1-1/2X10LG	10	0	030	125.83
5808-25112	2X1-1/2X12LG	10	0	030	132.66

SOC TEE Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5812-24908	2X1 X8LG	15	0	030	73.94
------------	----------	----	---	-----	-------



Turf & Irrigation EverTUFF® TURF™ Swing Joint Riser Assemblies

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

SOC TEE Inlet x MAT Outlet (continued)

5812-24910	2X1 X10LG	15	0	030	77.91
5812-24912	2X1 X12LG	15	0	030	82.05
5812-25008	2X1-1/4X8LG	20	0	030	90.28
5812-25010	2X1-1/4X10LG	15	0	030	95.04
5812-25012	2X1-1/4X12LG	15	0	030	100.03
5812-25108	2X1-1/2X8LG	10	0	030	119.38
5812-25110	2X1-1/2X10LG	10	0	030	125.83
5812-25112	2X1-1/2X12LG	10	0	030	132.66



SOC Inlet x MIPT Outlet Multi Ell

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5855-01008	1X8LG	20	0	030	74.83
5855-01010	1X10LG	15	0	030	80.48
5855-01012	1X12LG	15	0	030	83.26
5855-01208	1-1/4X8LG	20	0	030	95.45
5855-01210	1-1/4X10LG	15	0	030	101.09
5855-01212	1-1/4X12LG	15	0	030	103.87
5855-01508	1-1/2X8LG	10	0	030	115.95
5855-01510	1-1/2X10LG	10	0	030	121.54
5855-01512	1-1/2X12LG	10	0	030	124.34



SPIG Inlet x MIPT Outlet Multi-Ell

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5856-01008	1X8LG	20	0	030	74.83
5856-01010	1X10LG	15	0	030	80.48
5856-01012	1X12LG	15	0	030	83.26
5856-01208	1-1/4X8LG	20	0	030	95.45
5856-01210	1-1/4X10LG	15	0	030	101.09
5856-01212	1-1/4X12LG	15	0	030	103.87
5856-01508	1-1/2X8LG	10	0	030	115.95
5856-01510	1-1/2X10LG	10	0	030	121.54
5856-01512	1-1/2X12LG	10	0	030	124.34



MIPT Inlet x MIPT Outlet Multi-Ell

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5857-01008	1X8LG	20	0	030	74.83
5857-01010	1X10LG	15	0	030	80.48
5857-01012	1X12LG	15	0	030	83.26
5857-01208	1-1/4X8LG	20	0	030	95.45
5857-01210	1-1/4X10LG	15	0	030	101.09
5857-01212	1-1/4X12LG	15	0	030	103.87
5857-01508	1-1/2X8LG	10	0	030	115.95
5857-01510	1-1/2X10LG	10	0	030	121.54
5857-01512	1-1/2X12LG	10	0	030	124.34



TEE Inlet x MIPT Outlet Multi-Ell

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5858-24908	2X1 X8LG	15	0	030	106.95
5858-24910	2X1 X10LG	15	0	030	114.97
5858-24912	2X1 X12LG	10	0	030	118.94
5858-25008	2X1-1/4X8LG	10	0	030	136.37
5858-25010	2X1-1/4X10LG	10	0	030	144.40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

TEE Inlet x MIPT Outlet Multi-Ell (continued)

5858-25012	2X1-1/4X12LG	10	0	030	148.41
5858-25108	2X1-1/2X8LG	10	0	030	165.62
5858-25110	2X1-1/2X10LG	10	0	030	173.58
5858-25112	2X1-1/2X12LG	10	0	030	177.62



Solvent Cemented Riser Nipple Style

SOC Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5905-01000	1	1	10	030	42.40
5905-010 *	1	25	0	030	70.80
5905-010 **	1	25	0	030	80.48
5905-01200	1-1/4	1	10	030	56.09
5905-012 *	1-1/4	20	0	030	94.40
5905-012 **	1-1/4	20	0	030	107.33
5905-01500	1-1/2	1	8	030	69.78
5905-015 *	1-1/2	15	0	030	109.15
5905-015 **	1-1/2	15	0	030	124.03

Factory Assembled With Solvent Cemented Riser

Specify desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple

** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Solvent Cemented Riser Nipple Style

SPIG Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5906-01000	1	1	10	030	42.40
5906-010 *	1	25	0	030	70.80
5906-010 **	1	25	0	030	80.48
5906-01200	1-1/4	1	10	030	56.09
5906-012 *	1-1/4	20	0	030	94.40
5906-012 **	1-1/4	20	0	030	107.33
5906-01500	1-1/2	1	8	030	69.78
5906-015 *	1-1/2	15	0	030	109.15
5906-015 **	1-1/2	15	0	030	124.03

Factory Assembled With Solvent Cemented Riser

Specify desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple

** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

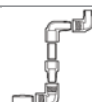
Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Solvent Cemented Riser Nipple Style

MIPT Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5907-01000	1	1	10	030	42.40
5907-010 *	1	25	0	030	70.80
5907-010 **	1	25	0	030	80.48
5907-01200	1-1/4	1	10	030	56.09
5907-012 **	1-1/4	10	0	030	107.33
5907-012 *	1-1/4	15	0	030	94.40
5907-01500	1-1/2	1	8	030	69.78
5907-015 *	1-1/2	15	0	030	109.15
5907-015 **	1-1/2	0	0	030	124.03



Turf & Irrigation EverTUFF® TURF™ Swing Joint Riser Assemblies



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Solvent Cemented Riser Nipple Style (continued)

MIPT Inlet x MIPT Outlet

Factory Assembled With Solvent Cemented Riser

Specify desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Solvent Cemented Riser Nipple Style

SOC TEE Inlet x MIPT Outlet



Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5908-24900	2X1	1	8	030	49.88
5908-249 *	1	15	0	030	83.51
5908-249 **	1	15	0	030	94.87
5908-25000	2X1-1/4	5	0	030	63.33
5908-250 *	1-1/4	15	0	030	105.08
5908-250 **	1-1/4	15	0	030	112.81
5908-25100	2X1-1/2	1	6	030	70.80
5908-251 *	1/2	10	0	030	110.82
5908-251 **	1/2	10	0	030	125.96

Factory Assembled With Solvent Cemented Riser

Specify desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

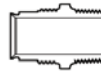
Cap FAT



548-010-28A	1	50	0	030	1.98
548-012-28A	1-1/4	25	0	030	2.41
548-015-28A	1-1/2	25	0	030	2.58

Outlet Adapter

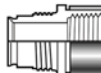
MAT x MIPT with O-rings



559-010-21AR	1	1	25	030	7.43
559-012-21AR	1-1/4	1	25	030	9.16
559-015-21AR	1-1/2	1	25	030	12.14

Outlet Adapter

MAT x SR FIPT with O-rings



559-010-22SRAR	1	1	25	030	9.84
559-012-22SRAR	1-1/4	1	250	030	18.29
559-015-22SRAR	1-1/2	1	80	030	27.54

Outlet Adapter

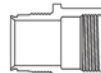
FAT x MAT with O-rings



559-212-101AR	1-1/2X1-1/4	150	0	030	18.56
---------------	--------------------	-----	---	-----	-------

Outlet Adapter

MAT x FAT with O-rings



559-212-85AR	1-1/2X1-1/4	1	80	030	19.88
--------------	--------------------	---	----	-----	-------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Inlet Adapter

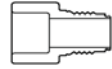
SPIG x MBT with O-rings



592-010-4AR	1	1	25	030	18.26
592-012-4AR	1-1/4	1	10	030	20.22
592-015-4AR	1-1/2	1	25	030	22.14

Inlet Adapter

SOC x MBT with O-rings



591-010-3AR	1	1	25	030	12.69
591-012-3AR	1-1/4	1	10	030	15.99
591-015-3AR	1-1/2	1	25	030	19.33

Inlet Adapter

JIS SPIG x MBT with O-rings



594-010-4AR	25	1	10	030	18.26
594-012-4AR	32	1	10	030	20.22
594-015-4AR	40	1	10	030	22.14

Inlet Adapter

DIN SPIG x MBT with O-rings



595-010-4AR	32	1	10	030	18.26
595-012-4AR	40	1	10	030	20.22
595-015-4AR	50	1	10	030	22.14

Inlet Adapters

MIPT x MBT with O-rings



596-010-4AR	1	1	25	030	15.51
596-012-4AR	1-1/4	1	10	030	18.11
596-015-4AR	1-1/2	1	25	030	20.65

Reducing Inlet Adapter

MIPT x MBT with O-rings



596-212-4AR	1-1/2X1-1/4	1	25	030	27.61
-------------	--------------------	---	----	-----	-------

Inlet Adapter

BSP x MBT with O-rings



597-010-4AR	1	1	25	030	15.51
597-012-4AR	1-1/4	1	10	030	18.11
597-015-4AR	1-1/2	1	25	030	20.65

Reducing Tee

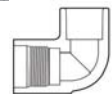
SOC x FBT



593-249-5A	2X1	30	0	030	32.40
593-250-5A	2X1-1/4	30	0	030	32.40
593-251-5A	2X1-1/2	25	0	030	32.40

90° Ell Outlet

FBT x SOC



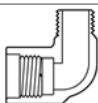
591-010-2A	1	115	0	030	20.11
591-012-2A	1-1/4	80	0	030	23.33
591-015-2A	1-1/2	50	0	030	26.49



Turf & Irrigation EverTUFF® TURF™ Swing Joint Riser Assemblies

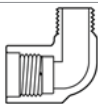
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° Street EII Outlet FBT x MIPT



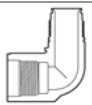
591-010-4A	1	140	0	030	17.17
591-012-4A	1-1/4	1	90	030	20.37
591-015-4A	1-1/2	1	60	030	23.55
591-168-4A	1-1/4X1	110	0	030	39.83

90° Street EII Outlet FBT x BSP



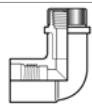
591-010-5A	1	140	0	030	20.11
591-012-5A	1-1/4	1	100	030	20.37
591-015-5A	1-1/2	60	0	030	26.49

90° Street EII Outlet FBT x MAT with O-rings



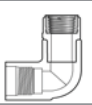
591-010-7AR	1	1	25	030	22.42
591-012-7AR	1-1/4	1	25	030	26.12
591-015-7AR	1-1/2	1	25	030	29.79
591-132-7AR	1X1-1/4	1	25	030	26.12
591-133-7AR	1X1-1/2	1	25	030	23.45
591-168-7AR	1-1/4X1	1	10	030	25.82
591-211-7AR	1-1/2X1	1	25	030	29.54
591-212-7AR	1-1/2X1-1/4	1	25	030	28.91

Special Reinforced 90° EII Outlet FBT x SR FIPT



591-010-8SRA	1	15	0	030	28.55
591-012-8SRA	1-1/4	15	0	030	32.61
591-015-8SRA	1-1/2	15	0	030	35.01

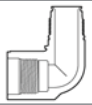
Brass Thread 90° EII Outlet FBT x FIPT with Brass Thread Insert



591-010-8BRA	1	15	0	030	35.51
591-012-8BRA	1-1/4	10	0	030	78.63
591-015-8BRA	1-1/2	10	0	030	113.67

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Street EII Outlet MBT x FBT with O-rings



591-010-1AR	1	1	25	030	22.42
591-012-1AR	1-1/4	1	10	030	26.12
591-015-1AR	1-1/2	1	25	030	29.79

Riser Nipple MBT (8" Length) with O-rings



59-010-08R	1X8	1	25	030	16.53
59-012-08R	1-1/4X8	1	10	030	21.54
59-015-08R	1-1/2X8	1	25	030	26.53

Riser Nipple MBT (10" Length) with O-rings



59-010-10R	1X10	1	25	030	17.72
59-012-10R	1-1/4X10	1	10	030	22.87
59-015-10R	1-1/2X10	1	25	030	28.04

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Riser Nipple MBT (12" Length) with O-rings



59-010-12R	1X12	1	25	030	20.09
59-012-12R	1-1/4X12	1	10	030	24.77
59-015-12R	1-1/2X12	1	25	030	29.52

Riser Nipple MBT (14" Length) with O-rings



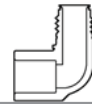
59-010-14R	1	1	25	030	14.34
59-012-14R	1-1/4	1	15	030	17.47
59-015-14R	1-1/2	1	15	030	19.66

Riser Nipple MBT (16" Length) with O-rings



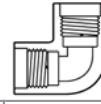
59-010-16R	1	1	45	030	15.61
59-012-16R	1-1/4	1	25	030	19.49
59-015-16R	1-1/2	1	20	030	22.07

90° Street EII Outlet SOC x MBT with O-rings



593-010-1AR	1	1	25	030	22.42
593-012-1AR	1-1/4	1	10	030	26.12
593-015-1AR	1-1/2	1	25	030	29.79

90° EII Outlet FBT x FBT



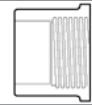
591-010-6A	1	1	95	030	18.26
591-012-6A	1-1/4	1	65	030	20.37
591-015-6A	1-1/2	1	50	030	26.72

Long Spigot Inlet SPIG x MBT with O-ring (4" in length)



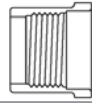
598-010-4AR	1	1	25	030	18.26
598-012-4AR	1-1/4	1	25	030	20.23
598-015-4AR	1-1/2	1	25	030	22.14

Reducer Bushing SPIGOT x FAT (Female Acme Thread)



598-168-27	1-1/4X1	20	120	030	4.24
598-212-27	1-1/2X1-1/4	15	90	030	5.17
598-251-27	2X1-1/2	10	60	030	5.66

Reducer Bushing SPIGOT x FBT (Female Buttress Thread)



598-168-26	1-1/4X1	20	120	030	4.16
598-212-26	1-1/2X1-1/4	10	60	030	4.66
598-251-26	2X1-1/2	10	60	030	5.47

Riser Extension Coupling



May be used with 5800 Series Buttress Threaded Nipples to Extend Height of Riser

58-010-1	1	140	0	030	15.20
58-012-1	1-1/4	100	0	030	15.98
58-015-1	1-1/2	80	0	030	17.92

Turf & Irrigation
EverTUFF® TURF™ Swing Joint Riser Assemblies



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

**Special Reinforced
R MIPT x SPIG Adapter**



May be used with SOC Inlet or Outlet to convert to MIPT Inlet or Outlet

590-168R	1-1/4X1	50	0	030	76.67
----------	----------------	----	---	-----	-------

MIPT x SPIG Adapter



May be used with SOC Inlet or Outlet to convert to MIPT Inlet or Outlet

590-015	1-1/2	25	0	030	11.23
590-211	1-1/2X1	25	0	030	6.48
590-212	1-1/2X1-1/4	25	0	030	6.48

Wire Holder



Holds up to 4-wires, #12 or #14 gauge single feeder irrigation control cable.
 Snaps onto Spears® Swing Joint Risers.

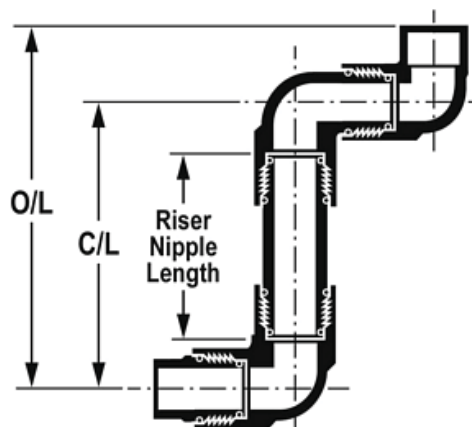
58WH-010	1	1500	0	030	2.23
58WH-012	1-1/4	450	0	030	2.43
58WH-015	1-1/2	400	0	030	2.76



Turf & Irrigation
EverTUFF® TURF™ Swing Joint Riser Assemblies

Swing Joint Riser Dimensions

RISER NIPPLE LENGTH (IN.)	CENTER TO CENTER C/L			OVERALL LENGTH O/L		
	1"	1-1/4"	1-1/2"	1"	1-1/4"	1-1/2"
5800 SERIES* — MALE BUTTRESS THREADED STYLE						
8	9-11/16	10-3/16	10-7/16	12-1/16	12-11/16	13-1/4
10	11-11/16	12-3/16	12-7/16	14-1/16	14-11/16	15-1/4
12	13-11/16	14-3/16	14-7/16	16-1/16	16-11/16	17-1/4
14	15-11/16	16-3/16	16-7/16	18-1/16	18-11/16	19-1/4
16	17-11/16	18-3/16	18-7/16	20-1/16	20-11/16	21-1/4
18	19-11/16	20-3/16	20-7/16	22-1/16	22-11/16	23-1/4
20	21-11/16	22-3/16	22-7/16	24-1/16	24-11/16	25-1/4
24	25-11/16	26-3/16	26-7/16	28-1/16	28-11/16	29-1/4
5900 SERIES** — CUT & SOLVENT CEMENTED STYLE						
6	9-11/16	10-3/16	10-7/16	12-1/16	12-11/16	12-1/4
7	10-11/16	11-3/16	11-7/16	13-1/16	13-11/16	14-1/4
8	11-11/16	12-3/16	12-7/16	14-1/16	14-11/16	15-1/4
9	12-11/16	13-3/16	13-7/16	15-1/16	15-11/16	16-1/4
10	13-11/16	14-3/16	14-7/16	16-1/16	16-11/16	17-1/4
11	14-11/16	15-3/16	15-7/16	17-1/16	17-11/16	18-1/4
12	15-11/16	16-3/16	16-7/16	18-1/16	18-11/16	19-1/4
13	16-11/16	17-3/16	17-7/16	19-1/16	19-11/16	20-1/4
14	17-11/16	18-3/16	18-7/16	20-1/16	20-11/16	21-1/4
15	18-11/16	19-3/16	19-7/16	21-1/16	21-11/16	22-1/4
16	19-11/16	20-3/16	20-7/16	22-1/16	22-11/16	23-1/4
17	20-11/16	21-3/16	21-7/16	23-1/16	23-11/16	24-1/4
18	21-11/16	22-3/16	22-7/16	24-1/16	24-11/16	25-1/4
19	22-11/16	23-3/16	23-7/16	25-1/16	25-11/16	26-1/4
20	23-11/16	24-3/16	24-7/16	26-1/16	26-11/16	27-1/4
21	24-11/16	25-3/16	25-7/16	27-1/16	27-11/16	28-1/4
22	25-11/16	26-3/16	26-7/16	28-1/16	28-11/16	29-1/4
23	26-11/16	27-3/16	27-7/16	29-1/16	29-11/16	30-1/4
24	27-11/16	28-3/16	28-7/16	30-1/16	30-11/16	31-1/4



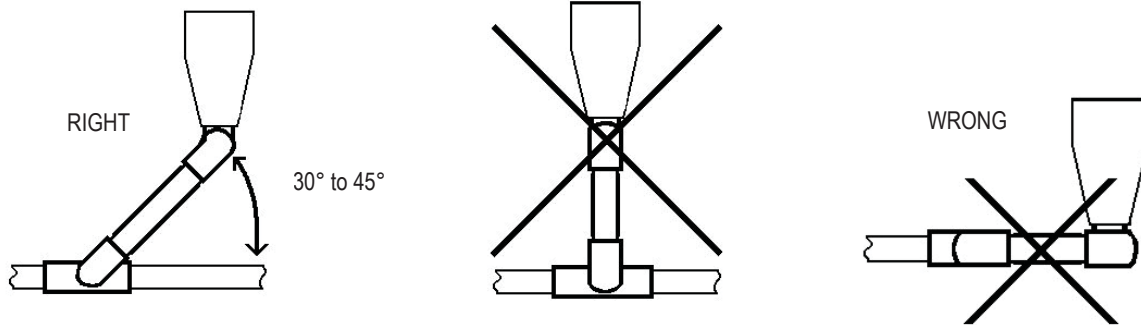
BSP	= British Standard Pipe
C/L	= Centerline to Centerline
DIN	= European Metric Standard
FAT	= Female Acme Thread
FBT	= Female Buttress Thread
FIPT	= Female Iron Pipe Thread
GMPT	= Glued Male Pipe Thread
JIS	= Japanese Industrial Standard
MAT	= Male Acme Thread
MBT	= Male Buttress Thread
MIPT	= Male Iron Pipe Thread
NPL	= Nipple
O/L	= Overall Length
SOC	= IPS Solvent Weld Socket
SPIG	= Spigot End
SR FIPT	= Special Reinforced Female Iron Pipe Thread

* Buttress Threaded Riser Lengths may be extended with the use of Riser Extension Couplings.

** Additional Nipple lengths are available. Please contact your servicing Spears® Regional Distribution Center.

Turf Swivel Joints, Compact Turf Swivel Joints and Turf Swivel Joint Kits are designed for open discharge systems and are not to be used with valve-in-head sprinklers or quick coupler valves. Can be used with bottom or side sprinklers. Provides 360° adjustment in three planes to place sprinklers at desired locations.

Turf Swivel Joint Assemblies should NOT be installed perpendicular or parallel to the supply line.



Turf Swivel Joint and Compact Turf Swivel Joints are pre-assembled from the factory with O-ring threaded joints. Turf Swivel Joint Kits are provided as two assemblies for use with user supplied pipe in solvent welded field assembly. These joints are pre-lubricated and should not be disassembled, as dirt, sand or other foreign objects could damage the O-ring or threads and cause leakage.

Prior to beginning installation, tighten each O-ring thread joint completely, and then back out the male part one full turn to allow the joint to swivel a full 360°.



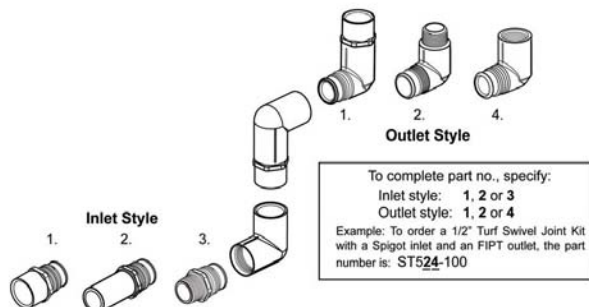
Turf & Irrigation Turf Swivel Kits

3-Elb Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



Turf Swivel Joint Kit

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

3-Elb Swivel Joint Kits

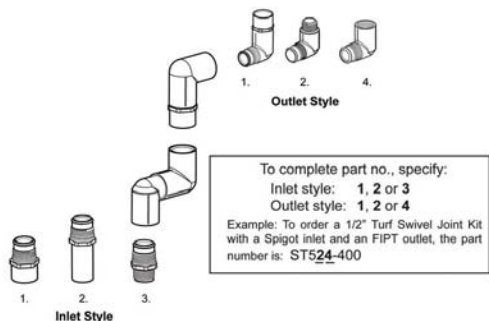
ST5_-100	1/2	10	0	030	19.61
ST7_-100	3/4	10	0	030	22.14
ST9_-100	1	10	0	030	25.77

4-Elb Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



4-Elb Swivel Joint Kits

ST5_-400	1/2	10	0	030	20.82
ST7_-400	3/4	10	0	030	23.38
ST9_-400	1	10	0	030	28.21

Turf & Irrigation Turf Swivel Joints



Complete Factory Assembly. Available in sizes 1/2", 3/4" and 1" with the following Lay Length Options:

8" = 8L
12" = 12L
15" = 15L
19" = 19L

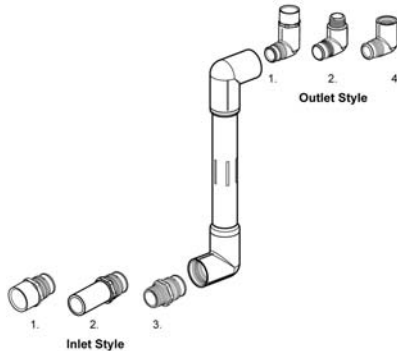
Choice of the following Inlet & Outlet Options:

Inlet Code
1 = Socket
2 = Spigot
3 = Mipt

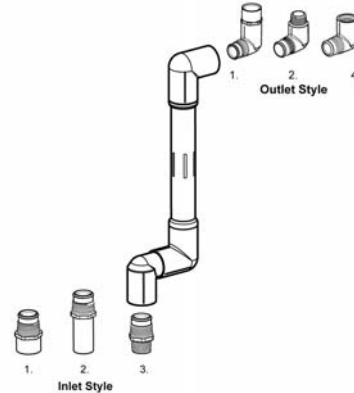
Outlet Code
1 = Socket
2 = Mipt
4 = Fipt

To complete part no., specify:
Inlet style: 1, 2, or 3
Outlet style: 1, 2, or 4
Example: To order a 1/2" 3-Elb Turf Swivel Joint with an 8" lay length, a Spigot inlet and an FIPT outlet, the part number is: ST524-208

3-Elb Turf Swivel Joint



4-Elb Turf Swivel Joint



Turf Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Elb Turf Swivel Joints					
ST5_-208	1/2X8L	10	0	030	30.74
ST5_-212	1/2X12L	10	0	030	31.11
ST5_-215	1/2X15L	10	0	030	32.06
ST5_-219	1/2X19L	10	0	030	33.09
ST7_-208	3/4X8L	10	0	030	33.14
ST7_-212	3/4X12L	10	0	030	34.71
ST7_-215	3/4X15L	10	0	030	35.38
ST7_-219	3/4X19L	10	0	030	36.22
ST9_-208	1X8L	10	0	030	36.49
ST9_-212	1X12L	10	0	030	37.64
ST9_-215	1X15L	10	0	030	38.62
ST9_-219	1X19L	10	0	030	39.95
ST57_-208	1/2X3/4X8L	10	0	030	30.74
ST57_-212	1/2X3/4X12L	10	0	030	31.11
ST57_-215	1/2X3/4X15L	10	0	030	32.06
ST57_-219	1/2X3/4X19L	10	0	030	33.09
ST75_-208	3/4X1/2X8L	10	0	030	33.14
ST75_-212	3/4X1/2X12L	10	0	030	34.71
ST75_-215	3/4X1/2X15L	10	0	030	35.38
ST75_-219	3/4X1/2X19L	10	0	030	35.38

4-Elb Turf Swivel Joints

ST5_-408	1/2X8L	10	0	030	31.40
ST5_-412	1/2X12L	10	0	030	31.77
ST5_-415	1/2X15L	10	0	030	32.65
ST5_-419	1/2X19L	10	0	030	33.61
ST7_-408	3/4X8L	10	0	030	33.80
ST7_-412	3/4X12L	10	0	030	35.29
ST7_-415	3/4X15L	10	0	030	35.97
ST7_-419	3/4X19L	10	0	030	36.74
ST9_-408	1X8L	10	0	030	38.39
ST9_-412	1X12L	10	0	030	39.45
ST9_-415	1X15L	10	0	030	40.41
ST9_-419	1X19L	10	0	030	41.67
ST57_-408	1/2X3/4X8L	10	0	030	31.40
ST57_-412	1/2X3/4X12L	10	0	030	31.77
ST57_-415	1/2X3/4X15L	10	0	030	32.65
ST57_-419	1/2X3/4X19L	10	0	030	33.61
ST75_-408	3/4X1/2X8L	10	0	030	35.38
ST75_-412	3/4X1/2X12L	10	0	030	36.74

Turf Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4-Elb Turf Swivel Joints					
ST75_-415	3/4X1/2X15L	10	0	030	36.74
ST75_-419	3/4X1/2X19L	10	0	030	36.74



Turf & Irrigation Compact Turf Swivel Joints

Factory Assembled
All Inlets are Swivel Male Threads

Three Outlet Choices:

Series ST11 & ST41 = Female Pipe Threads
Series ST12 & ST42 = Swivel Male Pipe Threads
Series ST13 & ST43 = Male Pipe Threads

Also available in 1" MBSP inlet x 1" MBSP outlet. Contact Spears® for pricing and availability.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

3-El Compact Swivel Joints

Swivel Mipt x Fipt



ST1105	1/2	10	0	030	19.61
ST1107	3/4	10	0	030	22.14
ST1110	1	10	0	030	25.78

3-El Compact Swivel Joints

Swivel Mipt x Swivel Mipt



ST1205	1/2	10	0	030	19.61
ST1207	3/4	10	0	030	22.14
ST1210	1	10	0	030	25.78

3-El Compact Swivel Joints

Swivel Mipt x Mipt



ST1305	1/2	10	0	030	19.61
ST1307	3/4	10	0	030	22.14
ST1310	1	10	0	030	25.78

4-El Compact Swivel Joints

Swivel Mipt x Fipt



ST4105	1/2	10	0	030	20.82
ST4107	3/4	10	0	030	23.38
ST4110	1	10	0	030	28.21

4-El Compact Swivel Joints

Swivel Mipt x Swivel Mipt



ST4205	1/2	10	0	030	20.82
ST4207	3/4	10	0	030	23.38
ST4210	1	10	0	030	28.21

4-El Compact Swivel Joints

Swivel Mipt x Mipt

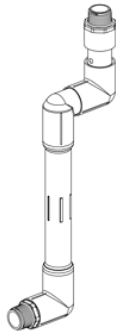


ST4305	1/2	10	0	030	20.82
ST4307	3/4	10	0	030	23.38
ST4310	1	10	0	030	28.21

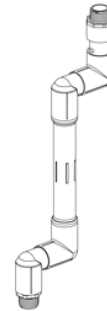


Pressure Regulated Swivel Joints

3-El Pressure Regulated Swivel Joint



4-El Pressure Regulated Swivel Joint



Pressure Regulated Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

3-El - Mipt x Mipt

ST73PR-208	3/4X8L	10	0	030	61.38
ST73PR-212	3/4X12L	10	0	030	63.05
ST73PR-215	3/4X15L	10	0	030	63.78
ST73PR-219	3/4X19L	10	0	030	64.64
ST93PR-208	1X8L	10	0	030	66.36
ST93PR-212	1X12L	10	0	030	67.57
ST93PR-215	1X15L	10	0	030	68.62
ST93PR-219	1X19L	10	0	030	70.02

4-El - Mipt x Mipt

ST73PR-408	3/4X8L	10	0	030	64.78
ST73PR-412	3/4X12L	10	0	030	66.47
ST73PR-415	3/4X15L	10	0	030	67.18
ST73PR-419	3/4X19L	10	0	030	68.06
ST93PR-408	1X8L	10	0	030	71.80

Pressure Regulated Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

4-El - Mipt x Mipt

ST93PR-412	1X12L	10	0	030	73.00
ST93PR-415	1X15L	10	0	030	74.05
ST93PR-419	1X19L	10	0	030	75.44

Complete Factory Assembly. Available in sizes 3/4" and 1" with Mipt Inlet x Mipt Outlet and the following Lay Length Options:

8"	=	8L
12"	=	12L
15"	=	15L
19"	=	19L

Maintains constant, uniform pressure to sprinkler at the following pre-set nominal values:
45 psi for 3/4" Turf Swivel Joint
70 psi for 1" Turf Swivel Joint

Not recommended for use in systems with pressures equal to or less than regulated pressures above.

Pressure Rating @ 73°F (23°C), Water 315 psi

Turf Swivel Joint Replacement Parts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling FAT x FAT



ST430-007	3/4	1	200	030	6.47
ST430-010	1	1	250	030	8.60

90° Elbow FAT x FAT



ST1101-005	1/2	1	300	030	3.74
ST1101-007	3/4	1	250	030	4.32
ST1101-101	3/4X1/2	1	270	030	3.94
ST1101-010	1	1	175	030	7.12

90° Elbow FAT x SOC



ST1102-005	1/2	1	350	030	3.74
ST1102-007	3/4	1	250	030	4.32
ST1102-010	1	1	160	030	7.12

90° Street El MAT x FAT



ST425-005	1/2	1	200	030	5.44
ST425-007	3/4	1	300	030	5.81
ST425-010	1	1	200	030	8.08

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Socket Inlet #1 SOC x MAT



ST436-005	1/2	1	350	030	3.49
ST436-007	3/4	1	50	030	3.86
ST436-010	1	1	330	030	7.24

Spigot Inlet #2 SPG x MAT



ST105-035	1/2	1	350	030	3.72
ST107-035	3/4	1	50	030	4.16
ST110-040	1	1	140	030	7.58

Male Thread Inlet #3 Mipt x MAT



ST205-020	1/2	1	25	030	3.29
ST207-020	3/4	1	350	030	3.86
ST210-020	1	1	150	030	4.19

Socket Outlet #1 MAT x SOC



ST410-005	1/2	1	50	030	7.42
ST410-007	3/4	1	200	030	8.13
ST410-010	1	1	25	030	8.52



Turf & Irrigation Turf Swivel Joint Replacement Parts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Male Thread Outlet #2

MAT x Mipt



ST408-005	1/2	1	250	030	5.44
ST408-007	3/4	1	25	030	5.81
ST408-010	1	1	150	030	8.60

Female Thread Outlet #4

MAT x Fipt



ST412-005	1/2	1	250	030	5.44
ST412-007	3/4	1	300	030	5.81
ST412-010	1	1	200	030	8.08

Molded Nipples

MAT x MAT



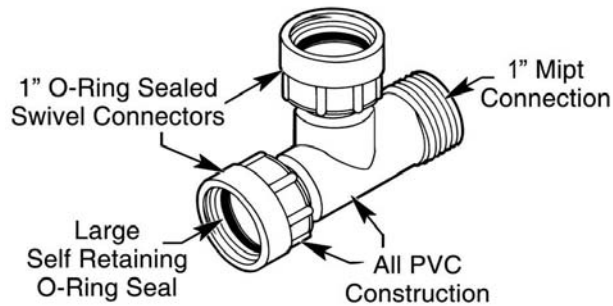
ST207-065	3/4X6-1/2	1	200	030	7.69
ST207-105	3/4X10-1/2	1	115	030	17.73
ST210-065	1X6-1/2	1	120	030	9.89
ST210-105	1X10-1/2	1	25	030	23.44

O-ring Seal



B-113	1/2	100	0	901	.07
B-115	3/4	100	0	901	.07
B-120	1	100	0	901	.18

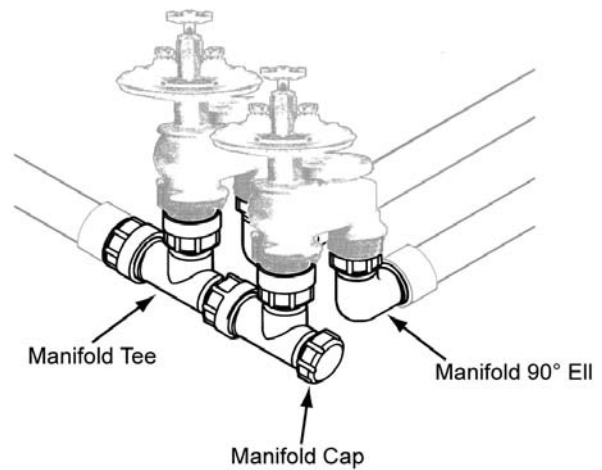
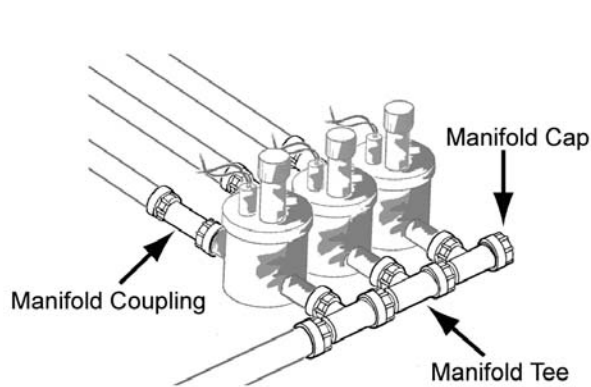
1" Manifold Tees & Companion Fitting Configurations
Designed For Uniform Irrigation Control Valve Installations



Manifold Tee
(1" Swivel x 1" Mipt x 1" Swivel)

- O-ring Sealed Swivel Connections Require No Thread Sealants - Large Cross-section O-ring Allows Hand Tight Assembly for Positive Seal
- Compatible with all 1" IPS Pipe Thread Outlets
- Pressure Rated to 150 psi @ 73°F (23°C)

Typical Application
Hundreds of Variation Possibilities





Turf & Irrigation High Strength 1" Manifold Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Manifold Tee

Swivel x Mipt x Swivel with O-ring Seal



MA0101-010	1	25	0	019	9.91
------------	---	----	---	-----	------

2 - Port Manifold Tee

Swivel x Mipt x Swivel Branch with O-ring Seal



MA0101-010-2	1	25	0	019	14.38
--------------	---	----	---	-----	-------

3 - Port Manifold Tee

Swivel x Mipt x Swivel Branch with O-ring Seal



MA0101-010-3	1	25	0	019	19.80
--------------	---	----	---	-----	-------

4 - Port Manifold Tee

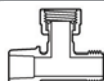
Swivel x Mipt x Swivel Branch with O-ring Seal



MA0101-010-4	1	25	0	019	25.26
--------------	---	----	---	-----	-------

Manifold Tee

Soc(Spig) x Mipt x Swivel with O-ring Seal



For Solvent Cement Connection

MA0109-010	1 (1-1/4)	25	0	019	8.81
------------	-----------	----	---	-----	------

Manifold 90° Street El

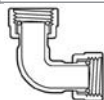
Mipt x Swivel with O-ring Seal



MA0602-010	1	25	0	019	8.46
------------	---	----	---	-----	------

Manifold 90° El

Swivel x Swivel with O-ring Seal



MA0603-010	1	20	0	019	9.34
------------	---	----	---	-----	------

Manifold Cross

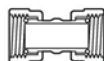
Swivel x Mipt x Swivel x Swivel with O-ring Seal



MA2004-010	1	25	0	019	13.15
------------	---	----	---	-----	-------

Manifold Swivel Coupling

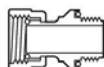
Swivel x Swivel with O-ring Seal



MA2903-010	1	25	200	019	7.01
------------	---	----	-----	-----	------

Manifold Nipple Coupling

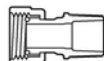
Swivel x Mipt with O-ring Seal



MA2907-010	n/a	25	200	019	5.12
------------	-----	----	-----	-----	------

Manifold Socket (Spig) Coupling

Swivel x Soc (Spig) with O-ring Seal

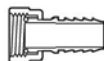


For Solvent Cement Connection

MA2908-010	1 (1-1/4)	25	0	019	5.12
------------	-----------	----	---	-----	------

Manifold Insert Coupling

Swivel x Barbed Insert with O-ring Seal



MA3505-007	1X3/4	25	200	019	5.09
MA3505-010	1	25	200	019	5.43

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Manifold Cap

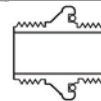
Fipt with O-ring Seal



MA4800-010	1	50	600	019	2.14
------------	---	----	-----	-----	------

Manifold Nipple

Mipt x Mipt with O-ring Seal



1" Nipple End Uses MA-218 O-ring

3/4" Nipple End Uses MA-214 O-ring

MA8306-010	1	25	200	019	2.29
MA8306-131	1X3/4	25	200	019	2.01

Manifold Replacement O-ring

For All 1" Cap/Swivel Connectors & For 3/4" Nipple End



MA-214	1 & 3/4	50	500	901	.49
--------	---------	----	-----	-----	-----

Manifold Nipple Replacement O-ring

For 1" Nipple & For 1" Nipped Coupling End



MA-218	1	50	500	901	.53
--------	---	----	-----	-----	-----

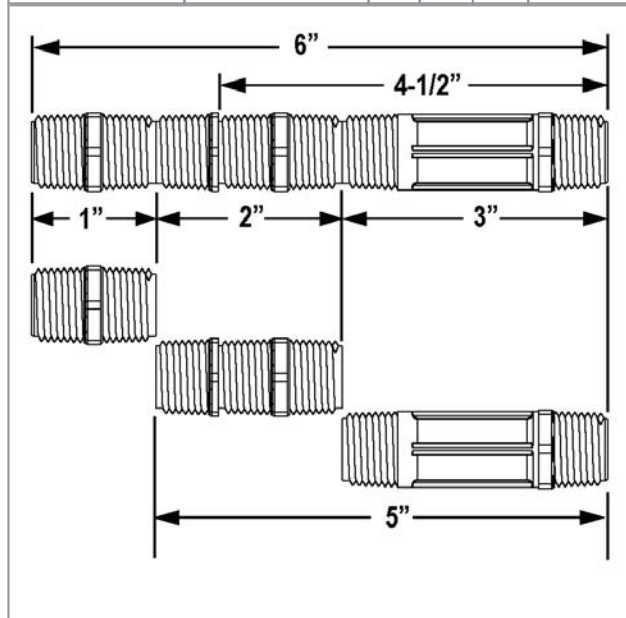
Turf & Irrigation
Four-In-One • Cut-Off Nipples



- High quality polyethylene construction
- Choice of sizes from just one nipple
- Reduces inventory
- Eliminates waste
- Reduces contractor down time

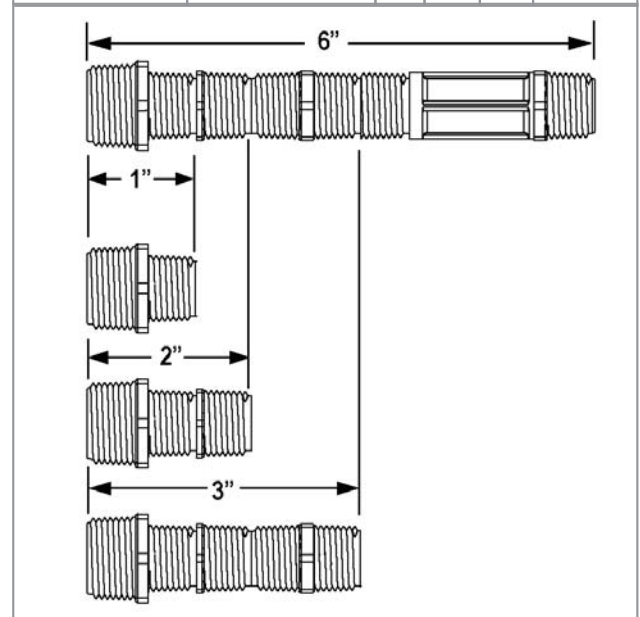
Four-In-One Cut-Off Nipple

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-005	1/2X6	50	350	123	1.08
M481-007	3/4X6	25	200	123	1.55



Four-In-One Cut-Off Nipple - Reducing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-101	3/4X1/2X6	50	300	123	1.18





Turf & Irrigation

• Hose Fittings • Solvent Weld For Flexible PVC Hose & • Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

• Hose Fittings • Solvent Weld For Flexible PVC Hose

FHT = Female Hose Thread
Fipt = Female Iron Pipe Thread
HS = Hose Socket
Ins = Male Insert Barb

MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Soc = IPS Solvent Weld Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Hose Coupling



C-44	1/2	200	0	020	.93
C-55	5/8	100	0	020	1.23
C-66	3/4	100	0	020	2.35

90° EII MHT x Soc



EHP-007	3/4	50	0	020	2.62
EHP-101	3/4X1/2	50	0	020	2.24

Hose Tee

MHT x MHT x FHT Swivel with Washer



AP-101	3/4	50	0	020	4.54
--------	-----	----	---	-----	------



W-100



W-101

Hose Washer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Washer Only

W-100	3/4	50	1500	020	.04
W-101	3/4	400	2400	020	1.21

Swivel Adapter

Fipt x FHT Swivel with Washer



AP-105	1/2X3/4	50	200	020	2.95
AP-106	3/4	50	200	020	2.95

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Swivel Adapter

Mipt x FHT Swivel with Washer



AP-109	3/4	50	200	020	2.95
AP-112	1/2X3/4	50	200	020	2.95

Swivel Adapter

FHT Swivel x FHT Swivel with Washer



AP-110	3/4	50	200	020	2.95
--------	-----	----	-----	-----	------

Female Adapter

FHT Swivel x HS with Washer



F-64	3/4X1/2	100	0	020	2.28
F-65	3/4X5/8	100	0	020	2.43
F-66	3/4	100	0	020	2.51

FHT Swivel x Soc

F-64-P	3/4X1/2	100	0	020	2.28
F-66-P	3/4	100	0	020	2.51

Male Adapter

Mipt x HS



M-44	1/2X1/2	50	300	020	1.27
------	---------	----	-----	-----	------

MHT x HS

M-64	3/4X1/2	50	300	020	1.29
M-65	3/4X5/8	50	200	020	2.06
M-66	3/4	50	200	020	2.39

MHT x Soc

M-64-P	3/4X1/2	50	200	020	1.27
M-66-P	3/4	50	200	020	2.39

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Female Compression Adapter

FHT x Poly Adapter with Insert Expander



F-64B	3/4X1/2	50	600	020	2.06
-------	---------	----	-----	-----	------

Male Compression Adapter

MHT x Poly Adapter with Insert Expander



M-64B	3/4X1/2	100	0	020	1.58
-------	---------	-----	---	-----	------

Hose Tee

Ins x Ins x FHT Swivel



AP-101B	1/2X3/4	50	0	020	3.54
---------	---------	----	---	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Transition Tee

Soc x Soc x Ins



1102-007	3/4	50	0	040	3.22
1102-130	1X1/2	200	0	040	3.61
1102-250	2X1-1/4	10	0	040	5.08

Insert Coupling

Ins x Ins



1429-005A	1/2	200	0	140	.98
-----------	-----	-----	---	-----	-----

Insert Male Adapter

Ins x Mipt



1436-005A	1/2	200	0	140	.82
-----------	-----	-----	---	-----	-----

Turf & Irrigation
• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose & Irrigation Accessories



• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Plug
MHT



HPL-6	3/4	100	600	020	2.06
-------	-----	-----	-----	-----	------

Cap
FHT with Washer



AP-100	3/4	200	0	020	1.72
--------	-----	-----	---	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Hose Closure
For 1/2" Poly Hose



S-HC-1	1/2	200	0	020	.91
--------	-----	-----	---	-----	-----

Irrigation Accessories

Spears® PVC Adapter System offers a unique method for expanding field irrigation systems that lends versatility and economy to your project. These adapters are designed to use 1/2", 5/8" or 3/4" vinyl hose, and the Rebar fittings and crosses accept a 1/2" or 3/4" sprinkler base. Transition to the existing system can be accomplished with any one of the threaded outlets offered.

New Installation — Spears® PVC Adapter System is designed with threaded or swivel thread connections which simplify the initial installation and minimize material, manpower and installation costs. Additional savings accrue through a reduction of the number of laterals required.

Improving Existing Systems — The Spears® Adapter System is ideal for updating existing systems because it readily adapts to aluminum or PVC mains and laterals. Expansion or refinement of the irrigation system is easily accomplished through the versatility afforded the user in the location of the new sprinkler heads.

BSW = British Standard Whitworth Thread
 FHT = Female Hose Thread
 Fipt = Female Iron Pipe Thread
 MHT = Male Hose Thread
 Mipt = Male Iron Pipe Thread

NFT = National Fine Thread
 Rebar = Accepts 1/2" Rebar
 Soc = IPS Solvent Weld Socket
 Spigot = Spigot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Hose System Riser
Soc x Mipt



RM-64	1/2	75	0	020	5.04
RM-66	3/4	75	0	020	5.04

Hose System Riser
Soc x MHT



RM-66-H	3/4	75	0	020	5.04
---------	-----	----	---	-----	------

Hose System Riser
Soc x Fipt



RF-64	1/2	75	0	020	6.28
RF-66	3/4	70	0	020	6.28

Trickle Irrigation Hex Cap
Fipt (Less Holes)



T-1	1/2	800	0	020	1.64
-----	-----	-----	---	-----	------

Shrub Adapter
Fipt x NFT



PA2010-01	1/2X10-32	50	300	020	1.27
PA2010-03	1/2X5/16	50	300	020	1.27

Fipt x Fipt

PA2010-02	1/2X1/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Fipt x BSW

PA2010-04	1/2X3/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Shrub Adapter
Soc x NFT



PA2020-01	1/2X10-32	50	300	020	1.27
PA2020-03	1/2X5/16	50	300	020	1.27

Soc x Fipt

PA2020-02	1/2X1/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Soc x BSW

PA2020-04	1/2X3/8	50	300	020	1.27
-----------	---------	----	-----	-----	------

Transition Nipple
Mipt x MHT (1.790 Length)



N-1	3/4X3/4	50	300	020	1.35
-----	---------	----	-----	-----	------

Mipt x Mipt (1.410 Length)

N-2	3/8X1/2	50	300	020	1.35
-----	---------	----	-----	-----	------

Mipt x MHT (1.872 Length)

N-3	1/2X3/4	50	300	020	1.35
-----	---------	----	-----	-----	------

Mipt x Mipt Polypropylene (1.480 Length)

N-4	3/4X1/2	50	300	020	1.35
-----	---------	----	-----	-----	------

Pipe Support (90° Clip to Body)
Without Nail Holes

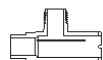


PS4-90	1/2	750	0	020	.60
--------	-----	-----	---	-----	-----

With Nail Holes

PS4-90N	1/2	750	0	020	.76
---------	-----	-----	---	-----	-----

Manifold Tee
Spigot x Soc x Mipt



476-010	1	20	0	020	5.98
---------	---	----	---	-----	------



Turf & Irrigation Irrigation Accessories & Hose Adapters

Irrigation Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Manifold Tee Spig x Soc x Fipt



477-010	1	25	0	020	5.98
---------	---	----	---	-----	------

Hose Adapters

For Solid Set Or Moveable Aluminum Systems

Fipt	=	Female Iron Pipe Thread
MHT	=	Male Hose Thread
Mipt	=	Male Iron Pipe Thread
Rebar	=	Accepts 1/2" Rebar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Cross MHT x MHT x Fipt x MHT



P-101	3/4X3/4X1/2X3/4	125	0	020	8.91
-------	-----------------	-----	---	-----	------

MHT x MHT x Fipt x Mipt

P-100	3/4	125	0	020	8.91
P-102	3/4X3/4X1/2X3/4	100	0	020	8.91
P-103	3/4X3/4X1/2X1/2	125	0	020	8.91

Rebar Cross MHT x MHT x Fipt x Rebar



PR-101	3/4X1/2	50	0	020	9.58
PR-103	3/4X3/4X1/2X1/2	50	0	020	9.58

Rebar Ell MHT x Fipt x Rebar



PR-100	3/4X1/2X1/2	100	0	020	5.04
PR-102	3/4X3/4X1/2	100	0	020	5.04

Turf & Irrigation Sprinkler Accessories



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Standard Sprinkler Stand

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet



Shown without adapters

ES-443†	1/2X3/8	100	0	020	7.82
ES-444†	1/2X1/2	100	0	020	7.82
ES-543*	5/8X1/2X3/8	75	0	020	9.08
ES-544*	5/8X1/2X1/2	75	0	020	9.08
ES-553*	5/8X3/8	75	0	020	10.11
ES-554*	5/8X1/2	75	0	020	10.11
ES-653*	3/4X5/8X3/8	75	0	020	11.07
ES-654*	3/4X5/8X1/2	75	0	020	11.07
ES-663*	3/4X3/8	75	0	020	11.59
ES-664*	3/4X1/2	75	0	020	11.59

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the ES-443 or ES-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Easy Pull Sled

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet



Shown without adapters

EP-443†	1/2X3/8	20	0	020	18.93
EP-444†	1/2	20	0	020	18.93
EP-543*	5/8X1/2X3/8	20	0	020	20.20
EP-544*	5/8X1/2X1/2	20	0	020	20.20
EP-553*	5/8X3/8	20	0	020	21.43
EP-554*	5/8X1/2	20	0	020	21.43
EP-653*	3/4X5/8X3/8	20	0	020	21.71
EP-654*	3/4X5/8X1/2	20	0	020	21.71
EP-663*	3/4X3/8	20	0	020	22.20
EP-664*	3/4X1/2	20	0	020	22.20

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the EP-443 or EP-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Tow-Line Tee

Soc



Assembled as shown

TL-112	1X1X1/2	15	0	020	12.61
TL-123	2X2X1/2	25	0	020	15.12

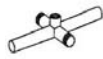
Soc x Soc x Fipt

TL-112-1	1X1X1/2	30	0	020	13.62
TL-116-1	1-1/4X1-1/4X1/2	30	0	020	13.88
TL-120-1	1-1/2X1-1/2X1/2	25	0	020	14.39
TL-123-1	2X2X1/2	25	0	020	15.64

NOTE: The Tow-Line Tee is used in conjunction with PVC Schedule 40 Pipe with solvent weld connection.

Hose Cross - with Legs

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet



Shown without adapters

HC-443†	1/2X3/8	60	0	020	9.08
HC-444†	1/2X1/2	60	0	020	9.08
HC-543*	5/8X1/2X3/8	60	0	020	10.35
HC-544*	5/8X1/2X1/2	60	0	020	10.35
HC-553*	5/8X3/8	60	0	020	11.59
HC-554*	5/8X1/2	60	0	020	11.59
HC-653*	3/4X5/8X3/8	60	0	020	12.36
HC-654*	3/4X5/8X1/2	60	0	020	12.36
HC-663*	3/4X3/8	60	0	020	13.12
HC-664*	3/4X1/2	60	0	020	13.12

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Hose Cross - with Legs (continued)

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the HC-443 or HC-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

NOTE: Hose Crosses are standard with 4" legs. 8" legs are available upon request. Add "-8" at the end of above Part Numbers for 8" legs (for example: HC-443-8). Contact your servicing Regional Distribution Center for pricing.

Hose Cross - Less Legs

Hose Socket Inlet x Hose Socket Inlet x IPS Riser Outlet



Shown without adapters

HC-443-1†	1/2X3/8	220	0	020	4.54
HC-444-1†	1/2X1/2	200	0	020	4.54
HC-543-1*	5/8X1/2X3/8	60	0	020	6.28
HC-544-1*	5/8X1/2X1/2	60	0	020	6.28
HC-553-1*	5/8X3/8	50	0	020	8.32
HC-554-1*	5/8X1/2	50	0	020	8.32
HC-653-1*	3/4X5/8X3/8	60	0	020	8.59
HC-654-1*	3/4X5/8X1/2	60	0	020	8.59
HC-663-1*	3/4X3/8	60	0	020	9.08
HC-664-1*	3/4X1/2	60	0	020	9.08

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.

* Item assembled when ordered — by providing either the HC-443-1 or HC-444-1 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.



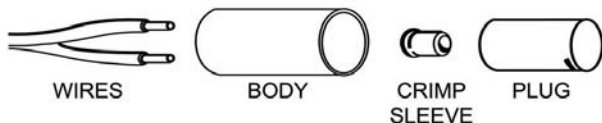
Turf & Irrigation Dri-Splice Wire Connectors

For use in electrical systems with 30v or less.

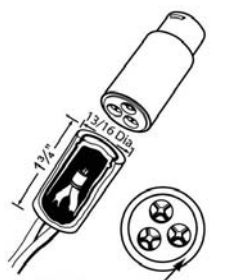
The Spears® Dri-Splice Seal designed into each wire hole enables you to stock one connector for all applications. The Dri-Splice Seal features an interference webbing which expands to accommodate #18 through #6 gauge wire sizes. In the event only two holes are used, the Dri-Splice Seal prevents sealant from leaking out through the third hole.

SOLD IN STANDARD PACK QUANTITIES ONLY

DS-100/DS-150 & DS-400/DS-450 Dri-Splice Wire Connector Installation Information



1. Insert wires through holes in base of body.
2. Twist stripped wires together and apply crimp sleeve with an indent type crimping tool. Trim excess bare wire.
3. DS-100 & DS-150 ONLY — Fill Plug to brim with DS-300 sealant.
4. Invert body and insert plug into body until it snaps tight.
5. Push wires all the way into the plug to completely seal the crimp sleeve.
6. DS-100 & DS-150 ONLY — Be certain sealant has formed into all holes in body.



allows easy insertion of wire, expands to appropriate wire size and seals any unused holes to prevent sealant run out

DS-100 & DS-150 Dri-Splice

- DS-100 fits AWG #18, #14, #12, or #10
- DS-150 fits AWG #14, #12, #10, #8, or #6
- Designed to insure waterproof connections
- Easily installed in the field without special tools
- Permanent protection for underground wire splices
- Requires the use of DS-300 Sealant

DS-400 & DS-450 Pre-Filled Dri-Splice

- All the features of the DS-100 or DS-150, plus the added benefit of being pre-filled with Dielectric Silicone Sealant
- Reduced inventory requirements
- Insures proper amount and type of Sealant every time
- Eliminates costly waste and clean-up
- Makes installations quick, clean and efficient

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DS-100	AWG #18, #14, #12, #10	25	400	020	1.46
DS-150	AWG #14, #12, #10, #8, #6	25	400	020	1.75

Pre-Filled Dri-Splice Wire Connector with Crimp Sleeve

DS-400	AWG #18, #14, #12, #10	25	400	020	3.19
DS-450	AWG #14, #12, #10, #8, #6	25	400	020	3.47

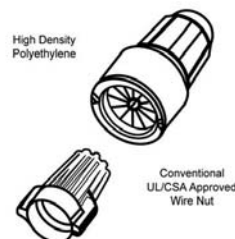
Crimp Sleeves

DS-200	AWG #18, #14, #12, #10	25	15000	901	.25
DS-250	AWG #14, #12, #10, #8, #6	25	12500	901	.53

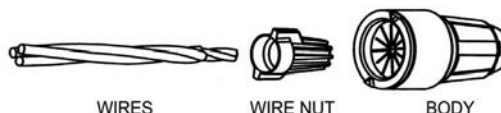
Dri-Splice Sealant For DS-100 and DS-150

(Approx. 30 connections per 5 oz. tube)

DS-300	AWG #18, #14, #12, #10	24	0	022	15.29
--------	------------------------	----	---	-----	-------



DS-500 Dri-Splice Wire Connector Installation Information



1. Strip wires and install wire nut.
2. wire nut wings with arrows and insert fully into body.

Sealant:

Dri-Splice Wire Connector General Information

DS-300 Sealant* (for DS-100 & DS-150) -MSDS available upon request.

DS-400 & DS-450 Dielectric Silicone Sealant*-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.

DS-500 Dielectric Silicone Sealant*-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.

Shelf Life:

DS-300 (unopened tube)— One Year*

DS-400 & DS-450 — Indefinite at 73°F (23°C)*

DS-500— Indefinite at 73°F (23°C)*

Electrical Systems:

For use in electrical systems with 30v or less. UL Listing NOT required in most areas.

DS-100/DS-150 &

Plug— PVC

Body— PVC

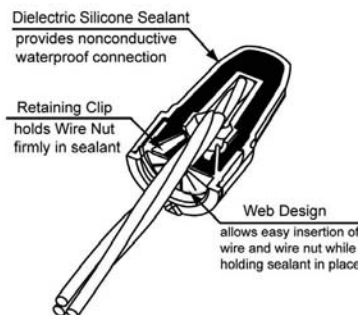
Components:

Crimp Sleeve— UL and CSA Listed for 18 - 10 awg solid or stranded copper conductors.

DS-500 Components: **Body**— Polyethylene

Wire Nut— Twist-On Spring Type - UL/CSA Listed for 22 - 10 awg solid or stranded copper wire.

* Information developed and furnished by the Sealant Manufacturers. For additional information, please contact Spears® Technical Services Department.



DS-500 Dri-Splice Wire Connector For use in electrical systems with 30v or less.

Spears® NEW DS-500 Dri Splice Wire Connector is the fast, reliable and clean way of making positive, waterproof connections you can depend on. Simply twist Wire Nut on and insert into Dielectric Silicone Sealant Cartridge. The DS-500 is specially designed for irrigation systems and low voltage lighting, marine and security systems and suitable for direct burial.

- Allows full assembly and check of connection prior to sealing
- Accepts wire combinations from 3 #22 to 3 #10 AWG solid or stranded copper wire
- Special "No-Mess" cartridge design fully encloses sealant
- Internal interlock prevents disengagement of wire nut from sealant cartridge

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DS-500	3 AWG #22-#10	25	500	020	3.19

Pre-Filled Dri-Splice Wire Connector with Wire Nut

Turf & Irrigation Filters



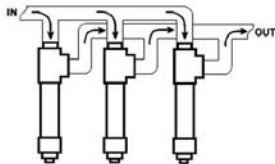
Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.



- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install

- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be pushed to required pipe size

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



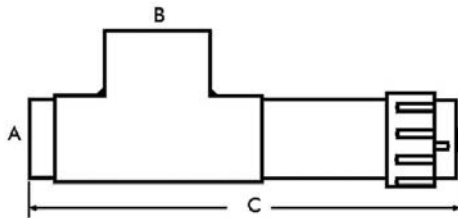
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM					
FL-16*	2-1/2 /3 x 4	1	0	020	555.11
FL-32*	2-1/2 /3 x 4	1	0	020	567.73
FL-50	2-1/2 /3 x 4	1	0	020	643.40
FL-76	2-1/2 /3 x 4	1	0	020	777.14
FL-100	2-1/2 /3 x 4	1	0	020	706.48
FL-150	2-1/2 /3 x 4	1	0	020	731.74
FL-200	2-1/2 /3 x 4	1	0	020	794.81

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.

50 GPM

MFL-16*	2-1/2 /3 x 2	1	0	020	466.82
MFL-32*	2-1/2 /3 x 2	1	0	020	474.37
MFL-50	2-1/2 /3 x 2	1	0	020	489.48
MFL-76	2-1/2 /3 x 2	1	0	020	592.98
MFL-100	2-1/2 /3 x 2	1	0	020	517.27
MFL-150	2-1/2 /3 x 2	1	0	020	542.49
MFL-200	2-1/2 /3 x 2	1	0	020	605.57

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.

Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22

Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-50-1	50 Mesh	3	0	020	479.42
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.

50 GPM (12" Length)

MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.

Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM Filter Body					
FL-11	2-1/2 /3 X 4	1	0	020	378.46

50 GPM Filter Body

MFL-11	2-1/2 /3 X 2	1	0	020	290.17
--------	--------------	---	---	-----	--------

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-4A	3X1-1/4	70	0	020	31.55



Turf & Irrigation Filters & Reverse Flow Filters

Filters

Components for Old-Style Filters w/3" Bottom Cap (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-5A	3X1/4	70	0	020	31.55
Cap Gasket Only					
FCG-5	3	2	0	020	10.04

Components for New-Style Filters w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-4B	4X1-1/4	25	0	020	57.97
FL-5B	4X1/4	1	0	020	93.78
Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)					
Cap O-Ring Only					
B-242	- - -	100	0	901	.83
Filter Bushing O-Rings					
B-335-60	- - -	100	0	901	3.66
Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals					

Reverse Flow Filters



100 GPM



50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

100 GPM Reverse Flow Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
FLR-16"	4X2-1/2 /3	1	0	020	555.11
FLR-32"	4X2-1/2 /3	1	0	020	567.73
FLR-50	4X2-1/2 /3	1	0	020	643.40
FLR-76	4X2-1/2 /3	1	0	020	777.14
FLR-100	4X2-1/2 /3	1	0	020	706.48
FLR-150	4X2-1/2 /3	1	0	020	731.74
FLR-200	4X2-1/2 /3	1	0	020	794.81

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
MFLR-16"	2X2-1/2 /3	1	0	020	466.82
MFLR-32"	2X2-1/2 /3	1	0	020	474.37
MFLR-50	2X2-1/2 /3	1	0	020	489.48
MFLR-76	2X2-1/2 /3	1	0	020	592.98
MFLR-100	2X2-1/2 /3	1	0	020	517.27
MFLR-150	2X2-1/2 /3	1	0	020	542.49
MFLR-200	2X2-1/2 /3	1	0	020	605.57

*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Reverse Flow Filter Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02

100 GPM Reverse Flow Filter Replacement Screens (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FLR-150-1	150 Mesh	3	0	020	383.52
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53

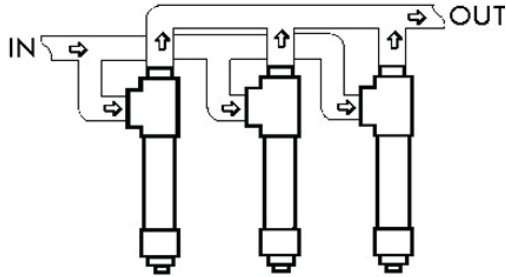
Turf & Irrigation Reverse Flow Filters



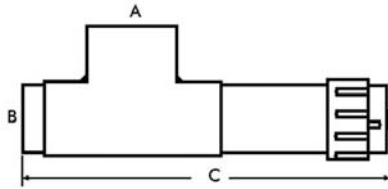
Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: FLR-50 = 50 Mesh

Typical Reverse Flow Application



- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in direct sunlight, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



Series	A Inlet	B Outlet		C Overall Length	Screen Length	Filter Approx. Weight
		Socket	Spigot			
FLR	4	2-1/2	3	28	24	8
MFLR	4	2-1/2	3	16	12	4-3/4



Turf & Irrigation

In-line Tee Style Filters and Reverse In-line Tee Style Filters

100 GPM and 50 GPM • PVC White • Buna O-ring Seal



100 GPM



50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

100 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	555.11
TF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	567.73
TF-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	643.40
TF-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	777.14
TF-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	706.48
TF-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	731.74
TF-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	794.81

50 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	466.82
MTF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	474.37
MTF-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	489.48
MTF-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	592.98
MTF-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	517.27
MTF-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	542.49
MTF-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	605.57

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

100 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	555.11
TF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	567.73
TFR-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	643.40
TFR-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	777.14
TFR-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	706.48
TFR-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	731.74
TFR-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	794.81

50 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	466.82
MTF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	474.37
MTFR-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	489.48
MTFR-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	592.98
MTFR-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	517.27

50 GPM PVC White Reverse Tee Filter (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTFR-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	542.49
MTFR-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	605.57

100 GPM Filter Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FL-50-1	50 Mesh	3	0	020	479.42
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67



**50 GPM Reverse Flow Filter Replacement Screens for
MTFR Filters (12" Length) (continued)**

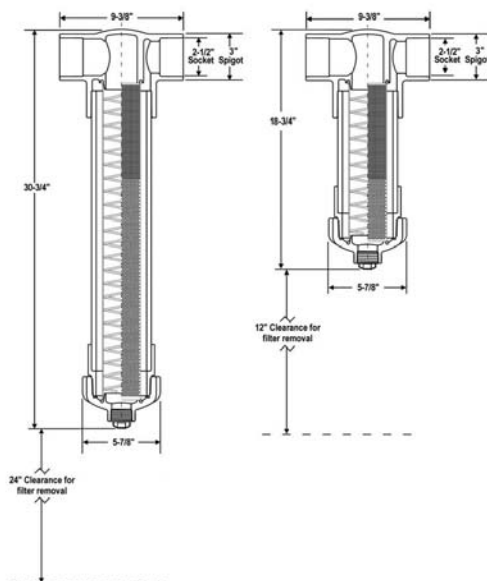
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53



Turf & Irrigation In-line Tee Style Filters and Reverse In-line Tee Style Filters

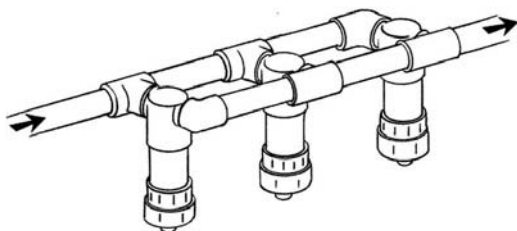
IN-LINE TECHNICAL INFORMATION

Dimensions



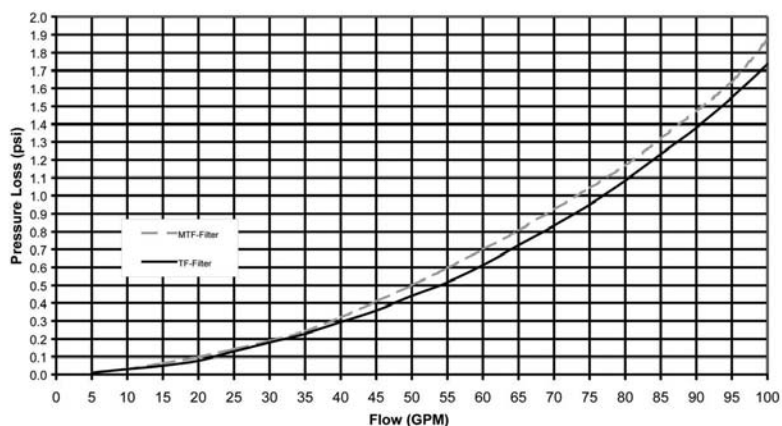
Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

Parallel Filter Installation

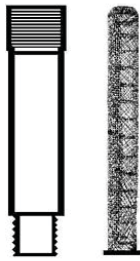


- When more than 100 gpm is required, filters may be installed in parallel.
- When installing filter, allow space for removing filter screen for cleaning.
- Remove stainless steel filter screen before solvent welding filter to pipe manifold to avoid cement contact with screen.
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance.
- Installation in a shaded area is preferred.

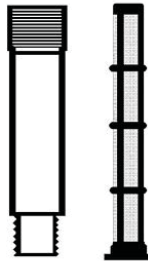
Pressure Loss



Turf & Irrigation Hose Filters



7 GPM Steel



7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

7 GPM Hose Filter Assembly

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
with Stainless Steel Screen					
HF-20	3/4	10	60	020	18.71
HF-30	3/4	10	60	020	18.71
HF-50	3/4	10	60	020	18.71
HF-80	3/4	10	60	020	18.71
HF-100	3/4	10	60	020	19.43
HF-150	3/4	10	60	020	19.67
HF-200	3/4	10	60	020	20.20

with Plastic/Nylon Screen

HF-150N	3/4	10	60	020	19.67
---------	-----	----	----	-----	-------

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Stainless Steel Screen					
HF-20-1W	5	25	150	020	6.84
HF-30-1W	5	25	150	020	6.84
HF-50-1W	5	25	150	020	6.84
HF-80-1W	5	25	150	020	6.84
HF-100-1W	5	25	150	020	10.11
HF-150-1W	5	25	150	020	10.11
HF-200-1W	5	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	4-3/4	25	150	020	10.11

7 GPM Hose Filter Body Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Hose Filter Body w/o screen					
HF	3/4	10	60	020	14.07
Hose Washer					
W-100	3/4	50	1500	020	.04
Screen Washer					
S-W	- - -	600	0	901	.21



Turf & Irrigation

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling Soc x Soc



280-100001	4 IPS	1	10	300	15.89
280-100002	6	1	5	300	19.61
280-100003	8	1	6	300	22.07
280-100004	10	1	4	300	30.68
280-100005	12	1	4	300	41.73
280-100006	15	1	0	300	73.61
280-100007	18	1	0	300	131.24
280-100008	20	1	0	300	161.93

11-1/4° Elbow Soc x Soc



280-100114	6	1	10	300	23.32
280-100115	8	1	4	300	33.15
280-100116	10	1	2	300	47.82
280-100117	12	1	2	300	66.24
280-100118	15	1	0	300	114.09
280-100119	18	1	0	300	196.32
280-100120	20	1	0	300	249.05

15° Elbow Soc x Soc



280-100234	6	1	10	300	23.32
280-100235	8	1	4	300	33.15
280-100236	10	1	2	300	47.82
280-100237	12	1	2	300	66.24
280-100238	15	1	0	300	114.09
280-100239	18	1	0	300	199.97
280-100240	20	1	0	300	258.84

22-1/2° Elbow Soc x Soc



280-100354	6	1	4	300	23.32
280-100355	8	1	3	300	33.15
280-100356	10	1	2	300	47.82
280-100357	12	1	2	300	66.24
280-100358	15	1	0	300	114.09
280-100359	18	1	0	300	199.97
280-100360	20	1	0	300	258.84

30° Elbow Soc x Soc



280-100474	6	1	8	300	39.23
280-100475	8	1	4	300	57.61
280-100476	10	1	2	300	71.15
280-100477	12	1	2	300	116.59
280-100478	15	1	0	300	187.72
280-100479	18	1	0	300	332.45
280-100480	20	1	0	300	369.29

45° Elbow Soc x Soc



280-100592	6	1	4	300	39.23
280-100593	8	1	4	300	57.61
280-100594	10	1	2	300	71.15
280-100595	12	1	2	300	116.59
280-100596	15	1	0	300	187.72
280-100597	18	1	0	300	332.45

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

45° Elbow (continued) Soc x Soc

280-100598	20	1	0	300	369.29
------------	----	---	---	-----	--------

60° Elbow Soc x Soc



280-100702	6	1	4	300	73.61
280-100703	8	1	2	300	90.75
280-100704	10	1	0	300	144.79
280-100705	12	1	0	300	190.15
280-100706	15	1	0	300	310.38
280-100707	18	1	0	300	537.36
280-100708	20	1	0	300	723.93

90° Elbow Soc x Soc



280-100812	6	1	4	300	73.61
280-100813	8	1	2	300	90.75
280-100814	10	1	0	300	144.79
280-100815	12	1	0	300	190.15
280-100816	15	1	0	300	310.38
280-100817	18	1	0	300	537.36
280-100818	20	1	0	300	723.93

Reducer Soc x Soc



280-100928	8X6	1	2	300	34.35
2829-626	10X6	1	4	300	138.38
280-100931	10X8	1	4	300	52.76
280-100933	12X6	1	6	300	197.32
280-100934	12X8	1	4	300	153.36
280-100935	12X10	1	4	300	76.09
2829-726	15X6	1	0	300	342.43
2829-728	15X8	1	0	309	245.95
280-100939	15X10	1	0	300	174.87
280-100940	15X12	1	0	300	115.28
2829-786	18X6	1	0	300	514.23
2829-788	18X8	1	0	300	483.79
280-100944	18X10	1	0	300	423.29
280-100945	18X12	1	0	300	379.04
280-100946	18X15	1	0	300	185.26
2829-816	20X6	1	0	300	791.83
2829-818	20X8	1	0	300	753.89
2829-820	20X10	1	0	300	697.04
2829-822	20X12	1	0	300	640.64
2829-825	20X15	1	0	300	523.91
280-100953	20X18	1	0	300	271.12

PIP x IPS Reducer Soc x Soc



280-101536	6X4	1	4	300	27.59
280-101537	8X6	1	8	300	39.88
280-101538	10X8	1	4	300	52.76
280-101534	12X8	1	4	300	153.36
280-101539	12X10	1	4	300	92.00
280-101540	15X12	1	0	300	147.18

IPS X PIP Adapter Soc x Soc



280-101649	6	1	4	300	30.68
280-101650	8	1	4	300	45.36

Turf & Irrigation PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

IPS X PIP Adapter (continued)

Soc x Soc

280-101651	10	1	4	300	71.15
280-101652	12	1	4	300	100.59

Concrete Adapter

Soc x Concrete



280-101761	6X6	1	5	300	29.44
280-101762	8X8	1	6	300	42.92
280-101763	10X10	1	4	300	66.24
280-101764	12X12	1	4	300	93.20
280-101765	12X14	1	0	300	99.34
280-101766	15X14	1	0	300	137.37
280-101767	15X15	1	0	300	141.09
280-101768	15X16	1	0	300	143.55
280-101769	18X18	1	0	300	166.85
280-101770	20X20	1	0	300	208.56

Linegate Valve Adapter

Linegate x Soc



280-101777	6	1	6	300	24.45
280-101778	8	1	6	300	27.74
280-101779	10	1	4	300	44.20
280-101780	12	1	4	300	62.58
280-101781	15	1	0	300	107.94
2845-180	18	1	0	300	155.42

Linegate Valve PIP Adapter

Linegate x Soc



2845-180P	18	1	0	300	155.42
-----------	----	---	---	-----	--------

Saddle

Soc



280-101788	4X2	1	40	300	19.61
280-101789	6X2	1	10	300	19.61
280-101790	8X2	1	10	300	19.61
280-101791	10X2	1	10	300	19.61
280-101792	12X2	1	10	300	19.61
280-101793	15X2	1	10	300	19.61
280-101794	18X2	1	20	300	19.61
280-101795	20X2	1	10	300	20.83
280-101796	4X3	1	5	300	20.83
280-101797	6X3	1	10	300	20.83
280-101798	8X3	1	10	300	20.83
280-101799	10X3	1	10	300	20.83
280-101800	12X3	1	10	300	20.83
280-101801	15X3	1	10	300	20.83
280-101802	18X3	1	20	300	20.83
280-101803	20X3	1	10	300	30.92
280-101804	6X4	1	10	300	23.32
280-101805	8X4	1	10	300	23.32
280-101806	10X4	1	10	300	23.32
280-101807	12X4	1	10	300	23.32
280-101808	15X4	1	10	300	23.32
280-101809	18X4	1	10	300	23.32
280-101810	20X4	1	8	300	23.32
280-101811	8X6	1	8	300	29.44
280-101812	10X6	1	8	300	29.44
280-101813	12X6	1	8	300	29.44
280-101814	15X6	1	8	300	29.44
280-101815	18X6	1	10	300	29.44
280-101816	20X6	1	7	300	33.15

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle (continued)

Soc

280-101817	10X8	1	8	300	34.35
280-101818	12X8	1	8	300	34.35
280-101819	15X8	1	8	300	34.35
280-101820	18X8	1	8	300	38.01
280-101821	20X8	1	8	300	53.94
280-101822	12X10	1	10	300	41.73
280-101823	15X10	1	10	300	47.82
280-101824	18X10	1	10	300	49.05
280-101825	20X10	1	7	300	90.75
280-101826	15X12	1	5	300	63.79
280-101827	18X12	1	3	300	82.16
280-101828	20X12	1	0	300	99.34
280-101829	18X15	1	0	300	106.71
280-101830	20X15	1	0	300	136.16
280-101831	20X18	1	0	300	150.88

Stub Saddle

Soc



280-101883	4X2	1	10	300	24.45
280-101884	6X2	1	10	300	24.45
280-101885	8X2	1	10	300	24.45
280-101886	10X2	1	10	300	24.45
280-101887	12X2	1	10	300	25.75
280-101888	15X2	1	10	300	28.22
280-101889	18X2	1	10	300	28.22
280-101890	20X2	1	10	300	31.88
280-101891	4X3	1	10	300	29.44
280-101892	6X3	1	5	300	29.44
280-101893	8X3	1	5	300	29.44
280-101894	10X3	1	5	300	29.44
280-101895	12X3	1	5	300	31.88
280-101896	15X3	1	5	300	31.88
280-101897	18X3	1	10	300	31.88
280-101898	20X3	1	5	300	34.35
280-101899	6X4	1	10	300	34.35
280-101900	8X4	1	10	300	34.35
280-101901	10X4	1	10	300	34.35
280-101902	12X4	1	10	300	34.35
280-101903	15X4	1	10	300	34.35
280-101904	18X4	1	10	300	36.09
280-101905	20X4	1	10	300	36.79
280-101906	8X6	1	6	300	40.46
280-101907	10X6	1	8	300	40.46
280-101908	12X6	1	6	300	40.46
280-101909	15X6	1	8	300	42.92
280-101910	18X6	1	10	300	42.92
280-101911	20X6	1	7	300	49.05
280-101912	10X8	1	4	300	53.94
280-101913	12X8	1	3	300	53.94
280-101914	15X8	1	5	300	57.61
280-101915	18X8	1	5	300	61.33
280-101916	20X8	1	0	300	77.27
280-101917	12X10	1	3	300	71.15
280-101918	15X10	1	5	300	74.84
280-101919	18X10	1	4	300	76.09
280-101920	20X10	1	0	300	117.73
280-101921	15X12	1	0	300	106.71
280-101922	18X12	1	0	300	123.91
280-101923	20X12	1	0	300	141.09
280-101924	18X15	1	0	300	166.85
280-101925	20X15	1	0	300	197.51
280-101926	20X18	1	0	300	240.45



Turf & Irrigation

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Same Size Saddle Soc



280-101937	6X6	1	10	300	33.71
280-101938	8X8	1	5	300	49.05
280-101939	10X10	1	5	300	67.43
280-101940	12X12	1	4	300	98.14
280-101941	15X15	1	0	300	147.18
280-101942	18X18	1	0	300	251.52
280-101943	20X20	1	0	300	343.53

Same Size Stub Saddle Soc



280-101949	6X6	1	5	300	58.85
280-101950	8X8	1	4	300	94.21
280-101951	10X10	1	0	300	115.28
280-101952	12X12	1	0	300	131.24
280-101953	15X15	1	0	300	196.32
280-101954	18X18	1	0	300	341.08
280-101955	20X20	1	0	300	398.72

End Cap Soc



280-107539	4 IPS	1	10	300	11.04
280-107540	6	1	10	300	12.26
280-107541	8	10	0	300	20.83
280-107542	10	1	10	300	33.15
280-107543	12	1	10	300	51.52
280-107545	15	1	5	300	72.39
280-107547	18	1	5	300	132.48
280-107548	20	1	5	300	177.89

Surface Reducer Soc



280-102013	6X2	1	10	300	19.61
280-102015	6X3	1	10	300	19.61
280-102016	6X4	1	10	300	19.61
280-102018	8X2	1	10	300	26.95
280-102020	8X3	1	10	300	26.95
280-102021	8X4	1	10	300	26.95
280-102022	8X6	1	10	300	26.95
280-102024	10X2	1	10	300	53.94
280-102026	10X3	1	10	300	53.94
280-102027	10X4	1	10	300	53.94
280-102028	10X6	1	10	300	53.94
280-102029	10X8	1	10	300	53.94
280-102031	12X2	1	10	300	66.24
280-102033	12X3	1	10	300	66.24
280-102034	12X4	1	10	300	66.24
280-102035	12X6	1	10	300	66.24
280-102036	12X8	1	10	300	66.24
280-102037	12X10	1	10	300	66.24
280-102048	15X2	1	5	300	93.20
280-102050	15X3	1	5	300	93.20
280-102051	15X4	1	5	300	93.20
280-102052	15X6	1	5	300	93.20
280-102053	15X8	1	5	300	93.20
280-102054	15X10	1	5	300	93.20
280-102055	15X12	1	5	300	93.20
280-102067	18X2	1	5	300	139.85
280-102069	18X3	1	4	300	139.85
280-102070	18X4	1	5	300	139.85
280-102071	18X6	1	5	300	139.85

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Surface Reducer (continued) Soc

280-102072	18X8	1	5	300	139.85
280-102073	18X10	1	5	300	139.85
280-102074	18X12	1	5	300	139.85
280-102075	18X15	1	5	300	139.85
280-102077	20X2	1	0	300	185.26
280-102136	20X3	1	0	300	185.26
280-102137	20X4	1	5	300	185.26
280-102138	20X6	1	5	300	185.26
280-102139	20X8	1	5	300	185.26
280-102140	20X10	1	5	300	185.26
280-102141	20X12	1	5	300	185.26
280-102142	20X15	1	5	300	185.26
280-102143	20X18	1	5	300	185.26

Tee Soc x Soc x Soc



280-102502	6	1	8	300	46.59
280-102499	6X2	1	6	300	36.79
280-102500	6X3	1	4	300	39.88
280-102501	6X4	1	4	300	41.73
280-102507	8	1	2	300	73.79
280-102503	8X2	1	2	300	47.46
280-102504	8X3	1	3	300	56.39
280-102505	8X4	1	2	300	58.85
280-102506	8X6	1	0	300	67.43
280-102508	10X2	1	0	300	74.81
280-102509	10X3	1	0	300	76.04
280-102510	10X4	1	0	300	77.93
280-102511	10X6	1	0	300	79.73
280-102512	10X8	1	0	300	85.49
280-102513	10	1	0	300	92.01
280-102520	12	1	0	300	149.65
280-102514	12X2	1	2	300	98.14
280-102515	12X3	1	0	300	104.32
280-102516	12X4	1	0	300	109.16
280-102517	12X6	1	0	300	111.33
280-102518	12X8	1	0	300	116.59
280-102519	12X10	1	0	300	127.58
280-102528	15	1	0	300	296.92
280-102521	15X2	1	0	300	159.47
280-102522	15X3	1	0	300	159.47
280-102523	15X4	1	0	300	165.62
280-102524	15X6	1	0	300	170.51
280-102525	15X8	1	0	300	190.15
280-102526	15X10	1	0	300	212.21
280-102527	15X12	1	0	300	247.80
280-102537	18	1	0	300	516.55
280-102529	18X2	1	0	300	300.56
280-102530	18X3	1	0	300	302.98
280-102531	18X4	1	0	300	305.48
280-102532	18X6	1	0	300	311.61
280-102533	18X8	1	0	300	316.54
280-102534	18X10	1	0	300	345.99
280-102535	18X12	1	0	300	381.59
280-102536	18X15	1	0	300	417.15
280-102547	20	1	0	300	639.23
280-102538	20X2	1	0	300	380.34
280-102539	20X3	1	0	300	384.27
280-102540	20X4	1	0	300	390.14
280-102541	20X6	1	0	300	402.44
280-102542	20X8	1	0	300	411.01
280-102543	20X10	1	0	300	455.16
280-102544	20X12	1	0	300	483.40
280-102545	20X15	1	0	300	519.02

Turf & Irrigation PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee (continued)

Soc x Soc x Soc

280-102546	20X18	1	0	300	584.00
------------	-------	---	---	-----	--------

Cross

Soc x Soc x Soc x Soc



280-103286	6	1	0	300	77.27
280-103283	6X2	1	0	300	61.33
280-103284	6X3	1	0	300	61.33
280-103285	6X4	1	4	300	67.43
280-103291	8	1	0	300	105.54
280-103287	8X2	1	0	300	85.85
280-103288	8X3	1	0	300	85.85
280-103289	8X4	1	0	300	92.00
280-103290	8X6	1	0	300	96.87
280-103297	10	1	0	300	143.55
280-103292	10X2	1	2	300	85.85
280-103293	10X3	1	0	300	88.95
280-103294	10X4	1	0	300	92.00
280-103295	10X6	1	0	300	103.06
280-103296	10X8	1	0	300	117.73
280-103304	12	1	0	300	199.97
280-103303	12X10	1	0	300	170.51
280-103298	12X2	1	0	300	115.95
280-103299	12X3	1	0	300	117.13
280-103300	12X4	1	0	300	120.20
280-103301	12X6	1	0	300	130.04
280-103302	12X8	1	0	300	141.09
280-103321	15	1	0	300	381.59
280-103313	15X2	1	0	300	170.51
280-103314	15X3	1	0	300	174.21
280-103315	15X4	1	0	300	182.82
280-103316	15X6	1	0	300	193.84
280-103317	15X8	1	0	300	208.56
280-103318	15X10	1	0	300	246.62
280-103319	15X12	1	0	300	296.92
280-103342	18	1	0	300	612.22
280-103332	18X2	1	0	300	331.26
280-103333	18X3	1	0	300	334.35
280-103334	18X4	1	0	300	337.42
280-103335	18X6	1	0	300	345.99
280-103336	18X8	1	0	300	355.79
280-103337	18X10	1	0	300	404.84
280-103338	18X12	1	0	300	430.69
280-103340	18X15	1	0	300	490.80
280-103354	20	1	0	300	806.11
280-103343	20X2	1	0	300	464.98
280-103344	20X3	1	0	300	468.66
280-103345	20X4	1	0	300	472.38
280-103346	20X6	1	0	300	483.40
280-103347	20X8	1	0	300	495.68
280-103348	20X10	1	0	300	531.23
280-103349	20X12	1	0	300	571.75
280-103351	20X15	1	0	300	598.73
280-103353	20X18	1	0	300	703.03

Orchard Riser

Saddle x Riser



2880-04030	4X4	1	0	301	35.52
2880-53230	6X4	1	25	301	35.52
2880-06030	6X6	1	25	301	61.33
2880-58230	8X4	1	25	301	35.52
2880-58530	8X6	1	25	301	46.59
2880-08030	8X8	1	12	301	85.89
2880-62430	10X4	1	30	301	36.79

Orchard Riser (continued)

Saddle x Riser

2880-62630	10X6	1	20	301	46.59
2880-62830	10X8	1	16	301	63.79
2880-10030	10X10	1	6	301	122.65
2880-66430	12X4	1	25	301	38.01
2880-66630	12X6	1	20	301	46.59
2880-66830	12X8	1	12	301	63.79
2880-67030	12X10	1	9	301	88.31
2880-12030	12X12	1	6	301	171.75
2880-72430	15X4	1	25	301	40.46
2880-72630	15X6	1	25	301	53.94
2880-72830	15X8	1	12	301	72.39
2880-73030	15X10	1	9	301	100.59
2880-73230	15X12	1	6	301	138.62
2880-15030	15X15	1	4	301	287.08
2880-78430	18X4	1	25	301	44.20
2880-78630	18X6	1	25	301	52.46
2880-78830	18X8	1	10	301	76.09
2880-79030	18X10	1	9	301	101.82
2880-79230	18X12	1	6	301	157.01
2880-79530	18X15	1	4	301	226.96
2880-18030	18X18	1	3	301	430.62
2880-81430	20X4	1	0	301	46.62
2880-81630	20X6	1	12	301	61.36
2880-81830	20X8	1	12	301	92.00
2880-82030	20X10	1	6	301	143.56
2880-82230	20X12	1	5	301	174.21
2880-82530	20X15	1	0	301	256.46
2880-82830	20X18	1	0	301	315.31
2880-20030	20X20	1	2	301	555.82

Erosion Pot Riser

Saddle x Riser x Pot



2881-53232	6X4X8	1	16	301	67.99
2881-06032	6X6X10	1	0	301	81.36
2881-58232	8X4X8	1	20	301	67.99
2881-58532	8X6X10	1	0	301	81.36
2881-08032	8X8X12	1	0	301	115.05
2881-62432	10X4X8	1	16	301	67.99
2881-62632	10X6X10	1	0	301	81.36
2881-62832	10X8X12	1	12	301	115.05
2881-10032	10X10X15	1	0	301	158.07
2881-66432	12X4X8	1	20	301	67.99
2881-66632	12X6X10	1	12	301	81.36
2881-66832	12X8X12	1	12	301	115.05
2881-67032	12X10X15	1	0	301	158.07
2881-12032	12X12X18	1	0	301	209.24
2881-72432	15X4X8	1	0	301	67.99
2881-72632	15X6X10	1	12	301	81.36
2881-72832	15X8X12	1	0	301	115.05
2881-73032	15X10X15	1	0	301	158.07
2881-73232	15X12X18	1	0	301	209.24
2881-15032	15X15X20	1	0	301	308.03
2881-78432	18X4X8	1	0	301	67.99
2881-78632	18X6X10	1	0	301	81.36
2881-78832	18X8X12	1	0	301	115.05
2881-79032	18X10X15	1	0	301	158.07
2881-79232	18X12X18	1	0	301	209.24
2881-79532	18X15X20	1	0	301	308.03
2881-81432	20X4X8	1	0	301	67.99
2881-81632	20X6X10	1	0	301	81.36
2881-81832	20X8X12	1	0	301	115.05
2881-82032	20X10X15	1	0	301	158.07
2881-82232	20X12X18	1	0	301	209.24
2881-82532	20X15X20	1	0	301	308.03



Turf & Irrigation

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Mechanical Vent Assembly Saddle x Riser/Vent



2882-420	4X2	1	10	301	67.43
2882-422	4X3	1	0	301	104.24
2882-528	6X2	1	10	301	67.43
2882-530	6X3	1	5	301	104.24
2882-532	6X4	1	5	301	144.79
2882-578	8X2	1	8	301	67.43
2882-580	8X3	1	4	301	104.24
2882-582	8X4	1	8	301	144.79
2882-621	10X2	1	10	301	67.43
2882-623	10X3	1	5	301	104.24
2882-624	10X4	1	3	301	144.79
2882-661	12X2	1	10	301	67.43
2882-663	12X3	1	5	301	104.24
2882-664	12X4	1	4	301	144.79
2882-721	15X2	1	0	301	67.44
2882-723	15X3	1	6	301	104.24
2882-724	15X4	1	4	301	144.79
2882-781	18X2	1	0	301	67.44
2882-783	18X3	1	0	301	104.24
2882-784	18X4	1	4	301	144.79
2882-811	20X2	1	0	301	67.44
2882-813	20X3	1	0	301	104.24
2882-814	20X4	1	0	301	144.79

Mechanical Vent Riser Saddle x Riser/Vent x Chamber



2883-52842	6X2X4	1	0	301	78.52
2883-57842	8X2X6	1	0	301	84.66
2883-58042	8X3X6	1	0	301	106.71
2883-62142	10X2X8	1	12	301	103.06
2883-62342	10X3X8	1	8	301	122.65
2883-62442	10X4X8	1	12	301	144.79
2883-66142	12X2X10	1	0	301	132.48
2883-66342	12X3X10	1	16	301	150.88
2883-66442	12X4X10	1	12	301	171.75
2883-72442	15X4X12	1	6	301	223.27
2883-78442	18X4X15	1	0	301	288.31
2883-81442	20X4X18	1	0	301	406.12

Vent Base Saddle x Riser x Outlet



2888-532020	6X4X2	1	2	301	50.94
2888-585030	8X6X3	1	0	301	157.60
2888-585040	8X6X4	1	4	301	79.73
2888-628060	10X8X6	1	0	301	122.65
2888-670060	12X10X6	1	0	301	130.04
2888-732080	15X12X8	1	0	301	195.05
2888-795080	18X15X8	1	0	301	269.94
2888-828080	20X18X8	1	0	301	488.35

Low Head Wye Soc x Soc



2875-060	6	1	2	300	86.11
2875-080	8	1	0	300	113.89
2875-100	10	1	0	300	148.17
2875-120	12	1	0	300	206.43
2875-150	15	1	0	300	319.35
2875-183	18	1	0	300	767.89
2875-200	20	1	0	300	1029.76

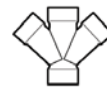
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Low Head Wye Soc x Soc



2875-532	6X4	1	4	300	67.15
2875-585	8X6	1	0	300	99.34
2875-626	10X6	1	0	300	127.04
2875-628	10X8	1	0	300	134.01
2875-666	12X6	1	0	300	139.62
2875-668	12X8	1	0	300	160.28
2875-670	12X10	1	0	300	171.22
2875-726	15X6	1	0	300	188.21
2875-728	15X8	1	0	300	203.99
2875-730	15X10	1	0	300	223.41
2875-732	15X12	1	0	300	245.28
2875-786	18X6	1	0	300	303.59
2875-788	18X8	1	0	300	308.39
2875-790	18X10	1	0	300	337.00
2875-792	18X12	1	0	300	371.67
2875-795	18X15	1	0	300	406.34
2875-816	20X6	1	0	300	379.47
2875-818	20X8	1	0	300	385.47
2875-820	20X10	1	0	300	421.24
2875-822	20X12	1	0	300	464.58
2875-825	20X15	1	0	300	507.94
2875-828	20X18	1	0	300	893.68

Double Wye Soc x Soc



2876-060	6	1	0	300	135.23
2876-080	8	1	0	300	154.05
2876-100	10	1	0	300	257.96
2876-120	12	1	0	300	308.09
2876-150	15	1	0	300	476.64
2876-183	18	1	0	300	1292.38
2876-200	20	1	0	300	1837.24

Reducing Double Wye Soc x Soc



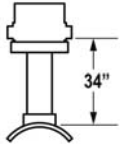
2876-585	8X6	1	0	300	108.76
2876-626	10X6	1	0	300	154.05
2876-628	10X8	1	0	300	170.38
2876-666	12X6	1	0	300	208.39
2876-668	12X8	1	0	300	239.23
2876-670	12X10	1	0	300	286.01
2876-726	15X6	1	0	300	280.91
2876-728	15X8	1	0	300	304.45
2876-730	15X10	1	0	300	333.47
2876-732	15X12	1	0	300	452.14
2876-786	18X6	1	0	300	453.14
2876-788	18X8	1	0	300	460.28
2876-790	18X10	1	0	300	502.98
2876-792	18X12	1	0	300	554.74
2876-795	18X15	1	0	300	606.48
2876-816	20X6	1	0	300	625.86
2876-818	20X8	1	0	300	642.18
2876-820	20X10	1	0	300	657.37
2876-822	20X12	1	0	300	693.40
2876-825	20X15	1	0	300	758.11
2876-828	20X18	1	0	300	1402.01

Turf & Irrigation

PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Size	Disc Code	Part Number List Price Each
DISTRIBUTING GATE RISER (Saddle x Riser x Pot)		
GATES NOT INCLUDED IN PRICE (See CHART #1 on Next Page)		
6x4x8	301	2884-53234 --- 103.08
8x4x8	301	2884-58234 --- 103.08
8x6x10	301	2884-58534 --- 132.48
10x4x8	301	2884-62434 --- 103.08
10x6x10	301	2884-62634 --- 132.48
10x8x12	301	2884-62834 --- 196.32
12x4x8	301	2884-66434 --- 103.08
12x6x10	301	2884-66634 --- 132.48
12x8x12	301	2884-66834 --- 196.32
12x10x15	301	2884-67034 --- 280.36
15x4x8	301	2884-72334 --- 103.08
15x6x10	301	2884-72634 --- 132.48
15x8x12	301	2884-72834 --- 196.32
15x10x15	301	2884-73034 --- 281.00
15x12x18	301	2884-73234 --- 510.40
18x4x8	301	2884-78434 --- 103.08
18x6x10	301	2884-78634 --- 132.48
18x8x12	301	2884-78834 --- 196.32
18x10x15	301	2884-79034 --- 280.36
18x12x18	301	2884-79234 --- 510.40
20x4x8	301	2884-81434 --- 103.08
20x6x10	301	2884-81634 --- 132.48
20x8x12	301	2884-81834 --- 196.34
20x10x15	301	2884-82034 --- 280.36
20x12x18	301	2884-82234 --- 510.40



HOW TO ORDER A DISTRIBUTING GATE RISER

Choose the Distributing Gate Riser size required:

Example: 6 x 4 x 8

(6" Saddle x 4" Riser x 8" Pot)
Part Number 2884-53234 ---

Next, choose the Gate size required from CHART #1:

Example: 2-1/2" Gates

(Code Number "2")

Next, add this Code Number to the end of the Part Number:

Example: 2884-53234 2 ---

Next, choose the position required for the gates from CHART #2:

Example: Standard 2-Way Gates

(Code Number "05")

Next, add this Code Number to the very end of the Part Number:

Example: 2884-532342 05

The Part Number is now complete for a
6" Saddle x 4" Riser x 8" Pot
with 2-1/2" Standard 2-Way Gates --

2884-53234205

HOW TO CALCULATE A DISTRIBUTING GATE RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:

Example: \$103.08

Next, find the List Price Each for the size of Gate required from CHART #1:

Example: 2-1/2" Gate -- \$15.92 each

Next, multiply the Gate price by the number of Gates required:

Example: \$15.92 x 2 = \$31.84

Next, add this amount to the base unit price, for the Total List Price Each:

Example: \$103.08 + \$31.84 = \$134.92

The Total List Price Each for a
6" Saddle x 4" Riser x 8" Pot with 2-1/2"
Standard 2-Way Gates installed is

\$134.92



Turf & Irrigation PVC Low Head PIP Fabricated Fittings, Risers & Accessories

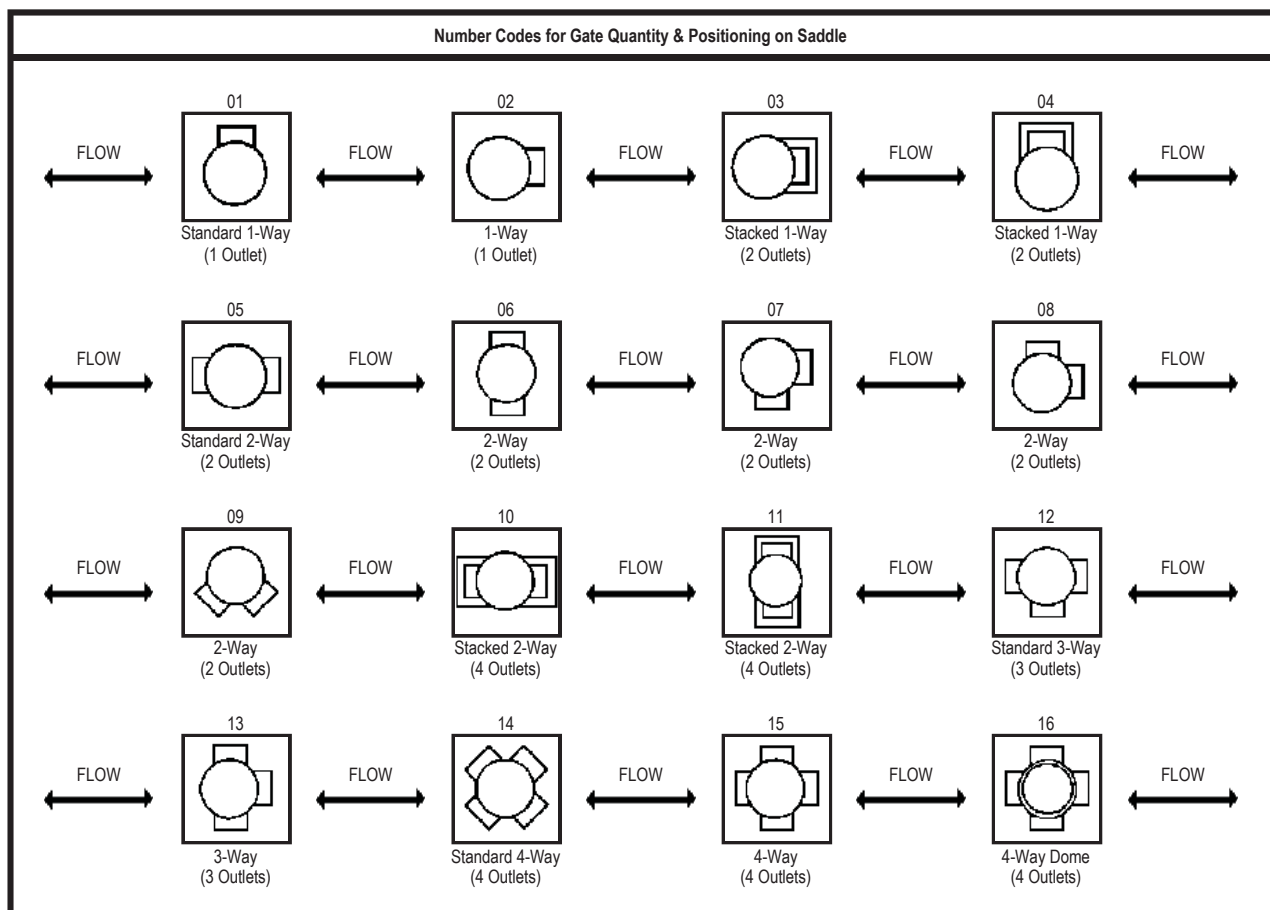
CHART #1

Gate/Hole Size	Distributing Gate Size Code	Disc Code	List Price Each Installed
2" Gate	1	301	13.49
2- 1/2" Gate	2	301	15.92
3" Gate	3	301	18.38
4" Gate	4	301	26.98
2" Hole*	5	301	—
2- 1/2" Hole*	6	301	—
3" Hole*	7	301	—
4" Hole*	8	301	—

* Hole Size Codes **MUST** be chosen **ONLY** when ordering with **NO GATES INSTALLED**.

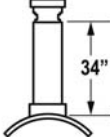
Number code for Gate Hole positioning must also be chosen from CHART #2 below.

CHART #2



Turf & Irrigation PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Part Number		Size	Disc Code	List Price Each			
RITE FLO RISER (Saddle x Riser)							
GATES NOT INCLUDED IN PRICE (See CHART #3 on Next Page)				1 Outlet	2 Outlets	3 Outlets	4 Outlets
	2885-58534	8x6	301	124.62	128.53	131.15	133.41
	2885-62634	10x6	301	124.62	128.53	131.15	133.41
	2885-66634	12x6	301	124.62	128.53	131.15	133.41
	2885-72634	15x6	301	124.62	128.53	131.15	133.41
	2885-78634	18x6	301	124.62	128.53	131.15	133.41
	2885-81634	20x6	301	124.62	128.53	131.15	133.41

HOW TO ORDER A RITE FLO RISER

Choose the Rite Flo Riser size required:

Example: 8 x 6 Riser
(8" Saddle x 6" Riser)
Part Number 2885-58534 ---

Next, choose the Gate size required from CHART #3:

Example: 3" Gates
(Code Number "3")

Next, add this Code Number to the end of the Part Number:

Example: 2885-58534 3---

Next, choose the position required for the gates from CHART #4:

Example: Standard 2-Way (2 Outlets)
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:

Example: 2885-585343 05

The Part Number is now complete for an 8" Saddle x 6" Standard 2-Way Riser
with 3" Gates --

2885-58534305

HOW TO CALCULATE A RITE FLO RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:

Example: \$133.41

Next, find the List Price Each for the 3" Gate required from CHART #3:

Example: 3" Gate -- \$47.20 each

Next, multiply the Gate price by the number of Gates required:

Example: \$47.20 x 4 = \$188.80

Next, add this amount to the base unit price, for the Total List Price Each:

Example: \$133.41 + \$188.80 = \$322.21

The Total List Price Each for a
8" Saddle x 6" 4-Way Dome Riser
with 3" Gates installed is

\$322.21



Turf & Irrigation PVC Low Head PIP Fabricated Fittings, Risers & Accessories

CHART #3

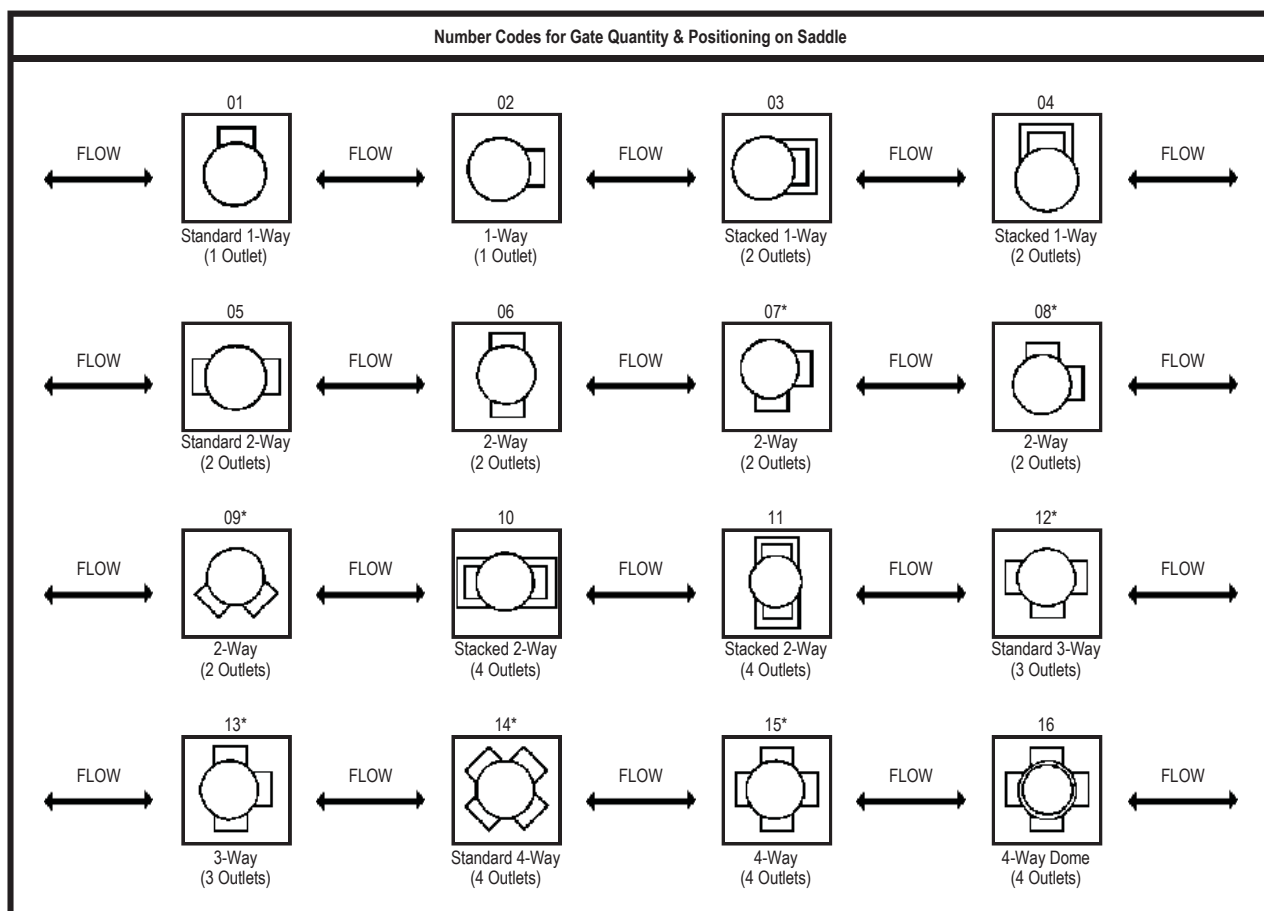
Gate/Hole Size	Gate Size Code	Disc Code	Rite Flo List Price Each Installed
3" Gate	3	301	47.20
2" Hole*	5	301	—
3" Hole*	7	301	—

* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #4 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

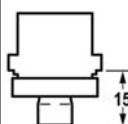
CHART #4



*Staggered gates are provided for Rite Flo Risers to allow adequate room for gates to operate properly.

Turf & Irrigation PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Size	Disc Code	Part Number	List Price Each
DISTRIBUTING GATE REPAIR UNIT (Riser x Pot)			
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			
	4x8	301	28840-42715 --- 85.89
	6x10	301	28840-53715 --- 115.33
	8x12	301	28840-59115 --- 165.61
	10x15	301	28840-63515 --- 218.92
	12x18	301	28840-67815 --- 413.51

HOW TO ORDER DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS

Choose the Repair Unit size required:

Example: 4 x 8 Distributing Gate Repair Unit
(4" Riser x 8" Pot)
Part Number 28840-42715 _ _ _

Next, choose the Gate size required from CHART #5:

Example: 2" Gate
(Code Number "1")

Next, add this Code Number to the end of the

Part Number:
Example: 28840-42715 1 _ _

Next, choose the position required for the gates from CHART #6:

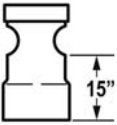
Example: 4-Way
(Code Number "14")

Next, add this Code Number to the very end of the Part Number:

Example: 28840-427151 14

The Part Number is now complete for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit with 2" 4-Way Gates –

28840-4271514

Part Number Size		Disc Code	List Price Each			
RITE FLO RISER REPAIR UNIT						
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	28850-06015 6" ---	301	62.95	68.18	73.39	78.67

HOW TO CALCULATE DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each above:

Example: \$85.89

Next, find the List Price Each for the size of Gate required from CHART #5:

Example: 2" Gate – \$13.50 each

Next, multiply the Gate price by the number of Gates required:

Example: \$13.50 x 4 = \$54.00

Next, add this amount to the base unit price, for the Total List Price Each:

Example: \$85.89 + \$54.00 = \$139.89

The Total List Price Each for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit
with 2" 4-Way Gates installed is

\$139.89



Turf & Irrigation
PVC Low Head PIP Fabricated Fittings, Risers & Accessories

CHART #5

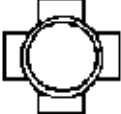
Gate/Hole Size	Gate Size Code	Disc Code	Distributing Gate List Price Each Installed	Rite Flo Gate List Price Each Installed
2" Gate	1	301	13.49	—
2- 1/2" Gate	2	301	15.92	—
3" Gate	3	301	18.38	47.20
4" Gate	4	301	26.98	—
2" Hole*	5	301	—	—
2- 1/2" Hole*	6	301	—	—
3" Hole*	7	301	—	—
4" Hole*	8	301	—	—

* Hole Size Codes **MUST** be chosen **ONLY** when ordering with **NO GATES INSTALLED**.

Number code for Gate Hole positioning must also be chosen from CHART #6 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers **ONLY**.

CHART #6

Repair Unit Number Codes for Gate Quantity & Positioning			
02  1-Way (1 Outlet)	04  Stacked 1-Way (2 Outlets)	06  2-Way (2 Outlets)	08*  2-Way (2 Outlets)
10  Stacked 2-Way (4 Outlets)	12*  3-Way (3 Outlets)	14*  4-Way (4 Outlets)	16  4-Way Dome (4 Outlets)

*Staggered gates are provided for Rite Flo Riser Repair Units to allow adequate room for gate to operate properly.

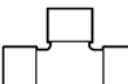
All Low Head PIP Fabricated Fittings showing size outlets of 4" and under are IPS size on that outlet

Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Tee (Socket)

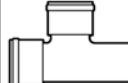
	6	290-102502 89.55	300-102502 107.15	3301-060P 107.73
	6X2	290-102499 62.58	300-102499 72.39	3301-528P 81.24
	6X3	290-102500 67.43	300-102500 77.27	3301-530P 87.42
	6X4	290-102501 69.93	300-102501 80.94	3301-532P 90.69
	8	290-102507 154.43	300-102507 158.24	3301-080P 215.97
	8X2	290-102503 77.27	300-102503 89.55	3301-578P 122.51
	8X3	290-102504 85.85	300-102504 96.87	3301-580P 133.51
	8X4	290-102505 96.87	300-102505 105.54	3301-582P 144.42
	8X6	290-102506 115.28	300-102506 130.04	3301-585P 178.94
	10	290-102513 223.27	300-102513 254.00	3301-100P 322.38
	10X2	290-102508 112.85	300-102508 123.91	3301-621P 170.32
	10X3	290-102509 123.91	300-102509 158.24	3301-623P 216.73
	10X4	290-102510 143.55	300-102510 161.93	3301-624P 223.28
	10X6	290-102511 158.24	300-102511 165.62	3301-626P 244.97
	10X8	290-102512 182.82	300-102512 220.85	3301-628P 303.81
	12	290-102520 316.54	300-102520 404.84	3301-120P 506.86
	12X2	290-102514 149.65	300-102514 179.06	3301-661P 266.96
	12X3	290-102515 176.69	300-102515 214.68	3301-663P 295.07
	12X4	290-102516 199.97	300-102516 238.01	3301-664P 325.83
	12X6	290-102517 210.99	300-102517 258.84	3301-666P 356.63
	12X8	290-102518 249.05	300-102518 305.48	3301-668P 422.18
	12X10	290-102519 287.08	300-102519 352.11	3301-670P 468.41
	15	290-102528 592.58	300-102528 696.89	3301-150P 905.48
	15X2	290-102521 276.06	300-102521 322.65	3301-721P 404.84
	15X3	290-102522 290.78	300-102522 339.85	3301-723P 430.69
	15X4	290-102523 299.36	300-102523 354.58	3301-724P 445.36
	15X6	290-102524 325.09	300-102524 390.14	3301-726P 504.26
	15X8	290-102525 375.41	300-102525 436.78	3301-728P 580.36
	15X10	290-102526 425.73	300-102526 516.55	3301-730P 656.39
	15X12	290-102527 487.04	300-102527 580.36	3301-732P 757.67
	18	290-102537 917.74	300-102537 1069.86	3301-180P 1523.89
	18X2	290-102529 479.53	300-102529 523.85	3301-781P 639.23
	18X3	290-102530 494.45	300-102530 537.36	3301-783P 715.27
	18X4	290-102531 547.19	300-102531 591.39	3301-784P 761.92
	18X6	290-102532 563.14	300-102532 612.22	3301-786P 780.33
	18X8	290-102533 586.47	300-102533 637.99	3301-788P 871.11
	18X10	290-102534 619.59	300-102534 685.85	3301-790P 952.08

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Tee (Socket) (continued)

	18X12	290-102535 685.85	300-102535 814.69	3301-792P 1069.86
	18X15	290-102536 795.05	300-102536 985.22	3301-795P 1245.38
	21	290-102558 1693.18	300-102558 1992.56	3301-210P 2271.07
	21X2	290-102548 695.20	300-102548 873.56	3301-841P 993.81
	21X3	290-102549 712.15	300-102549 879.68	3301-843P 1011.02
	21X4	290-102550 736.14	300-102550 889.52	3301-844P 1055.17
	21X6	290-102551 780.33	300-102551 1078.45	3301-846P 1209.78
	21X8	290-102552 833.06	300-102552 1110.36	3301-848P 1260.05
	21X10	290-102553 888.27	300-102553 1152.07	3301-850P 1318.97
	21X12	290-102554 972.97	300-102554 1163.14	3301-852P 1640.42
	21X15	290-102555 1072.34	300-102555 1333.66	3301-855P 1874.77
	21X18	290-102556 1251.44	300-102556 1523.89	3301-858P 2138.60
	24	290-102570 2311.60	300-102570 2666.15	3301-240P 2725.08
	24X2	290-102559 917.74	300-102559 1084.60	3301-901P 1171.69
	24X3	290-102560 976.61	300-102560 1143.51	3301-903P 1230.60
	24X4	290-102561 1031.86	300-102561 1230.60	3301-904P 1318.97
	24X6	290-102562 1087.08	300-102562 1318.97	3301-906P 1406.08
	24X8	290-102563 1158.23	300-102563 1406.08	3301-908P 1523.89
	24X10	290-102564 1192.57	300-102564 1523.89	3301-910P 1640.42
	24X12	290-102565 1289.53	300-102565 1640.42	3301-912P 1758.20
	24X15	290-102566 1415.85	300-102566 1787.67	3301-915P 1933.69
	24X18	290-102567 1612.21	300-102567 2022.00	3301-918P 2197.47
	24X21	290-102569 1813.39	300-102569 2166.74	3301-921P 2607.26
	27	2901-270 3501.91	3001-270 4148.83	3301-270P 5133.46
	27X4	2901-934 1248.57	3001-934 1567.65	3301-934P 1958.03
	27X6	2901-936 1317.42	3001-936 1687.79	3301-936P 2109.55
	27X8	2901-938 1402.36	3001-938 1806.63	3301-938P 2259.69
	27X10	2901-940 1420.94	3001-940 1931.77	3301-940P 2416.06
	27X12	2901-942 1561.67	3001-942 2087.01	3301-942P 2608.71
	27X15	2901-945 1714.12	3001-945 2297.20	3301-945P 2872.63
	27X18	2901-948 1952.92	3001-948 2604.86	3301-948P 3255.45
	27X21	2901-951 2197.16	3001-951 2771.29	3301-951P 3463.31
	27X24	2901-954 2801.35	3001-954 3421.93	3301-954P 4276.42

Tee (Gasket x Spigot x Gasket)

	6	290-103062 184.02	300-103062 190.15	3301-060232P 202.88
	6X4	290-103061 159.47	300-103061 177.89	3301-532232P 191.69
	8	290-103067 233.13	300-103067 254.00	3301-080232P 305.08



Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Tee (Gasket x Spigot x Gasket) (continued)

	8X4	290-103065 196.32	300-103065 215.91	3301-582232P 229.00
	8X6	290-103066 220.85	300-103066 228.21	3301-585232P 267.02
	10	290-103073 348.45	300-103073 386.49	3301-100232P 457.88
	10X4	290-103070 304.27	300-103070 316.54	3301-624232P 331.04
	10X6	290-103071 310.38	300-103071 330.02	3301-626232P 368.09
	10X8	290-103072 342.29	300-103072 354.58	3301-628232P 400.12
	12	290-103080 480.94	300-103080 525.13	3301-120232P 634.93
	12X4	290-103076 354.58	300-103076 398.72	3301-664232P 444.23
	12X6	290-103077 364.38	300-103077 412.21	3301-666232P 476.63
	12X8	290-103078 422.05	300-103078 424.52	3301-668232P 508.14
	12X10	290-103079 434.34	300-103079 468.66	3301-670232P 571.55
	15	290-103088 768.05	300-103088 949.65	3301-150232P 1138.56
	15X4	290-103083 569.29	300-103083 601.16	3301-724232P 791.36
	15X6	290-103084 576.38	300-103084 696.89	3301-726232P 841.64
	15X8	290-103085 607.31	300-103085 709.17	3301-728232P 873.56
	15X10	290-103086 653.92	300-103086 727.59	3301-730232P 917.74
	15X12	290-103087 696.89	300-103087 791.36	3301-732232P 976.27
	18	290-103097 1224.46	300-103097 1423.23	3301-180232P 1834.27
	18X4	290-103091 738.60	300-103091 823.26	3301-784232P 1012.20
	18X6	290-103092 791.36	300-103092 885.82	3301-786232P 1107.92
	18X8	290-103093 808.55	300-103093 999.97	3301-788232P 1202.40
	18X10	290-103094 899.35	300-103094 1044.12	3301-790232P 1296.87
	18X12	290-103095 975.40	300-103095 1107.92	3301-792232P 1360.71
	18X15	290-103096 1019.57	300-103096 1170.48	3301-795232P 1455.14
	21	2901-210232 1927.53	3001-210232 2371.74	3301-210232P 2896.81
	21X4	290-103110 1145.98	300-103110 1392.60	3301-844232P 1676.01
	21X6	290-103111 1158.23	300-103111 1423.23	3301-846232P 1707.89
	21X8	290-103112 1219.57	300-103112 1499.33	3301-848232P 1790.09
	21X10	290-103113 1257.60	300-103113 1518.94	3301-850232P 1847.74
	21X12	290-103114 1380.34	300-103114 1613.43	3301-852232P 2024.46
	21X15	290-103115 1494.43	300-103115 1676.01	3301-855232P 2182.71
	21X18	290-103116 1690.73	300-103116 2024.46	3301-858232P 2467.40
	24	2901-240232 4322.97	3001-240232 4579.35	3301-240232P 6243.22
	24X6	2901-906232 3074.15	3001-906232 3483.32	3301-906232P 4354.19
	24X8	2901-908232 3235.31	3001-908232 3612.11	3301-908232P 4579.20
	24X10	2901-910232 3400.77	3001-910232 3677.29	3301-910232P 4879.46
	24X12	2901-912232 3584.27	3001-912232 3773.58	3301-912232P 5095.95

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Tee (Gasket x Spigot x Gasket) (continued)

	24X15	2901-915232 3772.13	3001-915232 3935.01	3301-915232P 5353.69
	24X18	2901-918232 3967.42	3001-918232 4127.62	3301-918232P 5611.53
	24X21	2901-921232 4177.64	3001-921232 4386.61	3301-921232P 5934.20
	27	2901-270232 6503.11	3001-270232 7255.56	3301-270232P 9191.09
	27X6	2901-936232 3842.27	3001-936232 4354.06	3301-936232P 5482.61
	27X8	2901-938232 4043.65	3001-938232 4579.28	3301-938232P 5740.28
	27X10	2901-940232 4251.53	3001-940232 4837.07	3301-940232P 5998.07
	27X12	2901-942232 4481.67	3001-942232 5095.99	3301-942232P 6288.28
	27X15	2901-945232 4716.81	3001-945232 5353.69	3301-945232P 6514.74
	27X18	2901-948232 4960.88	3001-948232 5643.92	3301-948232P 7030.25
	27X21	2901-951232 5222.40	3001-951232 5934.33	3301-951232P 7416.87
	27X24	2901-954232 5497.60	3001-954232 6192.08	3301-954232P 7836.11

Tee (Gasketed)

	6	290-103174 184.02	300-103174 190.15	3301-0602P 202.88
	6X4	290-103173 159.47	300-103173 177.89	3301-5322P 191.69
	8	290-103179 233.13	300-103179 254.00	3301-0802P 305.08
	8X4	290-103177 196.32	300-103177 215.91	3301-5822P 229.00
	8X6	290-103178 220.85	300-103178 228.21	3301-5852P 267.02
	10	290-103185 348.45	300-103185 386.49	3301-1002P 457.88
	10X4	290-103182 304.27	300-103182 316.54	3301-6242P 331.04
	10X6	290-103183 310.38	300-103183 330.02	3301-6262P 368.09
	10X8	290-103184 342.29	300-103184 354.58	3301-6282P 400.12
	12	290-103192 480.94	300-103192 525.13	3301-1202P 634.93
	12X4	290-103188 354.58	300-103188 398.72	3301-6642P 444.23
	12X6	290-103189 364.38	300-103189 412.21	3301-6662P 476.62
	12X8	290-103190 422.05	300-103190 424.52	3301-6682P 508.14
	12X10	290-103191 434.34	300-103191 468.66	3301-6702P 571.55
	15	290-103200 768.05	300-103200 949.65	3301-1502P 1138.56
	15X4	290-103195 569.29	300-103195 601.16	3301-7242P 791.36
	15X6	290-103196 576.38	300-103196 696.89	3301-7262P 841.64
	15X8	290-103197 607.31	300-103197 709.17	3301-7282P 873.56
	15X10	290-103198 653.92	300-103198 727.59	3301-7302P 917.74
	15X12	290-103199 696.89	300-103199 791.36	3301-7322P 980.33
	18	290-103209 1224.46	300-103209 1423.23	3301-1802P 1834.27
	18X4	290-103203 738.60	300-103203 823.26	3301-7842P 1012.20
	18X6	290-103204 791.36	300-103204 885.82	3301-7862P 1107.92
	18X8	290-103205 808.55	300-103205 999.97	3301-7882P 1202.40

Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Tee (Gasketed) (continued)

	18X10	290-103206 899.35	300-103206 1044.12	3301-7902P 1296.87
	18X12	290-103207 975.40	300-103207 1107.92	3301-7922P 1360.71
	18X15	290-103208 1019.57	300-103208 1170.48	3301-7952P 1455.14
	21	290-103230 1927.53	300-103230 2371.74	3301-2102P 2896.81
	21X4	290-103222 1145.98	300-103222 1392.60	3301-8442P 1676.01
	21X6	290-103223 1158.23	300-103223 1423.23	3301-8462P 1707.89
	21X8	290-103224 1219.57	300-103224 1499.33	3301-8482P 1790.09
	21X10	290-103225 1257.60	300-103225 1518.94	3301-8502P 1847.74
	21X12	290-103226 1380.34	300-103226 1613.43	3301-8522P 2024.46
	21X15	290-103227 1494.43	300-103227 1676.01	3301-8552P 2182.71
	21X18	290-103228 1690.73	300-103228 2024.46	3301-8582P 2467.40
	24	2901-2402 4322.97	3001-2402 4579.35	3301-2402P 6243.22
	24X6	2901-9062 3074.15	3001-9062 3483.32	3301-9062P 4354.19
	24X8	2901-9082 3235.31	3001-9082 3612.11	3301-9082P 4579.20
	24X10	2901-9102 3400.77	3001-9102 3677.29	3301-9102P 4879.46
	24X12	2901-9122 3584.27	3001-9122 3773.58	3301-9122P 5095.95
	24X15	2901-9152 3772.13	3001-9152 3935.01	3301-9152P 5353.69
	24X18	2901-9182 3967.42	3001-9182 4127.62	3301-9182P 5611.53
	24X21	2901-9212 4177.64	3001-9212 4386.61	3301-9212P 5934.20
	27	2901-2702 6503.11	3001-2702 7255.56	3301-2702P 9191.09
	27X6	2901-9362 3842.27	3001-9362 4354.06	3301-9362P 5482.61
	27X8	2901-9382 4043.65	3001-9382 4579.28	3301-9382P 5740.28
	27X10	2901-9402 4251.53	3001-9402 4837.07	3301-9402P 5998.07
	27X12	2901-9422 4481.67	3001-9422 5095.99	3301-9422P 6288.28
	27X15	2901-9452 4716.81	3001-9452 5353.69	3301-9452P 6514.74
	27X18	2901-9482 4960.88	3001-9482 5643.92	3301-9482P 7030.25
	27X21	2901-9512 5222.40	3001-9512 5934.33	3301-9512P 7416.87
	27X24	2901-9542 5497.60	3001-9542 6192.08	3301-9542P 7836.11

Reinforced Tee (Soc x Soc x Fipt)

	6X2	---	300-202152 75.27	3302-528P 114.54
	6X3	---	300-202154 82.16	3302-530P 131.24
	6X4	---	300-202155 92.00	3302-532P 134.95
	8X2	---	300-202157 114.09	3302-578P 185.38
	8X3	---	300-202159 120.20	3302-580P 197.95
	8X4	---	300-202160 130.04	3302-582P 167.85
	10X2	---	300-202162 155.83	3302-621P 209.27
	10X3	---	300-202164 191.37	3302-623P 259.22

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Reinforced Tee (Soc x Soc x Fipt) (continued)

	10X4	---	300-202165 204.89	3302-624P 255.07
	12X2	---	300-202167 238.01	3302-661P 257.58
	12X3	---	300-202169 263.75	3302-663P 283.15
	12X4	---	300-202170 301.80	3302-664P 331.39
	15X2	---	300-202172 392.28	3302-721P 453.93
	15X3	---	300-202174 417.29	3302-723P 478.49
	15X4	---	300-202175 447.51	3302-724P 490.80

Reinforced Tee (Soc x Spig x Fipt)

	6X2	---	300-202222 62.58	---
	6X3	---	300-202224 73.61	---
	6X4	---	300-202225 85.85	---
	8X2	---	300-202227 100.59	---
	8X3	---	300-202229 110.41	---
	8X4	---	300-202230 120.20	---
	10X2	---	300-202232 149.61	---
	10X3	---	300-202234 182.82	---
	10X4	---	300-202235 193.84	---
	12X2	---	300-202237 223.27	---
	12X3	---	300-202239 255.17	---
	12X4	---	300-202240 290.78	---
	15X2	---	300-202242 390.14	3302-72113P 441.69
	15X3	---	300-202244 413.46	3302-72313P 472.38
	15X4	---	300-202245 440.43	3302-72413P 484.61

Reinforced Tee (Gasket x Spig x Fipt)

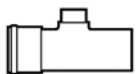
	6X2	---	300-202362 107.94	---
	6X3	---	300-202364 139.85	---
	6X4	---	300-202365 146.01	---
	8X2	---	300-202367 152.13	---
	8X3	---	300-202369 177.89	---
	8X4	---	300-202370 196.32	---
	10X2	---	300-202372 228.21	---
	10X3	---	300-202374 240.45	---
	10X4	---	300-202375 250.25	---
	12X2	---	300-202377 316.54	---
	12X3	---	300-202379 342.29	---
	12X4	---	300-202380 354.58	---
	15X2	---	300-202382 442.92	3302-72123P 539.55
	15X3	---	300-202384 468.66	3302-72323P 578.24



Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Reinforced Tee (Gasket x Spig x Fipt) (continued)

	15X4	---	300-202385 506.71	3302-72423P 630.48
---	------	-----	----------------------	-----------------------

Reinforced Tee (Gasket x Fipt)

	6X2	---	300-202432 114.09	---
	6X3	---	300-202434 139.85	---
	6X4	---	300-202435 152.13	---
	8X2	---	300-202437 171.75	---
	8X3	---	300-202439 187.72	---
	8X4	---	300-202440 202.42	---
	10X2	---	300-202442 247.80	---
	10X3	---	300-202444 272.35	---
	10X4	---	300-202445 291.97	---
	12X2	---	300-202447 348.45	---
	12X3	---	300-202449 366.82	---
	12X4	---	300-202450 392.63	---
	15X2	---	300-202452 506.71	3302-7212P 619.11
	15X3	---	300-202454 525.13	3302-7232P 672.68
	15X4	---	300-202455 550.91	3302-7242P 707.42

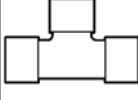
PIP X IPS Tee (Socket)



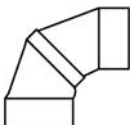
	6	2901-060PXi 84.18	3001-060PXi 107.15	3301-060PXi 107.73
	8	2901-080PXi 154.43	3001-080PXi 215.28	3301-080PXi 215.97
	8X6	2901-585PXi 108.37	3001-585PXi 130.04	3301-585PXi 168.20
	10	2901-100PXi 209.87	3001-100PXi 254.00	3301-100PXi 322.38
	10X6	2901-626PXi 148.75	300-102821 165.62	3301-626PXi 230.27
	10X8	2901-628PXi 171.85	3001-628PXi 339.99	3301-628PXi 285.58
	12	2901-120PXi 316.54	3001-120PXi 404.84	3301-120PXi 476.45
	12X6	2901-666PXi 251.54	300-102599 258.84	3301-666PXi 335.23
	12X8	2901-668PXi 234.11	300-102607 305.48	3301-668PXi 396.85
	12X10	2901-670PXi 287.08	3001-670PXi 352.11	3301-670PXi 440.31
	15X6	2901-726PXi 305.59	300-102708 390.14	3301-726PXi 474.01
	15X8	2901-728PXi 352.88	300-102709 492.14	3301-728PXi 545.54
	15X10	2901-730PXi 400.18	3001-730PXi 516.55	3301-730PXi 617.01
	15X12	2901-732PXi 457.82	300-102817 580.36	3301-732PXi 712.21
	18X6	2901-786PXi 529.35	3001-786PXi 612.22	3301-786PXi 733.51
	18X8	2901-788PXi 551.28	3001-788PXi 637.99	3301-788PXi 818.84
	18X10	2901-790PXi 619.59	3001-790PXi 685.85	3301-790PXi 894.96

	Size	80 PIP Disc Code: 310 Part Number Price Each	100 PIP Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
--	------	---	--	--

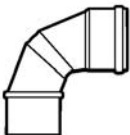
PIP X IPS Tee (Socket) (continued)

	18X12	2901-792PXI 685.85	3001-792PXI 814.69	3301-792PXI 1005.67
	21X6	2901-846PXI 780.33	3001-846PXI 1078.08	3301-846PXI 1137.19
	21X8	2901-848PXI 783.08	3001-848PXI 1110.36	3301-848PXI 1184.45
	21X10	2901-850PXI 888.27	3001-850PXI 1152.07	3301-850PXI 1239.83
	21X12	2901-852PXI 914.59	3001-852PXI 1163.14	3301-852PXI 1542.00
	24X6	2901-906PXI 1087.08	3001-906PXI 1318.97	3301-906PXI 1321.72
	24X8	2901-908PXI 1158.23	3001-908PXI 1406.08	3301-908PXI 1432.46
	24X10	2901-910PXI 1192.57	3001-910PXI 1523.89	3301-910PXI 1542.00
	24X12	2901-912PXI 1212.16	3001-912PXI 1640.42	3301-912PXI 1652.71

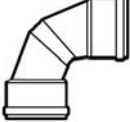
90° Elbow (Socket)

	6	290-100812 121.46	300-100812 142.33	3306-060P 176.45
	8	290-100813 164.40	300-100813 224.55	3306-080P 256.04
	10	290-100814 269.93	300-100814 316.54	3306-100P 353.34
	12	290-100815 347.17	300-100815 444.11	3306-120P 459.67
	15	290-100816 579.12	300-100816 688.32	3306-150P 787.68
	18	290-100817 871.11	300-100817 1025.67	3306-180P 1348.39
	21	290-100819 1363.12	300-100819 1652.67	3306-210P 2030.60
	24	290-100820 3046.54	300-100820 3633.02	3306-240P 3826.83
	27	2906-270 3245.43	3006-270 3853.56	3306-270P 4260.29

90° Elbow (Gasket x Spigot)

	6	290-100878 147.18	300-100878 159.47	3306-06023P 234.72
	8	290-100879 233.13	300-100879 255.17	3306-08023P 304.95
	10	290-100880 347.17	300-100880 393.81	3306-10023P 471.04
	12	290-100881 472.38	300-100881 559.47	3306-12023P 677.71
	15	290-100882 905.48	300-100882 1143.51	3306-15023P 1289.53
	18	290-100883 1518.94	300-100883 1758.20	3306-18023P 1787.67
	21	290-100885 2201.15	300-100885 2639.19	3306-21023P 3187.65
	24	2906-24023 3513.18	3006-24023 3992.52	3306-24023P 4992.22
	27	2906-27023 4767.00	3006-27023 5521.54	3306-27023P 6563.63

90° Elbow (Gasketed)

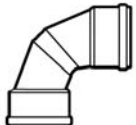
	6	290-100900 147.18	300-100900 159.47	3306-0602P 234.72
	8	290-100901 233.13	300-100901 255.17	3306-0802P 304.95
	10	290-100902 347.17	300-100902 393.81	3306-1002P 471.04
	12	290-100903 472.38	300-100903 559.47	3306-1202P 677.71
	15	290-100904 905.48	300-100904 1143.51	3306-1502P 1289.53
	18	290-100905 1518.94	300-100905 1758.20	3306-1802P 1787.67
	21	290-100907 2201.15	300-100907 2639.19	3306-2102P 3187.65
	24	2906-2402 3513.18	3006-2402 3992.52	3306-2402P 4992.22

Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

90° Elbow (Gasketed) (continued)

	27	2906-2702 4767.00	3006-2702 5521.54	3306-2702P 6563.63
---	----	-----------------------------	-----------------------------	------------------------------

11-1/4° Elbow (Socket)

	6	290-100114 33.15	300-100114 39.23	3311-060P 48.57
	8	290-100115 53.94	300-100115 58.85	3311-080P 72.28
	10	290-100116 96.87	300-100116 111.63	3311-100P 140.02
	12	290-100117 137.37	300-100117 155.83	3311-120P 192.71
	15	290-100118 213.47	300-100118 261.29	3311-150P 339.85
	18	290-100119 366.82	300-100119 434.34	3311-180P 539.85
	21	290-100121 612.22	300-100121 698.09	3311-210P 909.17
	24	290-100122 823.26	300-100122 909.17	3311-240P 981.54
	27	2911-270 1032.16	3011-270 1102.41	3311-270P 1433.89

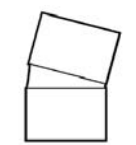
11-1/4° Elbow (Gasket x Spigot)

	6	290-100186 98.14	300-100186 120.20	3311-06023P 139.99
	8	290-100187 159.47	300-100187 177.89	3311-08023P 208.33
	10	290-100188 239.24	300-100188 263.75	3311-10023P 305.67
	12	290-100189 325.09	300-100189 380.34	3311-12023P 441.98
	15	290-100190 572.98	300-100190 628.17	3311-15023P 743.53
	18	290-100191 907.92	300-100191 1040.43	3311-18023P 1236.77
	21	290-100193 1341.02	300-100193 1442.91	3311-21023P 1875.99
	24	2911-24023 2219.44	3011-24023 2511.59	3311-24023P 3152.73
27	2911-27023 2871.55	3011-27023 3248.12	3311-27023P 3925.54	

11-1/4° Elbow (Gasketed)

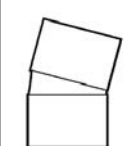
	6	290-100210 98.14	300-100210 120.20	3311-0602P 139.99
	8	290-100211 159.47	300-100211 177.89	3311-0802P 208.33
	10	290-100212 239.24	300-100212 263.75	3311-1002P 305.67
	12	290-100213 325.09	300-100213 380.34	3311-1202P 441.98
	15	290-100214 572.98	300-100214 628.17	3311-1502P 743.53
	18	290-100215 907.92	300-100215 1040.43	3311-1802P 1236.77
	21	290-100217 1341.02	300-100217 1442.91	3311-2102P 1875.99
	24	2911-2402 2219.44	3011-2402 2511.59	3311-2402P 3152.73
27	2911-2702 2871.55	3011-2702 3248.12	3311-2702P 3925.54	

15° Elbow (Socket)

	6	290-100234 33.15	300-100234 39.23	3318-060P 48.57
	8	290-100235 53.94	300-100235 58.85	3318-080P 72.28
	10	290-100236 96.87	300-100236 111.63	3318-100P 140.02
	12	290-100237 137.37	300-100237 155.83	3318-120P 192.71

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
--	------	---	--	--

15° Elbow (Socket) (continued)

	15	290-100238 213.47	300-100238 261.29	3318-150P 339.85
	18	290-100239 366.82	300-100239 434.34	3318-180P 539.85
	21	290-100241 612.22	300-100241 698.09	3318-210P 909.17
	24	290-100242 823.26	300-100242 909.17	3318-240P 981.54
	27	2918-270 1032.16	3018-270 1102.41	3318-270P 1433.89

15° Elbow (Gasket x Spigot)

	6	290-100306 98.14	300-100306 120.20	3318-06023P 139.99
	8	290-100307 159.47	300-100307 177.89	3318-08023P 208.33
	10	290-100308 239.24	300-100308 263.75	3318-10023P 305.67
	12	290-100309 325.09	300-100309 380.34	3318-12023P 441.98
	15	290-100310 572.98	300-100310 628.17	3318-15023P 743.53
	18	290-100311 907.92	300-100311 1040.43	3318-18023P 1236.77
	21	290-100313 1341.02	300-100313 1442.91	3318-21023P 1875.99
	24	2918-24023 2219.44	3018-24023 2511.59	3318-24023P 3152.73
	27	2918-27023 2871.55	3018-27023 3248.12	3318-27023P 3925.54

15° Elbow (Gasketed)

	6	290-100330 98.14	300-100330 120.20	3318-0602P 139.99
	8	290-100331 159.47	300-100331 177.89	3318-0802P 208.33
	10	290-100332 239.24	300-100332 263.75	3318-1002P 305.67
	12	290-100333 325.09	300-100333 380.34	3318-1202P 441.98
	15	290-100334 572.98	300-100334 628.17	3318-1502P 743.53
	18	290-100335 907.92	300-100335 1040.43	3318-1802P 1236.77
	21	290-100336 1341.06	300-100336 1442.91	3318-2102P 1875.99
	24	2918-2402 2219.44	3018-2402 2511.59	3318-2402P 3152.73
27	2918-2702 2871.55	3018-2702 3248.12	3318-2702P 3925.54	

22-1/2° Elbow (Socket)

	6	290-100354 33.15	300-100354 39.23	3316-060P 47.84
	8	290-100355 53.94	300-100355 58.85	3316-080P 71.68
	10	290-100356 96.87	300-100356 111.63	3316-100P 140.02
	12	290-100357 137.37	300-100357 155.83	3316-120P 192.71
	15	290-100358 213.47	300-100358 261.29	3316-150P 339.85
	18	290-100359 366.82	300-100359 434.34	3316-180P 539.85
	21	290-100361 612.22	300-100361 698.09	3316-210P 909.17
	24	290-100362 823.26	300-100362 909.17	3316-240P 981.54
	27	2916-270 1032.16	3016-270 1102.41	3316-270P 1433.89



Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

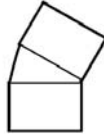
22-1/2° Elbow (Gasket x Spigot)

	6	290-100426 98.14	300-100426 120.20	3316-06023P 139.99
	8	290-100427 159.47	300-100427 177.89	3316-08023P 208.33
	10	290-100428 239.24	300-100428 263.75	3316-10023P 305.67
	12	290-100429 325.09	300-100429 380.34	3316-12023P 441.98
	15	290-100430 572.98	300-100430 628.17	3316-15023P 743.53
	18	290-100431 907.92	300-100431 1040.43	3316-18023P 1236.77
	21	290-100433 1341.02	300-100433 1442.91	3316-21023P 1875.99
	24	2916-24023 2219.44	3016-24023 2511.59	3316-24023P 3152.73
	27	2916-27023 2871.55	3016-27023 3248.12	3316-27023P 3925.54

22-1/2° Elbow (Gasketed)

	6	290-100450 98.14	300-100450 120.20	3316-0602P 139.99
	8	290-100451 159.47	300-100451 177.89	3316-0802P 208.33
	10	290-100452 239.24	300-100452 263.75	3316-1002P 305.67
	12	290-100453 325.09	300-100453 380.34	3316-1202P 441.98
	15	290-100454 572.98	300-100454 628.17	3316-1502P 743.53
	18	290-100455 907.92	300-100455 1040.43	3316-1802P 1236.77
	21	290-100457 1341.02	300-100457 1442.91	3316-2102P 1875.99
	24	2916-2402 2219.44	3016-2402 2511.59	3316-2402P 3152.73
	27	2916-2702 2871.55	3016-2702 3248.12	3316-2702P 3925.54

30° Elbow (Socket)

	6	290-100474 50.27	300-100474 52.76	3315-060P 67.48
	8	290-100475 76.09	300-100475 92.00	3315-080P 113.92
	10	290-100476 117.73	300-100476 138.62	3315-100P 172.42
	12	290-100477 169.27	300-100477 206.12	3315-120P 228.61
	15	290-100478 267.44	300-100478 320.22	3315-150P 396.27
	18	290-100479 436.78	300-100479 533.71	3315-180P 668.65
	21	290-100481 706.72	300-100481 861.34	3315-210P 1084.60
	24	290-100482 2015.89	300-100482 2343.47	3315-240P 2460.04
	27	2915-270 2221.92	3015-270 2499.78	3315-270P 2753.83

30° Elbow (Gasket x Spigot)

	6	290-100546 122.65	300-100546 141.09	3315-06023P 168.47
	8	290-100547 184.02	300-100547 199.97	3315-08023P 237.75
	10	290-100548 258.84	300-100548 287.08	3315-10023P 336.21
	12	290-100549 348.45	300-100549 408.57	3315-12023P 480.14
	15	290-100550 709.17	300-100550 826.96	3315-15023P 923.86
	18	290-100551 996.25	300-100551 1171.69	3315-18023P 1464.93
	21	290-100553 1484.59	300-100553 1268.36	3315-21023P 2085.81
	24	2915-24023 2381.81	3015-24023 3266.20	3315-24023P 3383.18

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

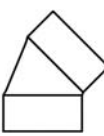
30° Elbow (Gasket x Spigot) (continued)

	27	2915-27023 3217.97	3015-27023 3755.29	3315-27023P 4397.72
---	----	-----------------------	-----------------------	------------------------

30° Elbow (Gasketed)

	6	290-100570 122.65	300-100570 141.09	3315-0602P 168.47
	8	290-100571 184.02	300-100571 199.97	3315-0802P 237.75
	10	290-100572 258.84	300-100572 287.08	3315-1002P 336.21
	12	290-100573 348.45	300-100573 408.57	3315-1202P 480.14
	15	290-100574 709.17	300-100574 826.96	3315-1502P 923.86
	18	290-100575 996.25	300-100575 1171.69	3315-1802P 1464.93
	21	290-100577 1484.59	300-100577 1268.36	3315-2102P 2085.81
	24	2915-2402 2382.07	3015-2402 3266.20	3315-2402P 3383.18
	27	2915-2702 3217.97	3015-2702 3755.29	3315-2702P 4397.72

45° Elbow (Socket)

	6	290-100592 50.27	300-100592 52.76	3317-060P 67.51
	8	290-100593 76.09	300-100593 92.00	3317-080P 113.92
	10	290-100594 117.73	300-100594 138.62	3317-100P 172.42
	12	290-100595 169.27	300-100595 206.12	3317-120P 228.61
	15	290-100596 267.44	300-100596 320.22	3317-150P 396.27
	18	290-100597 436.78	300-100597 533.71	3317-180P 668.65
	21	290-100599 706.72	300-100599 861.34	3317-210P 1084.60
	24	290-100600 2015.89	300-100600 2343.47	3317-240P 2460.04
	27	2917-270 2221.92	3017-270 2499.78	3317-270P 2753.83

45° Elbow (Gasket x Spigot)

	6	290-100658 122.65	300-100658 141.09	3317-06023P 168.47
	8	290-100659 184.02	300-100659 199.97	3317-08023P 237.75
	10	290-100660 258.84	300-100660 287.08	3317-10023P 336.21
	12	290-100661 348.45	300-100661 408.57	3317-12023P 480.14
	15	290-100662 709.17	300-100662 826.96	3317-15023P 923.86
	18	290-100663 996.25	300-100663 1171.69	3317-18023P 1464.93
	21	290-100665 1484.59	300-100665 1268.36	3317-21023P 2085.81
	24	2917-24023 2382.07	3017-24023 3266.20	3317-24023P 3383.18
	27	2917-27023 3217.97	3017-27023 3755.29	3317-27023P 4397.72

45° Elbow (Gasketed)

	6	290-100680 122.65	300-100680 141.09	3317-0602P 168.47
	8	290-100681 184.02	300-100681 199.97	3317-0802P 237.75
	10	290-100682 258.84	300-100682 287.08	3317-1002P 336.21
	12	290-100683 348.45	300-100683 408.57	3317-1202P 480.14

Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

45° Elbow (Gasketed) (continued)

	15	290-100684 709.17	300-100684 826.96	3317-1502P 923.86
	18	290-100685 996.25	300-100685 1171.69	3317-1802P 1464.93
	21	290-100687 1484.59	300-100687 1765.59	3317-2102P 2085.81
	24	2917-2402 2382.07	3017-2402 3266.20	3317-2402P 3383.18
	27	2917-2702 3217.97	3017-2702 3755.29	3317-2702P 4397.72

60° Elbow (Socket)

	6	290-100702 121.46	300-100702 142.33	3324-060P 176.45
	8	290-100703 164.40	300-100703 224.55	3324-080P 256.01
	10	290-100704 269.93	300-100704 316.54	3324-100P 353.34
	12	290-100705 347.17	300-100705 444.11	3324-120P 459.67
	15	290-100706 579.12	300-100706 688.32	3324-150P 787.68
	18	290-100707 871.11	300-100707 1025.67	3324-180P 1348.39
	21	290-100709 1363.12	300-100709 1652.67	3324-210P 2030.60
	24	290-100710 3046.54	300-100710 3633.02	3324-240P 3826.83
	27	2924-270 3245.43	3024-270 3853.56	3324-270P 4260.29

60° Elbow (Gasket x Spigot)

	6	290-100768 147.18	300-100768 159.47	3324-06023P 234.72
	8	290-100769 233.13	300-100769 255.17	3324-08023P 304.95
	10	290-100770 347.17	300-100770 393.81	3324-10023P 471.04
	12	290-100771 472.38	300-100771 559.47	3324-12023P 677.71
	15	290-100772 905.48	300-100772 1143.51	3324-15023P 1289.53
	18	290-100773 1518.94	300-100773 1758.20	3324-18023P 1787.67
	21	290-100775 2201.15	300-100775 2639.19	3324-21023P 3187.65
	24	2924-24023 3513.18	3024-24023 3992.52	3324-24023P 4992.22
	27	2924-27023 4767.00	3024-27023 5521.54	3324-27023P 6563.63

60° Elbow (Gasketed)

	6	290-100790 147.18	300-100790 159.47	3324-0602P 234.72
	8	290-100791 233.13	300-100791 255.17	3324-0802P 304.95
	10	290-100792 347.17	300-100792 393.81	3324-1002P 471.04
	12	290-100793 472.38	300-100793 559.47	3324-1202P 677.71
	15	290-100794 905.48	300-100794 1143.51	3324-1502P 1289.53
	18	290-100795 1518.94	300-100795 1758.20	3324-1802P 1787.67
	21	290-100797 2201.15	300-100797 2639.19	3324-2102P 3187.65
	24	2924-2402 3513.18	3024-2402 3992.52	3324-2402P 4992.22
	27	2924-2702 4767.00	3024-2702 5521.54	3324-2702P 6563.63

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Repair Coupling (Gasketed)

	6	2928-060 98.24	3028-060 111.63	3328-060P 127.58
	8	2928-080 137.62	3028-080 158.24	3328-080P 190.12
	10	2928-100 237.58	3028-100 254.00	3328-100P 299.59
	12	2928-120 331.39	3028-120 348.45	3328-120P 414.85
	15	2928-150 494.45	3028-150 519.02	3328-150P 628.17
	18	2928-180 823.82	3028-180 949.65	3328-180P 1307.73
	21	2928-210 1138.33	3028-210 1366.62	3328-210P 1837.55
	24	2928-240 1578.09	3028-240 1894.93	3328-240P 2570.13
	27	2928-270 2021.01	3028-270 2522.91	3328-270P 3211.64

Coupling (Socket)

	6	290-100002 29.44	300-100002 33.15	3329-060P 43.92
	8	290-100003 36.79	300-100003 45.36	3329-080P 55.85
	10	290-100004 61.33	300-100004 72.39	3329-100P 89.37
	12	290-100005 92.00	300-100005 111.63	3329-120P 145.09
	15	290-100006 139.85	300-100006 191.37	3329-150P 217.99
	18	290-100007 320.22	300-100007 402.44	3329-180P 490.69
	21	290-100009 425.73	300-100009 703.03	3329-210P 793.75
	24	290-100010 747.17	300-100010 937.36	3329-240P 954.62
	27	2929-270 905.76	3029-270 1128.48	3329-270P 1743.17
	30	2929-300 1187.95	3029-300 1832.56	---

Coupling (Gasket x Spigot)

	6	290-100068 61.33	300-100068 65.01	3329-06023P 81.35
	8	290-100069 93.20	300-100069 100.59	3329-08023P 128.77
	10	290-100070 138.62	300-100070 147.18	3329-10023P 191.23
	12	290-100071 170.51	300-100071 199.97	3329-12023P 250.99
	15	290-100072 263.75	300-100072 398.72	3329-15023P 463.79
	18	290-100073 442.92	300-100073 539.85	3329-18023P 610.22
	21	290-100075 647.83	300-100075 837.99	3329-21023P 929.94
	24	2929-24023 791.36	3029-24023 1053.89	3329-24023P 1316.86
	27	2929-27023 1027.62	3029-27023 1284.38	3329-27023P 1605.76

Coupling (Gasketed)

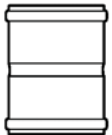
	6	290-100090 73.61	300-100090 82.16	3329-0602P 106.32
	8	290-100091 134.95	300-100091 152.28	3329-0802P 174.62
	10	290-100092 172.69	300-100092 193.84	3329-1002P 256.74
	12	290-100093 217.18	300-100093 283.68	3329-1202P 285.58
	15	290-100094 349.64	300-100094 521.42	3329-1502P 542.26
	18	290-100095 584.00	300-100095 615.94	3329-1802P 770.05
	21	290-100097 730.02	300-100097 996.25	3329-2102P 1133.41



Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Coupling (Gasketed) (continued)

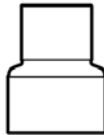
	24	2929-2402 1225.75	3029-2402 1326.19	3329-2402P 1591.69
	27	2929-2702 1412.60	3029-2702 1657.74	3329-2702P 2073.12

Reducer Coupling (Socket)

	6X2	2929-528 62.74	3029-528 111.20	---
	6X2-1/2	---	3029-529 92.82	---
	6X3	---	3029-530 96.87	---
	6X4	2929-532 36.24	3029-532 40.48	3329-532P 43.17
	8X2	2929-578 156.55	---	---
	8X2-1/2	---	3029-579 161.92	---
	8X3	---	3029-580 169.72	---
	8X4	2929-582 103.05	300-100927 110.57	3329-582P 128.64
	8X6	2929-585 53.65	300-100928 62.58	3329-585P 72.54
	10X2	2929-621 185.06	3029-621 227.92	---
	10X2-1/2	---	3029-622 187.26	---
	10X3	---	3029-623 133.67	---
	10X4	2929-624 141.76	3029-624 164.38	3329-624P 180.64
	10X6	2929-626 117.21	300-100930 128.77	3329-626P 126.52
	10X8	2929-628 73.69	300-100931 85.85	3329-628P 160.42
	12X2	---	3029-661 455.60	---
	12X2-1/2	---	3029-662 311.31	---
	12X3	---	3029-663 281.94	---
	12X4	2929-664 203.46	3029-664 212.21	3329-664P 309.44
	12X6	2929-666 186.56	300-100933 198.77	3329-666P 286.61
	12X8	2929-668 130.00	300-100934 137.79	3329-668P 250.87
	12X10	2929-670 107.36	300-100935 123.91	3329-670P 236.67
	15X2	2929-721 464.68	---	---
	15X3	2929-723 422.94	3029-723 487.43	---
	15X4	2929-724 438.67	3029-724 469.40	3329-724P 556.32
	15X6	2929-726 414.73	3029-726 443.76	3329-726P 482.86
	15X8	2929-728 389.20	3029-728 420.35	3329-728P 453.02
	15X10	2929-730 268.53	3029-730 336.16	3329-730P 365.64
	15X12	2929-732 173.34	300-100940 199.97	3329-732P 344.96
	18X4	2929-784 853.66	3029-784 958.60	3329-784P 1015.27
	18X6	2929-786 889.07	3029-786 937.97	3329-786P 994.15
	18X8	2929-788 819.58	3029-788 868.76	3329-788P 929.58
18X10	2929-790 527.42	3029-790 568.67	3329-790P 642.64	

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Reducer Coupling (Socket) (continued)

	18X12	2929-792 517.04	3029-792 534.17	3329-792P 605.64
	18X15	2929-795 310.71	300-100946 364.38	3329-795P 442.92
	21X3	2929-843 1060.92	---	---
	21X4	2929-844 1084.28	3029-844 1142.83	3329-844P 1234.27
	21X6	2929-846 1038.74	3029-846 1101.05	3329-846P 1172.63
	21X8	2929-848 866.92	3029-848 910.63	3329-848P 934.56
	21X10	2929-850 803.05	3029-850 848.03	3329-850P 876.77
	21X12	2929-852 808.61	3029-852 776.64	3329-852P 823.25
	21X15	2929-855 711.96	3029-855 754.59	3329-855P 904.83
	21X18	2929-858 428.55	300-100960 501.79	3329-858P 629.44
	24X3	2929-903 1684.06	3029-903 1016.94	---
	24X6	2929-906 1719.93	3029-906 1834.22	3329-906P 1999.29
	24X8	2929-908 1631.80	3029-908 1711.24	3329-908P 1804.79
	24X10	2929-910 1553.34	3029-910 1637.21	3329-910P 1758.00
	24X12	2929-912 1359.62	3029-912 1440.82	3329-912P 1538.79
	24X15	2929-915 989.16	3029-915 1068.29	3329-915P 1081.53
	24X18	2929-918 938.59	3029-918 1004.28	3329-918P 1072.17
	24X20	---	3029-920 1380.34	---
	24X21	2929-921 635.31	300-100969 738.60	3329-921P 898.09
	27X6	2929-936 2236.27	3029-936 2387.36	3329-936P 2578.36
	27X8	2929-938 2080.05	3029-938 2257.80	3329-938P 2411.02
	27X10	2929-940 1950.16	3029-940 2077.73	3329-940P 2220.99
	27X12	2929-942 1832.18	3029-942 1942.12	3329-942P 2097.17
	27X15	2929-945 1443.26	3029-945 1542.17	3329-945P 1645.57
	27X18	2929-948 1353.89	3029-948 1448.05	3329-948P 1524.12
	27X21	2929-951 1122.86	3029-951 1344.85	3329-951P 1437.85
	27X24	2929-954 873.35	3029-954 1089.17	3329-954P 1358.20
	30X18	2929-978 2702.25	3029-978 3375.63	---
	30X21	---	3029-981 2847.40	---
	30X24	2929-984 2022.41	3029-984 2539.97	---
	30X27	2929-987 2006.92	3029-987 2160.51	---

Reducer Coupling (Gasket x Spigot)

	6X4	2929-53223 87.36	300-101310 89.55	3329-53223P 127.69
	8X4	2929-58223 198.41	300-100927 110.57	3329-58223P 247.40
	8X6	2929-58523 105.15	300-101312 127.58	3329-58523P 165.67
	10X4	2929-62423 290.01	3029-62423 316.12	3329-62423P 347.38
	10X6	2929-62623 225.41	300-100930 128.77	3329-62623P 282.65

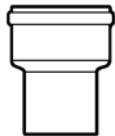
Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Reducer Coupling (Gasket x Spigot) (continued)

10X8	2929-62823 171.39	300-101315 184.02	3329-62823P 253.20
12X4	2929-66423 391.26	3029-66423 408.09	3329-66423P 572.17
12X6	2929-66623 358.76	300-100933 198.77	3329-66623P 551.16
12X8	2929-66823 249.99	300-100934 137.79	3329-66823P 482.45
12X10	2929-67023 240.05	300-101319 269.93	3329-67023P 329.66
15X4	2929-72423 843.62	3029-72423 902.68	3329-72423P 1138.13
15X6	2929-72623 797.55	3029-72623 853.38	3329-72623P 872.87
15X8	2929-72823 748.47	3029-72823 808.37	3329-72823P 858.23
15X10	2929-73023 516.38	3029-73023 646.46	3329-73023P 749.65
15X12	2929-73223 412.58	300-101324 449.05	3329-73223P 579.58
18X4	2929-78423 1746.44	3029-78423 1843.46	3329-78423P 1952.44
18X6	2929-78623 1709.75	3029-78623 1803.79	3329-78623P 1911.80
18X8	2929-78823 1575.99	3029-78823 1670.67	3329-78823P 1787.64
18X10	2929-79023 1014.26	3029-79023 1093.62	3329-79023P 1235.85
18X12	2929-79223 994.33	3029-79223 1027.24	3329-79223P 1164.69
18X15	2929-79523 726.66	300-101330 853.97	3329-79523P 885.82
21X6	2929-84623 1997.56	3029-84623 2117.48	3329-84623P 2255.06
21X8	2929-84823 1733.84	3029-84823 1750.52	3329-84823P 1797.23
21X10	2929-85023 1544.35	3029-85023 1630.82	3329-85023P 1686.08
21X12	2929-85223 1436.22	3029-85223 1493.54	3329-85223P 1583.17
21X15	2929-85523 1369.15	3029-85523 1451.15	3329-85523P 1541.57
21X18	2929-85823 1076.09	300-101344 1364.54	3329-85823P 1455.14
24X6	2929-90623 3307.55	3029-90623 3527.34	3329-90623P 3844.22
24X8	2929-90823 3138.08	3029-90823 3290.84	3329-90823P 3470.75
24X10	2929-91023 2987.18	3029-91023 3147.78	3329-91023P 3380.76
24X12	2929-91223 2614.64	3029-91223 2769.77	3329-91223P 2959.20
24X15	2929-91523 1902.23	3029-91523 2054.42	3329-91523P 2689.13
24X18	2929-91823 1804.97	3029-91823 2026.63	3329-91823P 2559.72
24X21	2929-92123 1605.79	3029-92123 1992.56	3329-92123P 2440.59
27X6	2929-93623 4300.52	3029-93623 4591.08	3329-93623P 4957.64
27X8	2929-93823 3999.88	3029-93823 4341.37	3329-93823P 4634.60
27X10	2929-94023 3750.31	3029-94023 4007.35	3329-94023P 4270.36
27X12	2929-94223 3521.21	3029-94223 3734.26	3329-94223P 4032.09
27X15	2929-94523 2774.36	3029-94523 2964.51	3329-94523P 3521.21
27X18	2929-94823 2595.66	3029-94823 2783.52	3329-94823P 3405.93
27X21	2929-95123 2295.54	3029-95123 2584.20	3329-95123P 3358.55
27X24	2929-95423 2247.96	3029-95423 2826.59	3329-95423P 3323.27



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Reducer Coupling (Spigot x Gasket)

6X4	2929-53232 83.20	300-101383 86.25	3329-53232P 110.99
8X4	2929-58232 190.48	3029-58232 204.15	3329-58232P 237.51
8X6	2929-58532 100.95	300-101385 120.20	3329-58532P 128.27
10X4	2929-62432 278.41	3029-62432 303.47	3329-62432P 333.49
10X6	2929-62632 216.38	3029-62632 237.74	3329-62632P 271.36
10X8	2929-62832 158.63	300-101388 179.34	3329-62832P 229.05
12X4	2929-66432 375.62	3029-66432 391.77	3329-66432P 549.28
12X6	2929-66632 344.40	3029-66632 366.97	3329-66632P 529.11
12X8	2929-66832 240.00	3029-66832 277.26	3329-66832P 463.05
12X10	2929-67032 229.49	300-101392 254.00	3329-67032P 323.96
15X4	2929-72432 809.86	3029-72432 866.57	3329-72432P 1092.61
15X6	2929-72632 765.64	3029-72632 819.26	3329-72632P 891.44
15X8	2929-72832 718.55	3029-72832 776.03	3329-72832P 823.89
15X10	2929-73032 495.62	3029-73032 620.59	3329-73032P 719.66
15X12	2929-73232 337.00	300-101397 392.63	3329-73232P 557.00
18X4	2929-78432 1676.59	3029-78432 1769.72	3329-78432P 1874.35
18X6	2929-78632 1641.35	3029-78632 1731.62	3329-78632P 1835.34
18X8	2929-78832 1512.95	3029-78832 1603.84	3329-78832P 1716.14
18X10	2929-79032 973.45	3029-79032 1049.86	3329-79032P 1186.42
18X12	2929-79232 954.54	3029-79232 986.16	3329-79232P 1118.11
18X15	2929-79532 660.74	300-101403 759.46	3329-79532P 852.76
21X6	2929-84632 1917.66	3029-84632 2032.79	3329-84632P 2164.85
21X8	2929-84832 1664.48	3029-84832 1680.49	3329-84832P 1773.22
21X10	2929-85032 1458.75	3029-85032 1565.58	3329-85032P 1618.64
21X12	2929-85232 1378.79	3029-85232 1433.80	3329-85232P 1518.66
21X15	2929-85532 1314.38	3029-85532 1392.96	3329-85532P 1479.87
21X18	2929-85832 1015.26	300-101417 1144.72	3329-85832P 1328.80
24X6	2929-90632 3175.24	3029-90632 3386.24	3329-90632P 3690.55
24X8	2929-90832 3012.56	3029-90832 3159.20	3329-90832P 3331.92
24X10	2929-91032 2867.69	3029-91032 3021.87	3329-91032P 3245.66
24X12	2929-91232 2510.31	3029-91232 2658.98	3329-91232P 2840.82
24X15	2929-91532 1826.41	3029-91532 1973.86	3329-91532P 2581.57
24X18	2929-91832 1732.77	3029-91832 1945.56	3329-91832P 2456.55
24X21	2929-92132 1580.17	3029-92132 1902.99	3329-92132P 2116.43
27X6	2929-93632 4128.48	3029-93632 4407.61	3329-93632P 4759.34
27X8	2929-93832 3839.89	3029-93832 4167.44	3329-93832P 4445.21
27X10	2929-94032 3600.20	3029-94032 3847.06	3329-94032P 4099.54

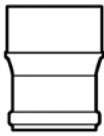




Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Reducer Coupling (Spigot x Gasket) (continued)

	27X12	2929-94232 3380.36	3029-94232 3584.91	3329-94232P 3870.82
	27X15	2929-94532 2663.56	3029-94532 2845.92	3329-94532P 3379.47
	27X18	2929-94832 2491.83	3029-94832 2672.18	3329-94832P 3269.68
	27X21	2929-95132 2203.71	3029-95132 2480.83	3329-95132P 3030.51
	27X24	2929-95432 2208.33	3029-95432 2644.97	3329-95432P 3189.63

Reducer Coupling (Gasketed)

	6X4	2929-5322 101.18	300-101456 120.20	3329-5322P 152.82
	8X4	2929-5822 226.66	3029-5822 242.94	3329-5822P 282.62
	8X6	2929-5852 127.97	300-101458 158.24	3329-5852P 196.69
	10X4	2929-6242 331.29	3029-6242 361.13	3329-6242P 395.51
	10X6	2929-6262 257.91	3029-6262 282.92	3329-6262P 322.93
	10X8	2929-6282 224.53	300-101461 254.00	3329-6282P 317.47
	12X4	2929-6642 446.99	3029-6642 466.41	3329-6642P 653.65
	12X6	2929-6662 409.84	3029-6662 436.69	3329-6662P 629.64
	12X8	2929-6682 334.02	3029-6682 389.87	3329-6682P 551.03
	12X10	2929-6702 301.62	300-101465 348.45	3329-6702P 438.95
	15X4	2929-7242 964.94	3029-7242 1031.35	3329-7242P 1300.27
	15X6	2929-7262 911.12	3029-7262 974.92	3329-7262P 1061.81
	15X8	2929-7282 855.06	3029-7282 923.48	3329-7282P 980.43
	15X10	2929-7302 589.69	3029-7302 719.88	3329-7302P 856.41
	15X12	2929-7322 444.96	300-101470 506.71	3329-7322P 633.08
	18X4	2929-7842 1994.62	3029-7842 2105.94	3329-7842P 2229.96
	18X6	2929-7862 1953.20	3029-7862 2060.64	3329-7862P 2184.05
	18X8	2929-7882 1800.41	3029-7882 1908.58	3329-7882P 2042.23
	18X10	2929-7902 1158.40	3029-7902 1249.34	3329-7902P 1411.83
	18X12	2929-7922 1135.85	3029-7922 1173.53	3329-7922P 1331.17
	18X15	2929-7952 794.96	300-101476 885.82	3329-7952P 1012.20
	21X6	2929-8462 2281.98	3029-8462 2419.01	3329-8462P 2576.17
	21X8	2929-8482 1980.74	3029-8482 1998.88	3329-8482P 2109.45
	21X10	2929-8502 1735.92	3029-8502 1862.79	3329-8502P 1926.59
	21X12	2929-8522 1640.77	3029-8522 1706.22	3329-8522P 1807.51
	21X15	2929-8552 1563.66	3029-8552 1657.22	3329-8552P 1760.72
	21X18	2929-8582 1301.41	300-101489 1392.60	3329-8582P 1549.64
	24X6	2929-9062 3778.03	3029-9062 4030.37	3329-9062P 4390.45
	24X8	2929-9082 3585.23	3029-9082 3759.45	3329-9082P 3964.98
	24X10	2929-9102 3412.27	3029-9102 3595.15	3329-9102P 3861.67
	24X12	2929-9122 2986.98	3029-9122 3164.19	3329-9122P 3381.08

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

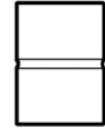
Reducer Coupling (Gasketed) (continued)

	24X15	2929-9152 2173.25	3029-9152 2348.89	3329-9152P 3072.04
	24X18	2929-9182 2122.01	3029-9182 2315.02	3329-9182P 2923.18
	24X21	2929-9212 2097.08	3029-9212 2289.48	3329-9212P 2902.71
	27X6	2929-9362 4913.56	3029-9362 5202.76	3329-9362P 5663.49
	27X8	2929-9382 4570.49	3029-9382 4958.93	3329-9382P 5289.24
	27X10	2929-9402 4284.12	3029-9402 4577.58	3329-9402P 4878.12
	27X12	2929-9422 4021.82	3029-9422 4265.69	3329-9422P 4605.94
	27X15	2929-9452 3169.85	3029-9452 3385.34	3329-9452P 4020.45
	27X18	2929-9482 2964.31	3029-9482 3179.78	3329-9482P 3890.02
	27X21	2929-9512 2741.77	3029-9512 3070.28	3329-9512P 3836.15
	27X24	2929-9542 2644.95	3029-9542 2935.37	3329-9542P 3740.96

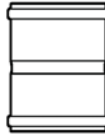
PIP X IPS Reducer (Socket)

	6X4	2929-532 36.24	---	---
	8X6	---	300-101537 47.82	---
	10X6	---	3029-626PXI 147.37	---
	10X8	---	300-101538 108.75	---
	12X10	---	300-101539 131.24	---
	15X10	---	300-101541 331.26	---
	15X12	---	300-101540 225.75	---

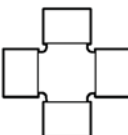
IPS X PIP Adapter (Socket)

	6	---	300-101649 39.23	---
	8	---	300-101650 56.39	---
	10	---	300-101651 94.48	---
	12	---	300-101652 147.18	---

IPS X PIP Adapter (Gasketed)

	6	---	300-101747 95.66	---
	8	---	300-101748 156.15	---
	10	---	300-101749 224.58	---
	12	---	300-101750 316.54	---

Cross (Socket)

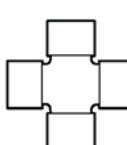
	6	290-103286 101.82	300-103286 141.09	3320-060P 175.58
	6X2	290-103283 77.27	300-103283 89.55	3320-528P 109.28
	6X3	290-103284 84.66	300-103284 100.59	3320-530P 118.02
	6X4	290-103285 92.00	300-103285 107.94	3320-532P 124.01
	8	290-103291 172.97	300-103291 206.12	3320-080P 254.14
	8X2	290-103287 95.66	300-103287 115.28	3320-578P 132.56
	8X3	290-103288 104.24	300-103288 126.35	3320-580P 148.58
	8X4	290-103289 111.63	300-103289 134.95	3320-582P 168.12

Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



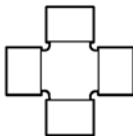
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Cross (Socket) (continued)

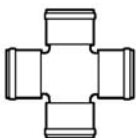
	8X6	290-103290 130.04	300-103290 155.83	3320-585P 192.71
	10	290-103297 293.21	300-103297 354.58	3320-100P 411.99
	10X2	290-103292 147.18	300-103292 153.36	3320-621P 171.88
	10X3	290-103293 158.24	300-103293 179.06	3320-623P 194.53
	10X4	290-103294 176.69	300-103294 191.37	3320-624P 236.41
	10X6	290-103295 199.97	300-103295 214.68	3320-626P 264.92
	10X8	290-103296 234.31	300-103296 261.29	3320-628P 323.76
	12	290-103304 455.16	300-103304 536.17	3320-120P 662.04
	12X2	290-103298 220.85	300-103298 225.75	3320-661P 285.98
	12X3	290-103299 244.14	300-103299 246.62	3320-663P 311.48
	12X4	290-103300 249.05	300-103300 269.93	3320-664P 333.67
	12X6	290-103301 267.44	300-103301 296.92	3320-666P 367.91
	12X8	290-103302 311.61	300-103302 345.99	3320-668P 378.88
	12X10	290-103303 366.82	300-103303 417.15	3320-670P 514.80
	15	290-103321 761.92	300-103321 923.86	3320-150P 1177.87
	15X2	290-103313 311.61	300-103313 352.11	3320-721P 411.01
	15X3	290-103314 316.54	300-103314 373.00	3320-723P 449.05
	15X4	290-103315 331.26	300-103315 381.59	3320-724P 466.20
	15X6	290-103316 364.38	300-103316 422.05	3320-726P 483.40
	15X8	290-103317 430.69	300-103317 483.40	3320-728P 660.09
	15X10	290-103318 498.12	300-103318 601.16	3320-730P 799.95
	15X12	290-103319 586.47	300-103319 703.03	3320-732P 914.01
	18	290-103342 1318.97	300-103342 1494.43	3320-180P 1904.21
	18X2	290-103332 466.20	300-103332 545.97	3320-781P 711.58
	18X3	290-103333 478.49	300-103333 571.75	3320-783P 750.88
	18X4	290-103334 495.68	300-103334 584.00	3320-784P 797.46
	18X6	290-103335 531.23	300-103335 630.63	3320-786P 879.68
	18X8	290-103336 588.91	300-103336 689.54	3320-788P 996.25
	18X10	290-103337 650.25	300-103337 747.17	3320-790P 1143.51
	18X12	290-103338 759.46	300-103338 923.86	3320-792P 1295.65
	18X15	290-103340 920.20	300-103340 1201.20	3320-795P 1538.60
	21	290-103367 1947.19	300-103367 2461.23	3320-210P 2929.97
	21X2	290-103355 711.58	300-103355 907.92	3320-841P 932.46
	21X3	290-103356 742.28	300-103356 956.99	3320-843P 1055.17
	21X4	290-103357 785.22	300-103357 996.25	3320-844P 1177.87
	21X6	290-103358 835.49	300-103358 1055.17	3320-846P 1272.29
21X8	290-103359 903.01	300-103359 1143.51	3320-848P 1406.08	

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Cross (Socket) (continued)

	21X10	290-103360 976.61	300-103360 1260.05	3320-850P 1553.32
	21X12	290-103361 1093.20	300-103361 1406.08	3320-852P 1728.78
	21X15	290-103363 1253.93	300-103363 1640.42	3320-855P 1992.56
	21X18	290-103365 1502.99	300-103365 1963.12	3320-858P 2431.81
	24	290-103381 2783.93	300-103381 3280.85	3320-240P 4511.54
	24X2	290-103368 981.54	300-103368 1177.87	3320-901P 1226.94
	24X3	290-103369 1030.59	300-103369 1226.94	3320-903P 1282.16
	24X4	290-103370 1093.20	300-103370 1289.53	3320-904P 1348.39
	24X6	290-103371 1186.43	300-103371 1374.16	3320-906P 1435.54
	24X8	290-103372 1260.05	300-103372 1494.43	3320-908P 1582.75
	24X10	290-103373 1348.39	300-103373 1612.21	3320-910P 1758.20
	24X12	290-103374 1464.93	300-103374 1787.67	3320-912P 1933.69
	24X15	290-103376 1758.20	300-103376 2022.00	3320-915P 2197.47
	24X18	290-103378 1992.56	300-103378 2343.47	3320-918P 2636.73
	24X21	290-103380 2372.92	300-103380 2783.93	3320-921P 3193.74
	27	2920-270 4215.02	3020-270 4967.07	3320-270P 6456.02
	27X4	2920-934 1246.62	3020-934 1561.47	3320-934P 2029.38
	27X6	2920-936 1438.81	3020-936 1666.69	3320-936P 2168.18
	27X8	2920-938 1527.60	3020-938 1811.69	3320-938P 2355.95
	27X10	2920-940 1632.80	3020-940 1953.22	3320-940P 2539.85
	27X12	2920-942 1774.16	3020-942 2165.78	3320-942P 2815.11
	27X15	2920-945 2129.36	3020-945 2449.77	3320-945P 3184.38
	27X18	2920-948 2412.35	3020-948 2839.00	3320-948P 3675.84
	27X21	2920-951 2875.19	3020-951 3371.97	3320-951P 4385.44
	27X24	2920-954 3371.93	3020-954 3973.74	3320-954P 5164.61

Cross (Gasketed)

	6	290-104001 245.32	300-104001 252.69	3320-0602P 303.23
	6X4	290-104000 227.32	300-104000 233.13	3320-5322P 260.82
	8	290-104006 343.53	300-104006 364.38	3320-0802P 438.25
	8X4	290-104004 273.45	300-104004 282.15	3320-5822P 352.88
	8X6	290-104005 311.24	300-104005 318.99	3320-5852P 379.64
	10	290-104012 510.38	300-104012 512.84	3320-1002P 604.24
	10X4	290-104009 364.06	300-104009 368.07	3320-6242P 433.96
	10X6	290-104010 398.72	300-104010 411.01	3320-6262P 458.31
	10X8	290-104011 427.60	300-104011 460.11	3320-6282P 515.01
	12	290-104019 732.51	300-104019 761.92	3320-1202P 916.42
	12X4	290-104015 441.69	300-104015 472.38	3320-6642P 600.67

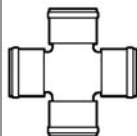


Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Cross (Gasketed) (continued)

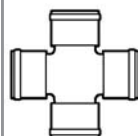
12X6	290-104016 478.49	300-104016 515.27	3320-6662P 639.71
12X8	290-104017 539.85	300-104017 588.91	3320-6682P 656.60
12X10	290-104018 625.72	300-104018 662.58	3320-6702P 777.35
15	290-104036 1143.51	300-104036 1318.97	3320-1502P 1656.36
15X4	290-104030 662.58	300-104030 834.32	3320-7242P 886.45
15X6	290-104031 711.58	300-104031 889.52	3320-7262P 923.18
15X8	290-104032 797.46	300-104032 950.86	3320-7282P 981.54
15X10	290-104033 920.20	300-104033 1042.91	3320-7302P 1104.26
15X12	290-104034 977.92	300-104034 1165.60	3320-7322P 1318.97
18	290-104057 1758.20	300-104057 1992.56	3320-1802P 2515.26
18X4	290-104049 981.54	300-104049 1104.26	3320-7842P 1128.76
18X6	290-104050 1067.42	300-104050 1226.94	3320-7862P 1282.45
18X8	290-104051 1202.40	300-104051 1349.63	3320-7882P 1368.99
18X10	290-104052 1288.28	300-104052 1472.36	3320-7902P 1524.79
18X12	290-104053 1411.01	300-104053 1595.01	3320-7922P 1668.69
18X15	2920-7952 1614.22	3020-7952 1814.67	3320-7952P 2143.55
21	290-104082 2910.36	300-104082 3875.43	3320-2102P 4101.00
21X4	290-104072 1570.49	300-104072 2657.15	3320-8442P 3147.16
21X6	290-104073 1680.88	300-104073 2760.37	3320-8462P 3212.73
21X8	290-104074 1840.40	300-104074 2879.75	3320-8482P 3356.98
21X10	290-104075 2024.46	300-104075 3045.68	3320-8502P 3435.63
21X12	290-104076 2269.87	300-104076 3212.21	3320-8522P 3593.00
21X15	290-104078 2515.26	300-104078 3359.35	3320-8552P 3615.11
21X18	290-104080 2699.29	300-104080 3709.48	3320-8582P 3804.26
24	2920-2402 5516.67	3020-2402 6595.12	3320-2402P 8222.40
24X4	2920-9042 2877.74	3020-9042 3199.51	3320-9042P 3998.76
24X6	2920-9062 2889.88	3020-9062 3230.39	3320-9062P 4014.24
24X8	2920-9082 3120.58	3020-9082 3468.63	3320-9082P 4334.80
24X10	2920-9102 3377.53	3020-9102 3751.98	3320-9102P 4688.87
24X12	2920-9122 3634.61	3020-9122 4037.34	3320-9122P 5045.31
24X15	2920-9152 4211.38	3020-9152 4678.82	3320-9152P 5848.73
24X18	2920-9182 4652.59	3020-9182 5168.58	3320-9182P 6461.76
24X21	2920-9212 5350.72	3020-9212 5945.69	3320-9212P 7431.11
27	2920-2702 7673.88	3020-2702 11029.28	3320-2702P 13751.19
27X4	2920-9342 3382.29	3020-9342 4000.89	3320-9342P 4998.58
27X6	2920-9362 3630.57	3020-9362 4016.54	3320-9362P 5071.82
27X8	2920-9382 3891.62	3020-9382 4336.81	3320-9382P 5421.37



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

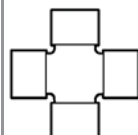
Cross (Gasketed) (continued)

27X10	2920-9402 4221.51	3020-9402 4688.98	3320-9402P 5862.76
27X12	2920-9422 4543.27	3020-9422 5049.19	3320-9422P 6310.13
27X15	2920-9452 5263.71	3020-9452 5848.56	3320-9452P 7311.73
27X18	2920-9482 5816.17	3020-9482 6461.76	3320-9482P 8075.85
27X21	2920-9512 6688.39	3020-9512 7431.11	3320-9512P 9290.89
27X24	2920-9542 7240.95	3020-9542 8222.56	3320-9542P 10278.47



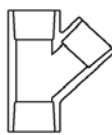
PIP X IPS Cross (Socket)

6	2920-060PXI 101.82	3020-060PXI 141.09	3320-060PXI 175.58
8	2920-080PXI 172.97	3020-080PXI 206.12	3320-080PXI 254.14
8X6	2920-585PXI 122.24	3020-585PXI 155.83	3320-585PXI 192.71
10	2920-100PXI 293.21	3020-100PXI 354.58	3320-100PXI 411.99
10X6	2920-626PXI 187.97	300-103700 214.68	3320-626PXI 249.02
10X8	2920-628PXI 220.24	3020-628PXI 291.83	3320-628PXI 304.34
12	2920-120PXI 455.16	3020-120PXI 536.17	3320-120PXI 662.04
12X6	2920-666PXI 267.44	3020-666PXI 296.92	3320-666PXI 345.83
12X8	2920-668PXI 311.61	3020-668PXI 345.99	3320-668PXI 729.43
12X10	2920-670PXI 344.81	3020-670PXI 417.15	3320-670PXI 483.92
15X6	2920-726PXI 342.52	3020-726PXI 422.05	3320-726PXI 454.40
15X8	2920-728PXI 404.85	3020-728PXI 483.40	3320-728PXI 620.48
15X10	2920-730PXI 468.23	3020-730PXI 601.16	3320-730PXI 751.95
15X12	2920-732PXI 551.28	3020-732PXI 703.03	3320-732PXI 859.17
18X6	2920-786PXI 531.23	3020-786PXI 630.63	3320-786PXI 879.68
18X8	2920-788PXI 553.57	3020-788PXI 689.54	3320-788PXI 936.47
18X10	2920-790PXI 650.25	3020-790PXI 747.17	3320-790PXI 1074.89
18X12	2920-792PXI 759.46	3020-792PXI 923.86	3320-792PXI 1217.92
21X6	2920-846PXI 875.21	3020-846PXI 1055.17	3320-846PXI 1195.96
21X8	2920-848PXI 903.01	3020-848PXI 1143.51	3320-848PXI 1321.72
21X10	2920-850PXI 976.61	3020-850PXI 1260.05	3320-850PXI 1460.12
21X12	2920-852PXI 1027.61	3020-852PXI 1406.08	3320-852PXI 1625.05
24X6	2920-906PXI 1186.43	3020-906PXI 1374.16	3320-906PXI 1349.40
24X8	2920-908PXI 1260.05	3020-908PXI 1494.43	3320-908PXI 1487.78
24X10	2920-910PXI 1348.39	3020-910PXI 1612.21	3320-910PXI 1652.71
24X12	2920-912PXI 1464.93	3020-912PXI 1787.67	3320-912PXI 1817.67



Wyes (Socket)

6	2975-060 193.72	---	---
6X4	2975-532 108.97	---	---
8	2975-080 205.64	---	---
8X4	2975-582 178.48	---	---



Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Wyes (Socket) (continued)

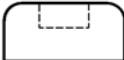
	8X6	2975-585 290.84	---	---
	10	2975-100 323.82	---	---
	10X4	2975-624 198.36	---	---
	10X6	2975-626 208.63	---	---
	10X8	2975-628 266.78	---	---
	12	2975-120 463.55	---	---
	12X4	2975-664 235.29	---	---
	12X6	2975-666 257.32	---	---
	12X8	2975-668 290.76	---	---
	12X10	2975-670 310.29	---	---
	15	2975-150 928.65	---	---
	15X4	2975-724 373.21	---	---
	15X6	2975-726 399.42	---	---
	15X8	2975-728 483.19	---	---
	15X10	2975-730 519.02	---	---
	15X12	2975-732 717.49	---	---
	18	2975-187 1356.41	---	---
	18X4	2975-784 585.98	---	---
	18X6	2975-786 621.27	---	---
	18X8	2975-788 686.02	---	---
	18X10	2975-790 715.55	---	---
	18X12	2975-792 938.63	---	---
	18X15	2975-795 1176.62	---	---

Surface Reducer (Socket)

	6X2	---	300-102013 49.05	---
	6X3	---	300-102015 49.05	---
	8X2	---	300-102018 92.00	---
	8X3	---	300-102020 92.00	---
	8X4	---	300-102021 92.00	---
	10X2	---	300-102024 116.59	---
	10X3	---	300-102026 116.59	---
	10X4	---	300-102027 116.59	---
	10X6	---	300-102028 116.59	---
	12X2	---	300-102031 171.75	---
	12X3	---	300-102033 171.75	---
	12X4	---	300-102034 171.75	---
	12X6	---	300-102035 171.75	---

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Surface Reducer (Socket) (continued)

	12X8	---	300-102036 171.75	---
	15X2	---	300-102048 312.75	---
	15X3	---	300-102050 312.75	---
	15X4	---	300-102051 312.75	---
	15X6	---	300-102052 312.75	---
	15X8	---	300-102053 312.75	---
	15X10	---	300-102054 312.75	---
	18X2	---	300-102067 472.38	---
	18X3	---	300-102069 472.38	---
	18X4	---	300-102070 472.38	---
	18X6	---	300-102071 472.38	---
	18X8	---	300-102072 472.38	---
	18X10	---	300-102073 472.38	---
	18X12	---	300-102074 472.38	---
	21X2	---	300-102088 779.13	---
	21X3	---	300-102089 779.13	---
	21X4	---	300-102090 779.13	---
	21X6	---	300-102091 779.13	---
	21X8	---	300-102092 779.13	---
	21X10	---	300-102093 779.13	---
	21X12	---	300-102094 779.13	---
	21X15	---	300-102095 779.13	---

Stub Surface Reducer (Socket)

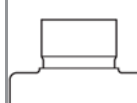
	6X4	---	30040-532 120.85	---
	8X4	---	30040-582 138.64	---
	8X6	---	30040-585 148.02	---
	10X4	---	30040-624 157.51	---
	10X6	---	30040-626 166.36	---
	10X8	---	30040-628 174.94	---
	12X4	---	30040-664 177.31	---
	12X6	---	30040-666 180.89	---
	12X8	---	30040-668 208.49	---
	12X10	---	30040-670 240.16	---
	15X4	---	30040-724 290.84	---
	15X6	---	30040-726 304.26	---
	15X8	---	30040-728 319.22	---
	15X10	---	30040-730 352.28	---



Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Stub Surface Reducer (Socket) (continued)

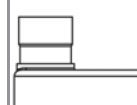
	15X12	---	30040-732 363.27	---
	18X4	---	30040-784 695.20	---
	18X6	---	30040-786 715.28	---
	18X8	---	30040-788 730.60	---
	18X10	---	30040-790 757.43	---
	18X12	---	30040-792 778.33	---
	18X15	---	30040-795 891.63	---
	21X4	---	30040-844 964.83	---
	21X6	---	30040-846 974.55	---
	21X8	---	30040-848 1001.13	---
	21X10	---	30040-850 1034.19	---
	21X12	---	30040-852 1047.96	---
	21X15	---	30040-855 1161.64	---
	21X18	---	30040-858 1282.81	---
	24X4	---	30040-904 1089.32	---
	24X6	---	30040-906 1096.77	---
	24X8	---	30040-908 1124.53	---
	24X10	---	30040-910 1157.58	---
	24X12	---	30040-912 1172.25	---
	24X15	---	30040-915 1286.03	---
	24X18	---	30040-918 1407.25	---
	24X21	---	30040-921 1669.24	---

Eccentric Stub Surface Reducer (Socket)

	6X2	---	3040-528E 81.44	---
	6X3	---	3040-530E 82.08	---
	6X4	---	3040-532E 85.06	---
	8X2	---	3040-578E 105.57	---
	8X3	---	3040-580E 106.75	---
	8X4	---	3040-582E 108.63	---
	8X6	---	3040-585E 119.84	---
	10X2	---	3040-621E 127.58	---
	10X3	---	3040-623E 133.47	---
	10X4	---	3040-624E 142.20	---
	10X6	---	3040-626E 146.48	---
	10X8	---	3040-628E 165.98	---
	12X2	---	3040-661E 180.34	---
	12X4	---	3040-664E 212.21	---

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Eccentric Stub Surface Reducer (Socket) (continued)

	12X6	---	3040-666E 221.77	---
	12X8	---	3040-668E 227.31	---
	15X2	---	3040-721E 193.41	---
	15X3	---	3040-723E 220.98	---
	15X4	---	3040-724E 228.27	---
	15X6	---	3040-726E 232.98	---
	15X8	---	3040-728E 252.47	---
	15X10	---	3040-730E 277.29	---
	15X12	---	3040-732E 310.62	---
	18X2	---	3040-781E 448.98	---
	18X3	---	3040-783E 453.17	---
	18X4	---	3040-784E 457.53	---
	18X6	---	3040-786E 465.19	---
	18X8	---	3040-788E 484.71	---
	18X10	---	3040-790E 504.68	---
	18X12	---	3040-792E 538.03	---
	18X15	---	3040-795E 601.58	---
	21X2	---	3040-841E 558.24	---
	21X3	---	3040-843E 563.05	---
	21X4	---	3040-844E 566.21	---
	21X6	---	3040-846E 573.87	---
	21X8	---	3040-848E 593.38	---
	21X10	---	3040-850E 613.39	---
	21X12	---	3040-852E 646.73	---
	21X15	---	3040-855E 710.28	---
	21X18.701	---	3040-858E 788.99	---
	24X2	---	3040-901E 895.24	---
	24X3	---	3040-903E 902.05	---
	24X6	---	3040-906E 1045.25	---
	24X8	---	3040-908E 1064.77	---
	24X10	---	3040-910E 1084.77	---
	24X12	---	3040-912E 1118.08	---
	24X15	---	3040-915E 1171.69	---
	24X18	---	3040-918E 1260.38	---
	24X21	---	3040-921E 1392.98	---
	27X3	---	3040-933E 1642.45	---
	27X4	---	3040-934E 1643.67	---

Turf & Irrigation
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Eccentric Stub Surface Reducer (Socket) (continued)

	27X6	---	3040-936E 1654.46	---
	27X8	---	3040-938E 1673.98	---
	27X10	---	3040-940E 1693.96	---
	27X12	---	3040-942E 1727.31	---
	27X15	---	3040-945E 1780.88	---
	27X18	---	3040-948E 1869.58	---
	27X21	---	3040-951E 2002.20	---
	27X24	---	3040-954E 4354.15	---
	30X18	---	3040-978E 2850.04	---

Cap (Socket)

	6	---	300-107540 49.05	---
	8	---	300-107541 62.58	---
	10	---	300-107542 100.59	---
	12	---	300-107543 132.48	---
	15	---	300-107545 215.91	---
	18	---	300-107547 421.81	---
	21	---	300-107549 645.34	---
	24	---	300-107550 882.46	---
	27	---	3047-270 1107.38	---
	30	---	3047-300 2705.66	---

Saddle (Socket)

	6X2	---	300-101789 61.33	---
	6X3	---	300-101797 73.61	---
	6X4	---	300-101804 85.85	---
	8X2	---	300-101790 61.33	---
	8X3	---	300-101798 73.61	---
	8X4	---	300-101805 85.85	---
	8X6	---	300-101811 98.14	---
	10X2	---	300-101791 61.33	---
	10X3	---	300-101799 73.61	---
	10X4	---	300-101806 85.85	---
	10X6	---	300-101812 98.14	---
	10X8	---	300-101817 110.41	---
	12X2	---	300-101792 61.33	---
	12X3	---	300-101800 73.61	---
	12X4	---	300-101807 85.85	---
	12X6	---	300-101813 98.14	---

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Saddle (Socket) (continued)

	12X8	---	300-101818 110.41	---
	12X10	---	300-101822 122.65	---
	15X2	---	300-101793 61.33	---
	15X3	---	300-101801 88.61	---
	15X4	---	300-101808 85.85	---
	15X6	---	300-101814 98.14	---
	15X8	---	300-101819 110.41	---
	15X10	---	300-101823 122.65	---
	15X12	---	300-101826 170.62	---
	18X2	---	300-101794 61.33	---
	18X3	---	300-101802 131.61	---
	18X4	---	300-101809 167.82	---
	18X6	---	300-101815 202.64	---
	18X8	---	300-101820 216.49	---
	18X10	---	300-101824 249.22	---
	18X12	---	300-101827 262.77	---
	18X15	---	300-101829 402.01	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Stub Saddle (Socket)

	6X2	---	300-101884 85.85	---
	6X3	---	300-101892 94.48	---
	6X4	---	300-101899 109.16	---
	8X2	---	300-101885 85.85	---
	8X3	---	300-101893 94.48	---
	8X4	---	300-101900 109.16	---
	8X6	---	300-101906 134.95	---
	10X2	---	300-101886 85.85	---
	10X3	---	300-101894 94.48	---
	10X4	---	300-101901 109.16	---
	10X6	---	300-101907 134.95	---
	10X8	---	300-101912 176.69	---
	12X2	---	300-101887 85.85	---
	12X3	---	300-101895 94.48	---
	12X4	---	300-101902 109.16	---



Turf & Irrigation PVC 125, 100 & 80 PSI PIP Fabricated Fittings & Pipe Flanges

Glue-on Saddles

	Size	80 PSI Disc Code: 310	100 PSI Disc Code: 320	125 PSI Disc Code: 330
		Part Number Price Each	Part Number Price Each	Part Number Price Each

Stub Saddle (Socket) (continued)

	12X6	---	300-101908 134.95	---
	12X8	---	300-101913 176.69	---
	12X10	---	300-101917 191.37	---
	15X2	---	300-101888 123.91	---
	15X3	---	300-101896 137.37	---
	15X4	---	300-101903 143.55	---
	15X6	---	300-101909 148.43	---
	15X8	---	300-101914 176.69	---
	15X10	---	300-101918 203.64	---
	15X12	---	300-101921 268.67	---
	18X2	---	300-101889 202.42	---
	18X3	---	300-101897 207.34	---

	Size	80 PSI Disc Code: 310	100 PSI Disc Code: 320	125 PSI Disc Code: 330
		Part Number Price Each	Part Number Price Each	Part Number Price Each

Stub Saddle (Socket) (continued)

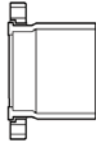
	18X4	---	300-101904 250.25	---
	18X6	---	300-101910 318.99	---
	18X8	---	300-101915 341.08	---
	18X10	---	300-101919 392.63	---
	18X12	---	300-101922 452.77	---
	18X15	---	300-101924 633.08	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Pipe Flanges

	Size	80 PSI Disc Code: 310	100 PSI Disc Code: 320	125 PSI Disc Code: 330
		Part Number Price Each	Part Number Price Each	Part Number Price Each

Flange x PIP (Socket)

	6X6.140	---	---	354-060F 133.67
	8X8.160	---	---	354-080F 202.42
	10X10.200	---	---	354-100F 284.61
	12X12.240	---	---	354-120F 412.21
	14X15.300	---	---	354-150F 1098.76
	16X15.300	---	---	354-151F 1253.46
	18X18.360	---	354-182F 1904.21	---
	18X18.701	---	354-181F 1904.21	---
	20X22.047	---	354-201F 2900.51	---
	24X24.803	---	354-241F 4247.72	---

PIP =Plastic Irrigation Pipe (PIP dimensions are NOT the same as IPS dimensions.)
 Sizes 6" through 16" are furnished with Plastic Ring.
 Sizes 18" Through 24" are furnished with Steel Ring.

Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Tee (Gasket x Spigot x Fipt)

	4X1-1/2	---	---	---	340-102356 189.49	350-102356 220.87
	4X2	---	---	---	340-102357 189.49	350-102357 220.87
	4X2-1/2	---	---	---	340-102358 202.32	350-102358 234.83
	4X3	---	---	---	340-102359 202.32	---
	6X1-1/2	---	---	---	340-102361 275.58	350-102361 287.19
	6X2	---	---	---	340-102362 275.58	350-102362 287.19
	6X2-1/2	---	---	---	340-102363 293.03	350-102363 299.97
	6X3	---	---	---	340-102364 293.03	350-102364 299.97
	6X4	---	---	---	340-102365 304.60	350-102365 316.24
	8X1-1/2	---	---	---	340-102366 336.01	350-102366 409.26
	8X2	---	---	---	340-102367 336.01	350-102367 409.26
	8X2-1/2	---	---	---	340-102368 353.45	350-102368 426.69
	8X3	---	---	---	340-102369 353.45	350-102369 426.69
	8X4	---	---	---	340-102370 382.52	350-102370 444.12
	10X2	---	---	---	340-102372 570.87	350-102372 623.20
	10X2-1/2	---	---	---	340-102373 605.77	---
	10X3	---	---	---	340-102374 605.77	350-102374 653.43
	10X4	---	---	---	340-102375 637.13	350-102375 687.17
	12X2	---	---	---	340-102377 760.40	350-102377 818.52
	12X2-1/2	---	---	---	340-102378 792.95	---
	12X3	---	---	---	340-102379 792.95	350-102379 862.69
	12X4	---	---	---	340-102380 830.18	350-102380 906.91

Tee (Gasket x Gasket x Fipt)

	4X1-1/2	---	---	---	340-102426 209.28	350-102426 229.06
	4X2	---	---	---	340-102427 209.28	350-102427 229.06
	4X2-1/2	---	---	---	340-102428 227.86	350-102428 246.48
	4X3	---	---	---	340-102429 227.86	350-102429 246.48
	6X1-1/2	---	---	---	340-102431 301.12	350-102431 316.24
	6X2	---	---	---	340-102432 301.12	350-102432 316.24
	6X2-1/2	---	---	---	340-102433 312.76	350-102433 331.39
	6X3	---	---	---	340-102434 312.76	350-102434 331.39
	6X4	---	---	---	340-102435 322.06	350-102435 345.33
	8X1-1/2	---	---	---	340-102436 368.59	350-102436 441.82
	8X2	---	---	---	340-102437 368.59	350-102437 441.82
	8X2-1/2	---	---	---	340-102438 390.66	350-102438 465.06
	8X3	---	---	---	340-102439 390.66	350-102439 465.06
	8X4	---	---	---	340-102440 415.07	350-102440 641.20



Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Tee (Gasket x Gasket x Fipt) (continued)

	10X2	---	---	---	340-102442 624.35	350-102442 687.17
	10X2-1/2	---	---	---	340-102443 653.43	350-102443 725.55
	10X3	---	---	---	340-102444 653.43	350-102444 725.55
	10X4	---	---	---	340-102445 689.44	350-102445 754.56
	12X2	---	---	---	340-102447 805.40	350-102447 876.67
	12X2-1/2	---	---	---	340-102448 845.27	---
	12X3	---	---	---	340-102449 845.27	350-102449 920.85
	12X4	---	---	---	340-102450 888.27	350-102450 965.04

Tee (Soc x Soc x Soc)

	6	310-102502 72.27	320-102502 145.69	330-102502 161.97	340-102502 285.59	350-102502 302.22
	6X2	310-102499 57.08	320-102499 75.75	330-102499 90.89	340-102499 226.69	350-102499 235.45
	6X3	310-102500 60.60	320-102500 85.06	330-102500 96.71	340-102500 241.20	350-102500 247.16
	6X4	310-102501 66.44	320-102501 93.25	330-102501 108.38	340-102501 249.94	350-102501 264.61
	8	310-102507 121.25	320-102507 184.15	330-102507 217.99	340-102507 447.66	350-102507 532.53
	8X2	310-102503 79.25	320-102503 100.23	330-102503 108.38	340-102503 288.35	350-102503 318.58
	8X3	310-102504 85.06	320-102504 111.86	330-102504 121.25	340-102504 323.23	350-102504 345.33
	8X4	310-102505 90.89	320-102505 127.00	330-102505 138.65	340-102505 341.83	350-102505 362.76
	8X6	310-102506 108.38	320-102506 163.18	330-102506 172.48	340-102506 396.48	350-102506 430.18
	10	310-102513 180.64	320-102513 256.38	330-102513 354.32	340-102513 695.27	350-102513 845.27
	10X2	310-102508 108.38	320-102508 132.83	330-102508 170.15	340-102508 408.12	350-102508 485.98
	10X3	310-102509 127.00	320-102509 153.83	330-102509 200.47	340-102509 438.36	350-102509 517.37
	10X4	310-102510 144.54	320-102510 172.48	330-102510 226.09	340-102510 474.39	350-102510 555.75
	10X6	310-102511 157.35	320-102511 189.98	330-102511 250.55	340-102511 522.04	350-102511 611.55
	10X8	310-102512 167.83	320-102512 220.28	330-102512 298.36	340-102512 588.33	350-102512 687.17
	12	310-102520 248.24	320-102520 404.44	330-102520 531.47	340-102520 989.47	350-102520 1306.84
	12X2	310-102514 186.52	320-102514 200.47	330-102514 262.27	340-102514 539.46	350-102514 640.65
	12X3	310-102515 192.29	320-102515 212.13	330-102515 284.38	340-102515 575.55	350-102515 690.63
	12X4	310-102516 199.32	320-102516 236.60	330-102516 314.71	340-102516 615.07	350-102516 737.09
	12X6	310-102517 205.12	320-102517 270.40	330-102517 354.32	340-102517 683.68	350-102517 835.96
	12X8	310-102518 216.80	320-102518 298.36	330-102518 398.65	340-102518 761.55	350-102518 891.78
	12X10	310-102519 222.58	320-102519 356.66	330-102519 473.19	340-102519 851.09	350-102519 1044.09
	15X2	310-102521** 221.46	---	---	---	---
	15X3	310-102522** 233.09	---	---	---	---
	15X4	310-102523** 258.75	---	---	---	---
	15X6	310-102524** 264.58	---	---	---	---
	15X8	310-102525** 284.38	---	---	---	---
	15X10	310-102526** 298.36	---	---	---	---

Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
		Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Tee (Soc x Soc x Soc) (continued)

	15X12	310-102527** 336.83	---	---	---	---
	15X15	310-102528* 428.92	---	---	---	---

* 15" PIP O.D.
 ** 15" PIP O.D. x IPS

Tee (Gasket x Spigot x Gasket)

	4	---	320-103058 116.54	330-103058 121.25	340-103058 221.46	350-103058 248.47
	6	---	320-103062 169.01	330-103062 180.64	340-103062 342.98	350-103062 395.29
	6X4	---	320-103061 144.54	330-103061 174.81	340-103061 304.60	350-103061 327.86
	8	---	320-103067 233.62	330-103067 300.71	340-103067 509.26	350-103067 640.65
	8X4	---	320-103065 182.35	330-103065 199.32	340-103065 380.18	350-103065 462.75
	8X6	---	320-103066 212.13	330-103066 251.77	340-103066 420.89	350-103066 526.69
	10	---	320-103073 396.29	330-103073 481.38	340-103073 833.66	350-103073 1051.96
	10X4	---	320-103070 272.73	330-103070 348.47	340-103070 559.27	350-103070 702.26
	10X6	---	320-103071 300.71	330-103071 378.82	340-103071 611.55	350-103071 766.20
	10X8	---	320-103072 334.52	330-103072 420.76	340-103072 687.17	350-103072 865.04
	12	---	320-103080 554.80	330-103080 662.03	---	---
	12X4	---	320-103076 368.32	330-103076 451.12	340-103076 731.31	350-103076 918.49
	12X6	---	320-103077 392.79	330-103077 456.89	340-103077 804.58	350-103077 1011.55
	12X8	---	320-103078 434.74	330-103078 481.38	340-103078 891.78	350-103078 1110.36
	12X10	---	320-103079 495.37	330-103079 540.83	340-103079 1009.22	350-103079 1256.85
	12X12	---	---	---	340-103080 1183.57	---

Tee (Gasket x Gasket x Gasket)

	4	---	320-103170 139.85	330-103170 191.08	340-103170 219.76	350-103170 272.07
	6	---	320-103174 163.18	330-103174 216.80	340-103174 366.24	350-103174 397.61
	6X4	---	320-103173 144.54	330-103173 205.12	340-103173 316.24	350-103173 339.49
	8	---	320-103179 289.04	330-103179 312.76	340-103179 570.87	350-103179 673.19
	8X4	---	320-103177 216.80	330-103177 241.26	340-103177 447.66	350-103177 497.60
	8X6	---	320-103178 222.58	330-103178 272.73	340-103178 497.60	350-103178 549.98
	10	---	320-103185 420.76	330-103185 529.14	340-103185 935.96	350-103185 1098.76
	10X4	---	320-103182 322.86	330-103182 400.95	340-103182 702.26	350-103182 716.20
	10X6	---	320-103183 346.18	330-103183 418.42	340-103183 745.28	350-103183 777.87
	10X8	---	320-103184 376.47	330-103184 487.22	340-103184 833.66	350-103184 876.67
	12	---	320-103192 585.13	330-103192 765.77	340-103192 1301.06	350-103192 1519.65
	12X4	---	320-103188 412.58	330-103188 487.22	340-103188 891.78	350-103188 932.47
	12X6	---	320-103189 423.12	330-103189 501.17	340-103189 974.32	350-103189 1031.31
	12X8	---	320-103190 445.26	330-103190 601.45	340-103190 1067.56	350-103190 1127.79
	12X10	---	320-103191 529.14	330-103191 641.08	340-103191 1198.77	350-103191 1276.62



Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
		Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

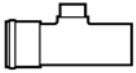
Reinforced Tee (Soc x Soc x Fipt)

	6X2	---	---	330-202152 81.59	---	---
	6X3	---	---	330-202154 93.25	---	---
	6X4	---	---	330-202155 106.03	---	---
	8X2	---	---	330-202157 117.71	---	---
	8X3	---	---	330-202159 137.52	---	---
	8X4	---	---	330-202160 150.31	---	---
	10X2	---	---	330-202162 181.79	---	---
	10X3	---	---	330-202164 212.13	---	---
	10X4	---	---	330-202165 231.92	---	---
	12X2	---	---	330-202167 262.27	---	---
	12X3	---	---	330-202169 292.57	---	---
	12X4	---	---	330-202170 322.86	---	---

Reinforced Tee (Soc x Spigot x Fipt)

	6X2	---	---	330-202222 81.59	---	---
	6X3	---	---	330-202224 93.25	---	---
	6X4	---	---	330-202225 106.03	---	---
	8X2	---	---	330-202227 116.54	---	---
	8X3	---	---	330-202229 130.48	---	---
	8X4	---	---	330-202230 143.32	---	---
	10X2	---	---	330-202232 172.48	---	---
	10X3	---	---	330-202234 201.61	---	---
	10X4	---	---	330-202235 222.58	---	---
	12X2	---	---	330-202237 249.41	---	---
	12X3	---	---	330-202239 278.57	---	---
	12X4	---	---	330-202240 310.05	---	---

Reinforced Tee (Gasket x Spigot x Fipt)

	6X2	---	---	330-202362 139.85	---	---
	6X3	---	---	330-202364 159.64	---	---
	6X4	---	---	330-202365 169.01	---	---
	8X2	---	---	330-202367 174.81	---	---
	8X3	---	---	330-202369 186.52	---	---
	8X4	---	---	330-202370 199.32	---	---
	10X2	---	---	330-202372 264.58	---	---
	10X3	---	---	330-202374 285.55	---	---
	10X4	---	---	330-202375 313.53	---	---
	12X2	---	---	330-202377 361.31	---	---
	12X3	---	---	330-202379 391.61	---	---
	12X4	---	---	330-202380 420.76	---	---

Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

Reinforced Tee (Gasket x Gasket x Fipt)

	6X2	---	---	330-202432 169.01	---	---
	6X3	---	---	330-202434 180.64	---	---
	6X4	---	---	330-202435 192.29	---	---
	8X2	---	---	330-202437 210.96	---	---
	8X3	---	---	330-202439 222.58	---	---
	8X4	---	---	330-202440 241.26	---	---
	10X2	---	---	330-202442 328.69	---	---
	10X3	---	---	330-202444 346.18	---	---
	10X4	---	---	330-202445 382.29	---	---
	12X2	---	---	330-202447 445.26	---	---
	12X3	---	---	330-202449 487.22	---	---
	12X4	---	---	330-202450 509.40	---	---

90° Elbow (Soc x Soc)

	6	310-100812 79.25	320-100812 102.53	330-100812 114.20	340-100812 294.15	350-100812 318.58
	8	310-100813 108.38	320-100813 157.35	330-100813 187.62	340-100813 408.12	350-100813 462.75
	10	310-100814 169.01	320-100814 245.93	330-100814 297.21	340-100814 620.88	350-100814 762.71
	12	310-100815 241.26	320-100815 342.64	330-100815 454.58	340-100815 899.91	350-100815 1023.18
	15	310-100816* 451.12	---	---	---	---

* 15" PIP O.D.

90° Elbow (Gasket x Spigot)

	4	---	---	330-100877 177.00	---	---
	6	---	320-100878 207.48	330-100878 238.94	340-100878 389.47	350-100878 409.26
	8	---	320-100879 314.71	330-100879 385.82	340-100879 555.75	350-100879 596.47
	10	---	320-100880 458.07	330-100880 607.23	340-100880 804.58	350-100880 982.45
	12	---	320-100881 614.26	330-100881 723.83	340-100881 1081.34	350-100881 1242.91

90° Elbow (Gasket x Gasket)

	4	---	---	330-100899 177.00	340-100899 263.92	350-100899 293.03
	6	---	320-100900 207.48	330-100900 238.94	340-100900 389.47	350-100900 409.26
	8	---	320-100901 314.71	330-100901 385.82	340-100901 555.75	350-100901 596.47
	10	---	320-100902 458.07	330-100902 607.23	340-100902 804.58	350-100902 982.45
	12	---	320-100903 614.26	330-100903 723.83	340-1202 900.63	350-100903 1242.91

11-1/4° Elbow (Soc x Soc)

	4	---	---	330-100113 33.76	340-100113 37.38	350-100113 44.84
	6	310-100114 30.25	320-100114 39.64	330-100114 47.76	340-100114 52.31	350-100114 55.79
	8	310-100115 47.76	320-100115 60.60	330-100115 94.37	340-100115 90.68	350-100115 102.31
	10	310-100116 67.57	320-100116 96.71	330-100116 134.04	340-100116 156.98	350-100116 210.40
	12	310-100117 109.51	320-100117 151.53	330-100117 217.99	340-100117 246.48	350-100117 351.15



Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

11-1/4° Elbow (Soc x Soc) (continued)

	15	310-100118 184.15	---	---	---	---
---	----	----------------------	-----	-----	-----	-----

11-1/4° Elbow (Gasket x Spigot)

	4	---	---	330-100185 121.25	340-100185 134.55	350-100185 165.57
	6	---	320-100186 135.19	330-100186 169.01	340-100186 186.87	350-100186 204.63
	8	---	320-100187 165.51	330-100187 252.93	340-100187 274.06	350-100187 330.20
	10	---	320-100188 283.25	330-100188 336.83	340-100188 389.47	350-100188 573.17
	12	---	320-100189 378.82	330-100189 456.89	340-100189 567.40	350-100189 789.48

11-1/4° Elbow (Gasket x Gasket)

	4	---	---	330-100209 121.25	340-100209 134.55	350-100209 165.57
	6	---	320-100210 135.19	330-100210 169.01	340-100210 186.87	350-100210 204.63
	8	---	320-100211 165.51	330-100211 252.93	340-100211 274.06	350-100211 330.20
	10	---	320-100212 283.25	330-100212 336.83	340-100212 389.47	350-100212 573.17
	12	---	320-100213 378.82	330-100213 456.89	340-100213 567.40	350-100213 789.48

15° Elbow (Soc x Soc)

	4	---	---	330-100233 33.76	340-100233 37.38	350-100233 44.84
	6	310-100234 30.25	320-100234 39.64	330-100234 47.76	340-100234 52.31	350-100234 55.79
	8	310-100235 47.76	320-100235 60.60	330-100235 73.39	340-100235 90.68	350-100235 104.32
	10	310-100236 67.57	320-100236 96.71	330-100236 134.04	340-100236 156.98	350-100236 210.40
	12	310-100237 109.51	320-100237 151.53	330-100237 217.99	340-100237 246.48	350-100237 351.15
	15	310-100238* 184.15	---	---	---	---

* 15° PIP O.D.

15° Elbow (Gasket x Spigot)

	4	---	---	330-100305 121.25	340-100305 134.55	350-100305 165.57
	6	---	320-100306 135.19	330-100306 169.01	340-100306 186.87	350-100306 204.63
	8	---	320-100307 165.51	330-100307 252.93	340-100307 274.06	350-100307 330.20
	10	---	320-100308 283.25	330-100308 336.83	340-100308 389.47	350-100308 573.17
	12	---	320-100309 378.82	330-100309 456.89	340-100309 567.40	350-100309 789.48

15° Elbow (Gasket x Gasket)

	4	---	---	330-100329 121.25	340-100329 134.55	350-100329 165.57
	6	---	320-100330 135.19	330-100330 169.01	340-100330 186.87	350-100330 204.63
	8	---	320-100331 177.89	330-100331 252.93	340-100331 274.06	350-100331 330.20
	10	---	320-100332 263.75	330-100332 336.83	340-100332 389.47	350-100332 573.17
	12	---	320-100333 380.32	330-100333 456.89	340-100333 567.40	350-100333 789.48

Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

22-1/2° Elbow (Soc x Soc)

	4	---	---	330-100353 33.76	340-100353 37.38	350-100353 44.84
	6	310-100354 30.25	320-100354 39.64	330-100354 47.76	340-100354 52.31	350-100354 55.79
	8	310-100355 47.76	320-100355 60.60	330-100355 73.39	340-100355 90.68	350-100355 104.32
	10	310-100356 67.57	320-100356 96.71	330-100356 134.04	340-100356 156.98	350-100356 210.40
	12	310-100357 109.51	320-100357 151.53	330-100357 217.99	340-100357 246.48	350-100357 351.15
	15	310-100358* 184.15	---	---	---	---

* 15" PIP O.D.

22-1/2° Elbow (Gasket x Spigot)

	4	---	---	330-100425 121.25	340-100425 134.55	350-100425 165.57
	6	---	320-100426 135.19	330-100426 169.01	340-100426 186.87	350-100426 204.63
	8	---	320-100427 165.51	330-100427 252.93	340-100427 274.06	350-100427 330.20
	10	---	320-100428 283.25	330-100428 336.83	340-100428 389.47	350-100428 573.17
	12	---	320-100429 378.82	330-100429 456.89	340-100429 567.40	350-100429 789.48

22-1/2° Elbow (Gasket x Gasket)

	4	---	---	330-100449 121.25	340-100449 134.55	350-100449 165.57
	6	---	320-100450 135.19	330-100450 169.01	340-100450 186.87	350-100450 204.63
	8	---	320-100451 165.51	330-100451 252.93	340-100451 274.06	350-100451 330.20
	10	---	320-100452 283.25	330-100452 336.83	340-100452 389.47	350-100452 573.17
	12	---	320-100453 378.82	330-100453 456.89	340-100453 567.40	350-100453 789.48

30° Elbow (Soc x Soc)

	4	---	---	330-100473 41.94	340-100473 88.31	350-100473 146.81
	6	310-100474 41.94	320-100474 52.46	330-100474 59.42	340-100474 216.27	350-100474 261.36
	8	310-100475 61.74	320-100475 87.41	330-100475 92.05	340-100475 294.15	350-100475 351.15
	10	310-100476 89.75	320-100476 134.04	330-100476 189.98	340-100476 455.78	350-100476 549.98
	12	310-100477 145.69	320-100477 195.80	330-100477 278.57	340-100477 660.40	350-100477 768.54
	15	310-100478 217.99	---	---	---	---

30° Elbow (Gasket x Spigot)

	4	---	---	330-100545 139.13	340-100545 167.42	350-100545 175.56
	6	---	320-100546 180.64	330-100546 192.29	340-100546 248.82	350-100546 304.60
	8	---	320-100547 222.58	330-100547 270.40	340-100547 366.24	350-100547 453.43
	10	---	320-100548 313.53	330-100548 397.42	340-100548 608.07	350-100548 756.95
	12	---	320-100549 433.61	330-100549 576.95	340-100549 804.58	350-100549 949.93

30° Elbow (Gasket x Gasket)

	4	---	---	330-100569 139.13	340-100569 167.42	350-100569 175.56
	6	---	320-100570 180.64	330-100570 192.29	340-100570 248.82	350-100570 304.60
	8	---	320-100571 222.58	330-100571 270.40	340-100571 366.24	350-100571 453.43
	10	---	320-100572 313.53	330-100572 397.42	340-100572 608.07	350-100572 756.95
	12	---	320-100573 433.61	330-100573 576.95	340-100573 804.58	350-100573 949.93



Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

45° Elbow (Soc x Soc)

	6	310-100592 41.94	320-100592 52.46	330-100592 59.42	340-100592 216.26	350-100592 225.54
	8	310-100593 61.74	320-100593 87.41	330-100593 92.05	340-100593 294.15	350-100593 351.15
	10	310-100594 89.75	320-100594 134.04	330-100594 189.98	340-100594 455.78	350-100594 549.98
	12	310-100595 145.69	320-100595 195.80	330-100595 278.57	340-100595 660.40	350-100595 768.54
	15	310-100596* 217.99	---	---	---	---

* 15" PIP O.D.

45° Elbow (Gasket x Spigot)

	4	---	---	330-100657 139.13	340-100657 167.42	350-100657 175.56
	6	---	320-100658 141.09	330-100658 192.29	340-100658 248.82	350-100658 304.60
	8	---	320-100659 199.97	330-100659 270.40	340-100659 366.24	350-100659 453.43
	10	---	320-100660 287.06	330-100660 397.42	340-100660 608.07	350-100660 755.13
	12	---	320-100661 408.54	330-100661 576.95	340-100661 804.58	350-100661 949.93

45° Elbow (Gasket x Gasket)

	4	---	---	330-100679 139.13	340-100679 167.42	350-100679 175.56
	6	---	320-100680 141.09	330-100680 192.29	340-100680 248.82	350-100680 304.60
	8	---	320-100681 199.97	330-100681 270.40	340-100681 366.24	350-100681 453.43
	10	---	320-100682 287.06	330-100682 397.42	340-100682 608.07	350-100682 756.95
	12	---	320-100683 433.58	330-100683 576.95	340-100683 804.58	350-100683 949.93

60° Elbow (Soc x Soc)

	4	---	---	330-100701 75.01	---	---
	6	310-100702 79.25	320-100702 102.53	330-100702 114.20	340-100702 294.15	350-100702 318.58
	8	310-100703 108.38	320-100703 157.35	330-100703 187.62	340-100703 408.12	350-100703 462.75
	10	310-100704 169.01	320-100704 245.93	330-100704 297.21	340-100704 620.88	350-100704 762.71
	12	310-100705 241.26	320-100705 342.64	330-100705 454.58	340-100705 899.91	350-100705 1023.18
	15	310-100706* 451.12	---	---	---	---

* 15" PIP O.D.

60° Elbow (Gasket x Spigot)

	4	---	---	330-100767 177.00	340-100767 263.92	350-100767 293.03
	6	---	320-100768 207.48	330-100768 238.94	340-100768 389.26	350-100768 409.26
	8	---	320-100769 314.71	330-100769 385.82	340-100769 555.75	350-100769 596.47
	10	---	320-100770 458.07	330-100770 607.23	340-100770 804.58	350-100770 982.45
	12	---	320-100771 614.26	330-100771 723.83	340-100771 1081.34	350-100771 1242.91

60° Elbow (Gasket x Gasket)

	4	---	---	330-100789 177.00	340-100789 263.92	350-100789 293.03
	6	---	320-100790 207.48	330-100790 238.94	340-100790 389.26	350-100790 409.26
	8	---	320-100791 314.71	330-100791 385.82	340-100791 555.75	350-100791 596.47
	10	---	320-100792 458.07	330-100792 607.23	340-100792 804.58	350-100792 982.45
	12	---	320-100793 614.26	330-100793 723.83	340-100793 1081.34	350-100793 1242.91

Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63 Disc Code 340 Part Number Price Each	CLASS 100 Disc Code 350 Part Number Price Each	CLASS 125 Disc Code 360 Part Number Price Each	CLASS 160 Disc Code 370 Part Number Price Each	CLASS 200 Disc Code 380 Part Number Price Each
--	------	--	---	---	---	---

Coupling (Soc x Soc)

	6	310-100002 22.15	320-100002 26.77	330-100002 30.25	340-100002 36.02	350-100002 44.20
	8	310-100003 38.44	320-100003 46.60	330-100003 50.13	340-100003 66.31	350-100003 84.86
	10	310-100004 45.46	320-100004 76.92	330-100004 92.05	340-100004 105.28	350-100004 184.87
	12	310-100005 69.93	320-100005 120.03	330-100005 148.04	340-100005 168.60	350-100005 277.88
	15	310-100006* 104.91	---	---	---	---

* 15" PIP O.D.

Coupling (Gasket x Spigot)

	4	---	320-100067 40.77	330-100067 52.46	340-100067 58.54	350-100067 70.88
	6	---	320-100068 64.06	330-100068 69.93	340-100068 94.19	350-100068 99.99
	8	---	320-100069 103.72	330-100069 125.84	340-100069 150.00	350-100069 167.42
	10	---	320-100070 137.52	330-100070 167.83	340-100070 219.76	350-100070 277.88
	12	---	320-100071 189.98	330-100071 228.44	340-100071 330.20	350-100071 397.61

Coupling (Gasket x Gasket)

	4	---	320-100089 64.06	330-100089 75.75	340-100089 83.03	350-100089 91.33
	6	---	320-100090 96.71	330-100090 108.38	340-100090 113.89	350-100090 144.16
	8	---	320-100091 144.54	330-100091 157.35	340-100091 170.56	350-100091 190.68
	10	---	320-100092 205.12	330-100092 228.44	340-100092 275.58	350-100092 330.20
	12	---	320-100093 270.40	330-100093 313.53	340-100093 362.76	350-100093 491.79

Reducer Coupling (Soc x Soc)

	6X4	310-100926 30.25	320-100926 33.76	330-100926 38.44	340-100926 40.65	350-100926 51.15
	8X6	310-100928 39.64	320-100928 53.58	330-100928 59.42	340-100928 65.09	350-100928 70.88
	10X8	310-100931 55.93	320-100931 106.44	330-100931 95.56	340-100931 120.91	350-100931 144.16
	12X10	310-100935 97.93	320-100935 145.69	330-100935 181.79	340-100935 222.06	350-100935 237.19
	15X12	310-100940** 184.15	---	---	---	---

** 15" PIP O.D. x IPS

Reducer Coupling (Gasket x Spigot)

	6X4	---	320-101310 96.51	330-101310 114.20	340-101310 133.67	350-101310 147.65
	8X6	---	320-101312 138.65	330-101312 169.01	340-101312 208.09	350-101312 231.38
	10X8	---	320-101315 192.29	330-101315 228.44	340-101315 286.03	350-101315 325.54
	12X10	---	320-101319 272.73	330-101319 328.69	340-101319 462.75	350-101319 522.04

Reducer Coupling (Spigot x Gasket)

	6X4	---	320-101383 90.89	330-101383 102.53	340-101383 111.63	350-101383 127.87
	8X6	---	320-101385 121.25	330-101385 144.54	340-101385 184.87	350-101385 210.40
	10X8	---	320-101388 180.64	330-101388 222.58	340-101388 268.60	350-101388 316.24
	12X10	---	320-101392 270.40	330-101392 310.05	340-101392 436.00	350-101392 511.57



Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Reducer Coupling (Gasket x Gasket)

	6X4	---	320-101456 121.25	330-101456 132.83	340-101456 156.98	350-101456 172.06
	8X6	---	320-101458 174.81	330-101458 192.29	340-101458 252.28	350-101458 275.58
	10X8	---	320-101461 241.26	330-101461 300.71	340-101461 360.39	350-101461 526.69
	12X10	---	320-101465 334.52	330-101465 378.82	340-101465 478.53	350-101465 783.66

Repair Coupling (Gasket x Gasket)

	4	---	3228-040 70.78	3328-040 75.75	3428-040 100.04	3528-040 121.36
	6	---	3228-060 99.16	3328-060 102.53	3428-060 127.95	3528-060 148.20
	8	---	3228-080 151.31	3328-080 157.35	3428-080 183.17	3528-080 199.64
	10	---	3228-100 216.02	3328-100 234.27	3428-100 288.46	3528-100 320.23
	12	---	3228-120 289.41	3328-120 313.53	3428-120 375.58	3528-120 447.24
	14	---	3228-140 415.63	3328-140 437.32	3428-140 474.68	---
	16	---	3228-160 548.04	3328-160 622.56	3428-160 675.27	---

Cross (Soc x Soc x Soc x Soc)

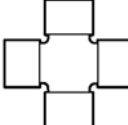
	4X2	---	320-103280 58.25	330-103280 87.41	---	---
	4X3	---	320-103281 64.06	330-103281 90.33	---	---
	6	310-103286 96.71	320-103286 167.83	330-103286 189.98	340-103286 391.80	350-103286 430.18
	6X2	310-103283 66.44	320-103283 72.27	330-103283 96.71	340-103283 287.19	350-103283 289.52
	6X3	310-103284 75.75	320-103284 90.89	330-103284 121.25	340-103284 298.80	350-103284 304.60
	6X4	310-103285 81.59	320-103285 102.53	330-103285 138.65	340-103285 322.06	350-103285 345.33
	8	310-103291 125.84	320-103291 217.99	330-103291 264.58	340-103291 590.63	350-103291 631.35
	8X2	310-103287 85.06	320-103287 108.38	330-103287 121.25	340-103287 368.59	350-103287 374.22
	8X3	310-103288 90.89	320-103288 121.25	330-103288 132.83	340-103288 380.18	350-103288 420.89
	8X4	310-103289 103.72	320-103289 138.65	330-103289 159.64	340-103289 406.92	350-103289 444.12
	8X6	310-103290 114.20	320-103290 169.01	330-103290 200.47	340-103290 474.39	350-103290 509.26
	10	310-103297 203.97	320-103297 325.17	330-103297 456.89	340-103297 976.66	350-103297 1041.43
	10X2	310-103292 103.72	320-103292 150.31	330-103292 178.32	340-103292 570.87	350-103292 619.75
	10X3	310-103293 114.20	320-103293 170.15	330-103293 214.43	340-103293 579.01	350-103293 634.80
	10X4	310-103294 125.84	320-103294 189.98	330-103294 242.43	340-103294 628.99	350-103294 666.22
	10X6	310-103295 139.85	320-103295 210.96	330-103295 282.06	340-103295 702.26	350-103295 742.97
	10X8	310-103296 159.64	320-103296 258.75	330-103296 350.84	340-103296 789.48	350-103296 845.27
	12	310-103304 318.19	320-103304 501.17	330-103304 737.80	340-103304 1446.39	350-103304 1671.94
	12X2	310-103298 148.04	320-103298 198.14	330-103298 289.04	340-103298 725.55	350-103298 731.31
	12X3	310-103299 161.97	320-103299 228.44	330-103299 300.71	340-103299 764.03	350-103299 803.57
	12X4	310-103300 172.48	320-103300 273.16	330-103300 336.83	340-103300 862.69	350-103300 876.67
	12X6	310-103301 181.79	320-103301 284.38	330-103301 386.96	340-103301 947.58	350-103301 965.04
	12X8	310-103302 209.79	320-103302 332.17	330-103302 454.58	340-103302 1058.02	350-103302 1081.34
	12X10	310-103303 250.55	320-103303 412.58	330-103303 576.95	340-103303 1212.65	350-103303 1256.85

Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

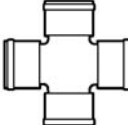
Cross (Soc x Soc x Soc x Soc) (continued)

	15	310-103321* 540.83	---	---	---	---
	15X2	310-103313** 233.09	---	---	---	---
	15X3	310-103314** 262.27	---	---	---	---
	15X4	310-103315** 289.04	---	---	---	---
	15X6	310-103316** 331.03	---	---	---	---
	15X8	310-103317** 361.31	---	---	---	---
	15X10	310-103318** 391.61	---	---	---	---
	15X12	310-103319** 433.61	---	---	---	---

* 15" PIP O.D.

** 15" PIP O.D. x IPS

Cross (Gasket x Gasket x Gasket)

	4	---	320-103997 203.97	330-103997 221.46	340-103997 276.84	350-103997 298.99
	6	---	320-104001 237.75	330-104001 298.36	340-104001 497.60	350-104001 631.35
	6X4	---	320-104000 215.63	330-104000 273.89	340-104000 391.80	350-104000 491.79
	8	---	320-104006 389.31	330-104006 445.26	340-104006 772.04	350-104006 959.24
	8X4	---	320-104004 291.38	330-104004 337.99	340-104004 534.78	350-104004 642.96
	8X6	---	320-104005 349.64	330-104005 384.60	340-104005 641.80	350-104005 748.76
	10	---	320-104012 585.13	330-104012 773.98	340-104012 1285.93	350-104012 1432.42
	10X4	---	320-104009 407.94	330-104009 495.37	340-104009 695.27	350-104009 830.18
	10X6	---	320-104010 466.20	330-104010 512.85	340-104010 851.09	350-104010 947.58
	10X8	---	320-104011 524.52	330-104011 670.22	340-104011 1046.43	350-104011 1081.34
	12	---	320-104019 793.75	330-104019 1086.36	340-104019 1791.69	350-104019 2017.25
	12X4	---	320-104015 582.79	330-104015 641.08	340-104015 1019.64	350-104015 1169.65
	12X6	---	320-104016 641.08	330-104016 676.03	340-104016 1169.16	350-104016 1247.56
	12X8	---	320-104017 699.34	330-104017 792.60	340-104017 1319.61	350-104017 1348.72
	12X10	---	320-104018 745.99	330-104018 955.78	340-104018 1546.39	350-104018 1578.94

Surface Reducer (Soc)

	6X2	310-102013 32.62	---	330-102013 46.60	---	---
	6X3	310-102015 32.62	---	330-102015 46.60	---	---
	6X4	310-102016 32.62	---	---	---	---
	8X2	310-102018 44.23	---	330-102018 93.25	---	---
	8X3	310-102020 44.23	---	330-102020 93.25	---	---
	8X4	310-102021 44.23	---	330-102021 93.25	---	---
	8X6	310-102022 44.23	---	3340-585 93.25	---	---
	10X2	310-102024 71.07	---	330-102024 145.69	---	---
	10X3	310-102026 71.07	---	330-102026 145.69	---	---
	10X4	310-102027 71.07	---	330-102027 145.69	---	---
	10X6	310-102028 71.07	---	330-102028 145.69	---	---



Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Surface Reducer (Soc) (continued)

	10X8	310-102029 71.07	---	330-102029 145.69	---	---
	12X2	310-102031 87.41	---	330-102031 262.27	---	---
	12X3	310-102033 87.41	---	330-102033 262.27	---	---
	12X4	310-102034 87.41	---	330-102034 262.27	---	---
	12X6	310-102035 87.41	---	330-102035 262.27	---	---
	12X8	310-102036 87.41	---	330-102036 262.27	---	---
	12X10	310-102037 87.41	---	330-102037 262.27	---	---

Cap (Soc)

	6	310-107540 22.15	---	330-107540 43.11	---	---
	8	310-107541 40.77	---	330-107541 55.93	---	---
	10	310-107542 69.93	---	330-107542 89.75	---	---
	12	310-107543 85.59	---	330-107543 172.48	---	---

Cap (Gasket)

	4	---	---	330-107565 78.64	---	---
	6	---	---	330-107566 111.86	---	---
	8	---	---	330-107567 189.98	---	---
	10	---	---	330-107568 306.51	---	---
	12	---	---	330-107569 462.73	---	---

Saddle (Soc)

	6	310-101937 31.47	---	---	---	---
	6X2	310-101789 24.44	---	330-101789 69.93	---	---
	6X3	310-101797 26.77	---	330-101797 81.59	---	---
	6X4	310-101804 30.25	---	330-101804 93.25	---	---
	8	310-101938 46.60	---	---	---	---
	8X2	310-101790 24.44	---	330-101790 69.93	---	---
	8X3	310-101798 26.77	---	330-101798 81.59	---	---
	8X4	310-101805 30.25	---	330-101805 93.25	---	---
	8X6	310-101811 31.47	---	330-101811 104.91	---	---
	10	310-101939 72.27	---	---	---	---
	10X2	310-101791 24.44	---	330-101791 69.93	---	---
	10X3	310-101799 26.77	---	330-101799 81.59	---	---
	10X4	310-101806 30.25	---	330-101806 93.25	---	---
	10X6	310-101812 31.47	---	330-101812 104.91	---	---
	10X8	310-101817 46.60	---	330-101817 116.54	---	---
	12	310-101940 108.12	---	---	---	---
	12X2	310-101792 32.78	---	330-101792 69.93	---	---

Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
		Disc Code: 340	Disc Code: 350	Disc Code: 360	Disc Code: 370	Disc Code: 380
		Part Number	Part Number	Part Number	Part Number	Part Number
		Price Each	Price Each	Price Each	Price Each	Price Each

Saddle (Soc) (continued)

	12X3	310-101800 26.77	---	330-101800 81.59	---	---
	12X4	310-101807 30.25	---	330-101807 93.25	---	---
	12X6	310-101813 31.47	---	330-101813 104.91	---	---
	12X8	310-101818 46.60	---	330-101818 116.54	---	---
	12X10	310-101822 72.27	---	330-101822 128.20	---	---

Stub Saddle (Soc)

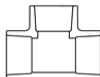
	6	310-101949 51.25	---	---	---	---
	6X2	310-101884 33.76	---	330-101884 61.74	---	---
	6X3	310-101892 39.64	---	330-101892 67.57	---	---
	6X4	310-101899 45.46	---	330-101899 75.75	---	---
	8	310-101950 69.93	---	---	---	---
	8X2	310-101885 33.76	---	330-101885 61.74	---	---
	8X3	310-101893 39.64	---	330-101893 67.57	---	---
	8X4	310-101900 45.46	---	330-101900 75.75	---	---
	8X6	310-101906 51.25	---	330-101906 92.05	---	---
	10	310-101951 96.71	---	---	---	---
	10X2	310-101886 33.76	---	330-101886 61.74	---	---
	10X3	310-101894 39.64	---	330-101894 67.57	---	---
	10X4	310-101901 45.46	---	330-101901 75.75	---	---
	10X6	310-101907 51.25	---	330-101907 92.05	---	---
	10X8	310-101912 69.93	---	330-101912 106.03	---	---
	12	310-101952 121.25	---	---	---	---
	12X2	310-101887 33.76	---	330-101887 61.74	---	---
	12X3	310-101895 39.64	---	330-101895 67.57	---	---
	12X4	310-101902 45.46	---	330-101902 87.44	---	---
	12X6	310-101908 51.25	---	330-101908 92.05	---	---
	12X8	310-101913 69.93	---	330-101913 106.03	---	---
	12X10	310-101917 96.71	---	330-101917 111.86	---	---



Turf & Irrigation
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Tee, Class 125 Molded



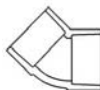
12501-100	10	1	0	361	378.71
12501-120	12	1	0	361	568.02

90° Elbow, Class 125 Molded



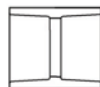
12506-100	10	1	0	361	317.65
12506-120	12	1	0	361	485.84

45° Elbow, Class 125 Molded



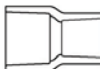
12517-100	10	1	0	361	203.04
12517-120	12	1	0	361	297.73

Coupling, Class 125 Molded



12529-100	10	1	0	361	98.39
12529-120	12	1	0	361	158.24

Reducer Coupling, Class 125 Molded



12529-626	10X6	1	0	361	164.04
12529-628	10X8	1	0	361	102.16
12529-668	12X8	1	0	361	244.08
12529-670	12X10	1	0	361	194.32

Reducer Bushing, Class 125 Molded



12537-626	10X6	1	2	361	155.73
12537-628	10X8	4	0	361	155.73
12537-668	12X8	1	2	361	280.33
12537-670	12X10	1	2	361	278.63

Barbed Insert Fittings Barbed Insert Fittings



STANDARDS & SPECIFICATIONS

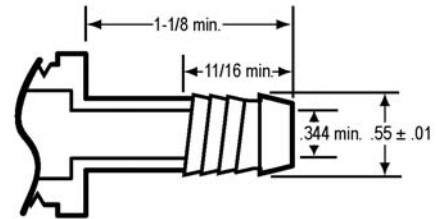


ASTM D 2609 Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.

Material Spears® Insert Fittings are produced from PVC Type 1, Cell Classification 12454, CPVC Cell Classification 23447 or Polypropylene (PP).

It is the user's responsibility to determine the suitability for the intended service application.

Dimensions of Spiral Barb Ends

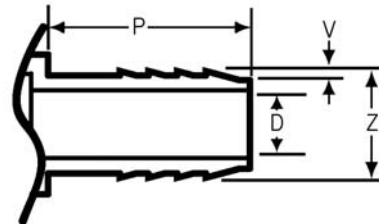


Dimensions of Polyethylene Pipe ASTM D 2104 and D 2239

Spears® Manufacturing Company Insert Fittings are designed for use with polyethylene pipe produced with average inside diameter as shown in the chart below.

Nominal Size in.	Average I.D. in.	Tolerance in.
1/2	.622	+ .010 - .010
3/4	.824	+ .010 - .015
1	1.049	+ .010 - .020
1-1/4	1.380	+ .010 - .020
1-1/2	1.610	+ .015 - .020
2	2.067	+ .015 - .020
2-1/2	2.469	+ .010 - .025
3	3.068	+ .015 - .030
4	4.026	+ .015 - .035

Dimensions of Insert Ends ASTM D 2609



Nominal Size	Insert Length "P"	Barb O.D. "Z"		Barb Depth "V"	Inside Diameter "D"
in.	min.	max.	min.	min.	min.
1/2	1-1/4	0.665	0.635	0.015	0.406
3/4	1-1/4	0.865	0.835	0.015	0.562
1	1-1/4	1.095	1.065	0.020	0.750
1-1/4	1-1/4	1.425	1.395	0.025	0.995
1-1/2	1-1/2	1.665	1.630	0.030	1.125
2	1-1/2	2.125	2.085	0.030	1.656
2-1/2	2	2.520	2.487	0.030	2.062
3	2-1/8	3.125	3.086	0.030	2.600
4	3	4.090	4.044	0.030	3.525

INSERT FITTING INSTALLATION

Pipe is cut to length with handsaw or knife. When installing flexible lines, (a) snake line one foot or more per 100 lineal feet, (b) cold water should be run through lines prior to backfilling to permit pipe to contract, (c) care should be taken to prevent large and sharp-edged rocks from being in position to crush pipe. Insert fittings are used to join lengths of flexible pipe. Stainless steel clamps are first slipped over ends of pipe, fitting is inserted and steel clamps are tightened securely over barbs on fittings. DO NOT use oil or detergent on any fittings. Use plain water or soapy water as lubricant on fitting. For attachment to previously installed metallic systems or threaded fixtures, the insert adapter is utilized. Apply thread sealant to the threaded end of adapter and tighten into female connection. Steel clamp is then slipped over pipe end and pipe slipped over serrated end of insert adapter. Steel clamp is then positioned over serrations on insert adapter and securely tightened with a screwdriver.

TWIST LOCK INSERT INSTALLATION

Twist Lock Fittings with built in lock ring are installed the same as regular Insert Fittings, but do not require steel clamps. Check that lock ring component is fully threaded onto fitting. Slip pipe over serrated end of insert adapter. Twist lock ring back over pipe and barb to seal.

SPIRAL BARB FITTING INSTALLATION

Spiral Barb fittings are designed for use with 1/2" (.490) polyethylene irrigation hose and do not require steel clamps. Install with a twisting motion to fully engage barbs.



Barbed Insert Fittings Barbed Insert Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Twist Lock Coupling

Loc Insert x Loc Insert



Requires NO Clamps

1429TL-005	1/2	50	600	140	5.98
1429TL-007	3/4	50	600	140	7.27
1429TL-010	1	50	400	140	8.65

PVC Spiral Barb Tee

Spiral Barb



3/8" Spiral Barb accepts .490 Irrigation Pipe.

1401-003	3/8	50	800	140	1.81
----------	-----	----	-----	-----	------

PVC Spiral Barb Tee

Insert x Insert x Spiral Barb

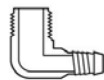


3/8" Spiral Barb accepts .490 Irrigation Pipe.

1401-099	3/4X3/8	25	450	140	3.29
1401-129	1X3/8	25	200	140	3.58

PP Spiral Barb 90° El

Mipt x Spiral Barb



3/8" Spiral Barb accepts .490 Irrigation Pipe.

1413-073	1/2X3/8	50	200	140	1.29
1413-099	3/4X3/8	50	200	140	1.29

PVC Spiral Barb Coupling

Spiral Barb x Spiral Barb



3/8" Spiral Barb accepts .490 Irrigation Pipe.

1429-003	3/8	50	300	140	1.95
----------	-----	----	-----	-----	------

PVC Spiral Barb Coupling

Insert x Spiral Barb



3/8" Spiral Barb accepts .490 Irrigation Pipe.

1429-099	3/4X3/8	50	600	140	2.13
1429-129	1X3/8	50	200	140	2.27

PP Spiral Barb Male Adapter

Mipt x Spiral Barb



3/8" Spiral Barb accepts .490 Irrigation Pipe.

1436-073	1/2X3/8	50	300	140	1.29
1436-099	3/4X3/8	50	300	140	1.29

PVC Tee

Insert x Insert x Insert



1401-005	1/2	50	400	140	2.11
1401-007	3/4	50	0	140	2.28
1401-010	1	25	150	140	2.97
1401-012	1-1/4	10	80	140	4.64
1401-015	1-1/2	10	0	140	5.26
1401-020	2	10	0	140	10.38
1401-040*	4	2	0	140	159.86
1401-060*	6	1	0	140	299.44

* Assembled molded components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Tee

Insert x Insert x Insert



1401-005C	1/2	50	400	143	3.52
-----------	-----	----	-----	-----	------

PVC Reducing Tee

Insert x Insert x Insert



1401-074	1/2X3/4	25	400	140	5.69
1401-094	3/4X1/2X1/2	25	300	140	2.85
1401-101	3/4X1/2	25	150	140	2.58
1401-102	3/4X1	25	275	140	6.56
1401-124	1X3/4X1/2	25	200	140	4.15
1401-125	1X3/4X3/4	25	200	140	4.93
1401-130	1X1/2	25	200	140	3.02
1401-131	1X3/4	25	200	140	3.05
1401-132	1X1-1/4	25	0	140	9.16
1401-156	1-1/4X1X1/2	25	0	140	5.66
1401-157	1-1/4X1X3/4	25	0	140	5.66
1401-158	1-1/4X1X1	25	0	140	5.66
1401-166	1-1/4X1/2	25	0	140	3.98
1401-167	1-1/4X3/4	25	0	140	3.98
1401-168	1-1/4X1	25	0	140	3.98
1401-201	1-1/2X1-1/4X3/4	10	80	140	7.13
1401-202	1-1/2X1-1/4X1	10	80	140	7.13
1401-203	1-1/2X1-1/4X1-1/4	10	0	140	7.13
1401-209	1-1/2X1/2	10	80	140	6.94
1401-210	1-1/2X3/4	10	80	140	6.94
1401-211	1-1/2X1	10	80	140	6.94
1401-212	1-1/2X1-1/4	10	0	140	6.94
1401-241	2X1-1/2X1-1/2	10	0	140	9.16
1401-247	2X1/2	10	0	140	9.87
1401-248	2X3/4	10	0	140	9.87
1401-249	2X1	10	0	140	9.87
1401-250	2X1-1/4	10	0	140	10.34
1401-251	2X1-1/2	10	0	140	10.64
1401-335*	3X1	5	0	140	110.40
1401-338*	3X2	5	0	140	121.67

* Assembled molded components

PVC Tee

Insert x Insert x Fipt



1402-005	1/2	50	400	140	2.28
1402-007	3/4	50	0	140	3.44
1402-010	1	25	0	140	4.05
1402-012	1-1/4	10	0	140	5.95
1402-015	1-1/2	10	0	140	10.34
1402-020	2	10	0	140	12.82

PVC Reducing Tee

Insert x Insert x Fipt



1402-094	3/4X1/2X1/2	25	200	140	3.73
1402-101	3/4X1/2	25	150	140	2.85
1402-124	1X3/4X1/2	25	200	140	4.66
1402-125	1X3/4X3/4	25	0	140	5.56
1402-130	1X1/2	25	200	140	3.74
1402-131	1X3/4	25	200	140	3.74
1402-156	1-1/4X1X1/2	25	0	140	6.89
1402-157	1-1/4X1X3/4	25	0	140	8.06
1402-166	1-1/4X1/2	25	0	140	5.11
1402-167	1-1/4X3/4	25	0	140	5.63
1402-168	1-1/4X1	25	0	140	5.95
1402-199	1-1/2X1-1/4X1/2	25	0	140	10.85
1402-201	1-1/2X1-1/4X3/4	10	0	140	12.08

Barbed Insert Fittings Barbed Insert Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Reducing Tee (continued)

Insert x Insert x Fipt

1402-202	1-1/2X1-1/4X1	10	0	140	13.82
1402-209	1-1/2X1/2	10	80	140	7.85
1402-210	1-1/2X3/4	10	80	140	9.29
1402-211	1-1/2X1	10	0	140	9.29
1402-212	1-1/2X1-1/4	10	0	140	9.53
1402-247	2X1/2	10	0	140	10.53
1402-248	2X3/4	10	0	140	11.12
1402-249	2X1	10	0	140	12.24
1402-251	2X1-1/2	10	0	140	12.82

PVC Tee

Insert x Insert x Mipt



1403-005	1/2	50	500	140	2.92
1403-007	3/4	50	0	140	3.98
1403-010	1	25	0	140	5.11
1403-012	1-1/4	10	80	140	6.64
1403-015	1-1/2	10	0	140	7.43
1403-020	2	10	0	140	11.56

PVC Reducing Tee

Insert x Insert x Mipt



1403-130	1X1X1/2	25	200	140	4.87
1403-131	1X1X3/4	25	0	140	4.87

PVC Tee

Insert x Insert x Socket



1404-010	1	25	0	140	4.05
----------	---	----	---	-----	------

PVC Reducing Tee

Insert x Insert x Socket



1404-102	3/4X3/4X1	100	0	140	6.56
----------	-----------	-----	---	-----	------

PVC Side Outlet Tee

Insert x Insert x Insert x Fipt



1416-007	3/4X3/4	50	0	140	7.16
----------	---------	----	---	-----	------

PVC Reducing Side Outlet Tee

Insert x Insert x Insert x Fipt



1416-101	3/4X1/2	50	0	140	7.16
1416-130	1X1/2	50	0	140	7.62
1416-131	1X3/4	50	0	140	7.62

PVC 90° EII

Insert x Insert



1406-005	1/2	50	1000	140	1.93
1406-007	3/4	50	400	140	2.36
1406-010	1	25	200	140	2.61
1406-012	1-1/4	10	180	140	2.92
1406-015	1-1/2	10	80	140	3.44
1406-020	2	10	0	140	4.80
1406-025	2-1/2	10	0	140	21.67
1406-040*	4	2	0	140	71.74

* Assembled

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC 90° EII

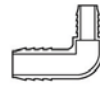
Insert x Insert



1407-007C	3/4	50	0	142	3.31
-----------	-----	----	---	-----	------

PVC 90° Reducing EII

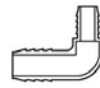
Insert x Insert



1406-101	3/4X1/2	25	300	140	2.23
1406-131	1X3/4	25	300	140	2.74
1406-168	1-1/4X1	25	0	140	4.05
1406-212	1-1/2X1-1/4	10	80	140	4.80
1406-251	2X1-1/2	10	0	140	5.28

CPVC 90° Reducing EII

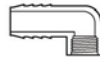
Insert x Insert



1407-074C	1/2X3/4	20	160	143	6.59
-----------	---------	----	-----	-----	------

PVC 90° EII

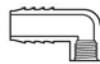
Insert x Fipt



1407-005	1/2	50	400	140	2.17
1407-007	3/4	50	0	140	2.36
1407-010	1	25	0	140	3.02
1407-012	1-1/4	10	140	140	4.48
1407-015	1-1/2	10	0	140	5.11
1407-020	2	10	0	140	8.62

PVC 90° Reducing EII

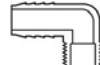
Insert x Fipt



1407-074	1/2X3/4	50	400	140	2.23
1407-101	3/4X1/2	50	400	140	2.23
1407-130	1X1/2	25	300	140	2.36
1407-131	1X3/4	25	200	140	2.74
1407-166	1-1/4X1/2	25	200	140	4.05
1407-167	1-1/4X3/4	25	250	140	4.05
1407-168	1-1/4X1	25	0	140	4.05
1407-211	1-1/2X1	10	80	140	4.61
1407-212	1-1/2X1-1/4	10	80	140	5.01
1407-251	2X1-1/2	10	0	140	8.18

PVC 90° EII

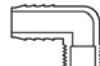
Insert x Mipt



1413-005	1/2	50	600	140	2.42
1413-007	3/4	50	400	140	3.35
1413-010	1	25	200	140	4.40
1413-012	1-1/4	10	120	140	5.85
1413-015	1-1/2	10	80	140	7.77
1413-015H	1-1/2	10	80	140	7.77
1413-020	2	10	0	140	12.26

CPVC 90° EII

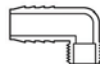
Insert x Mipt



1413-020C	2	10	0	140	15.27
-----------	---	----	---	-----	-------

PVC 90° Reducing EII

Insert x Mipt



1413-055	3/8X3/4	50	200	140	2.61
1413-101	3/4X1/2	50	300	140	4.19
1413-130	1X1/2	50	400	140	4.77



Barbed Insert Fittings Barbed Insert Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC 90° Reducing EII (continued)

Insert x Mipt

1413-131	1X3/4	50	0	140	5.12
----------	-------	----	---	-----	------

PVC 90° Side Outlet EII

Insert x Insert x Fipt



1414-101	3/4X3/4X1/2	50	0	140	5.56
1414-130	1X1X1/2	25	200	140	5.97
1414-131	1X3/4	50	0	140	5.97

PVC Cross

Insert



1420-005	1/2	50	0	140	4.07
1420-007	3/4	25	150	140	5.52
1420-010	1	25	0	140	6.86

PVC Coupling

Insert x Insert



1429-005	1/2	50	600	140	.98
1429-007	3/4	50	600	140	1.18
1429-010	1	50	400	140	1.23
1429-012	1-1/4	25	200	140	1.82
1429-015	1-1/2	25	0	140	2.16
1429-020	2	25	0	140	4.08
1429-025	2-1/2	10	0	140	10.58
1429-030	3	10	0	140	17.97
1429-040	4	10	0	140	24.46
1429-060	6	8	0	140	69.32
1429-080*	8	4	0	140	150.06

* Fabricated

CPVC Coupling

Insert x Insert



1429-005C	1/2	50	600	142	1.39
1429-007C	3/4	50	600	142	2.01
1429-010C	1	50	400	042	1.75

PVC Reducer Coupling

Insert x Insert



1429-101	3/4X1/2	50	600	140	1.60
1429-130	1X1/2	50	400	140	2.20
1429-131	1X3/4	50	400	140	1.64
1429-1315	1X7/8	50	400	140	3.36
1429-167	1-1/4X3/4	25	300	140	3.36
1429-168	1-1/4X1	25	200	140	2.61
1429-210	1-1/2X3/4	25	275	140	4.08
1429-211	1-1/2X1	25	200	140	3.93
1429-212	1-1/2X1-1/4	25	0	140	3.05
1429-249	2X1	10	80	140	5.56
1429-250	2X1-1/4	10	80	140	5.17
1429-251	2X1-1/2	10	80	140	4.92
1429-291	2-1/2X1-1/2	10	0	140	14.07
1429-338*	3X2	12	0	140	39.79
1429-422	4X3	18	0	140	69.95
1429-532	6X4	8	0	140	79.57

* Fabricated

Insert Adapter (White PVC)

Insert x I.P.S. Spigot



460-005	1/2	50	300	040	2.26
---------	-----	----	-----	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Insert Adapter (White PVC) (continued)

Insert x I.P.S. Spigot

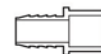
460-007	3/4	50	200	040	2.97
460-007N	3/4X3/4X1/2	50	200	040	2.97
460-010	1	50	0	040	3.11
460-012	1-1/4	20	160	040	3.20
460-012N	1-1/4X1-1/4X1	20	160	040	3.20
460-015	1-1/2	25	0	040	3.44
460-020	2	10	0	040	5.72
460-030	3	25	0	040	19.31
460-040	4	10	0	040	22.24
460-131N	3/4X1X3/4	20	160	040	3.46
460-132N	1X1-1/4X1	20	160	040	3.74
1432-060	6	8	0	140	95.61
1432-080*	8	4	0	140	189.82

N = Nesting

* Fabricated

Insert Adapter (PVC Gray)

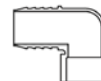
Insert x I.P.S. Spigot



460-005G	1/2	50	300	043	2.51
460-007G	3/4	50	200	043	3.31
460-010G	1	50	0	043	3.44
460-012G	1-1/4	20	160	043	3.56
460-015G	1-1/2	25	0	043	3.82
460-020G	2	10	0	043	6.36
1432-060G	6	4	0	140	106.24

Insert Adapter 90° EII (White PVC)

Insert x I.P.S. Spigot



460A-015	1-1/2	10	80	040	6.83
----------	-------	----	----	-----	------

Insert Adapter (White PVC)

Insert x Soc



474-005	1/2	50	600	040	2.06
474-007	3/4	50	400	040	2.47
474-010	1	50	0	040	2.62
474-012	1-1/4	25	0	040	4.16
474-015	1-1/2	25	0	040	4.61
474-020	2	25	0	040	8.54
474-030	3	15	0	040	25.45
474-040	4	15	0	040	29.09

Insert Adapter (PVC Gray)

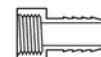
Insert x Soc



474-005G	1/2	50	600	043	2.28
474-007G	3/4	50	400	043	2.76
474-010G	1	50	0	043	2.92
474-012G	1-1/4	25	0	043	4.62
474-015G	1-1/2	25	0	043	4.79
474-020G	2	25	0	043	9.48

PVC Female Adapter

Fipt x Insert



1435-005	1/2	50	300	140	4.28
1435-007	3/4	50	400	140	4.66
1435-010	1	50	0	140	5.17
1435-012	1-1/4	25	0	140	6.35
1435-015	1-1/2	25	0	140	8.06
1435-020	2	10	0	140	10.24

Barbed Insert Fittings Barbed Insert Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Female Adapter

Fipt x Insert



1435-005C	1/2	50	300	143	4.87
1435-007C	3/4	50	400	143	6.65
1435-010C	1	50	0	143	7.56
1435-012C	1-1/4	25	0	143	8.29
1435-015C	1-1/2	25	0	143	10.47
1435-020C	2	10	0	143	13.72

Special Reinforced PVC Female Adapter

SR Fipt x Insert



1435-005SR	1/2	50	400	142	5.73
1435-007SR	3/4	50	400	142	6.77
1435-010SR	1	50	0	142	8.07
1435-015SR	1-1/2	20	0	142	22.78

PVC Reducing Female Adapter

Fipt x Insert



1435-074	1/2X3/4	50	500	140	5.97
1435-101	3/4X1/2	50	600	140	5.53
1435-102	3/4X1	50	0	140	6.17
1435-131	1X3/4	50	0	140	4.07

PVC Male Adapter

Mipt x Insert



1436-005	1/2	50	600	140	.96
1436-007	3/4	50	400	140	1.18
1436-010	1	50	0	140	1.22
1436-012	1-1/4	20	160	140	1.93
1436-015	1-1/2	25	0	140	2.16
1436-015W	1-1/2	20	0	001	2.16
1436-020	2	10	0	140	4.14
1436-025	2-1/2	10	0	140	17.00
1436-030	3	10	0	140	19.61
1436-040	4	10	0	140	27.26
1436-060G ¹	6	1	4	140	153.72
1436-060 ²	6	4	0	140	138.35

1 Fabricated - Gray PVC
2 Fabricated - White PVC

CPVC Male Adapter

Mipt x Insert



1436-005C	1/2	1400	0	143	1.39
1436-007C	3/4	50	400	143	1.69
1436-010C	1	50	0	143	1.74
1436-012C	1-1/4	20	160	143	2.61
1436-015C	1-1/2	25	0	143	3.11
1436-020C	2	10	0	143	5.92
1436-030C	3	10	0	143	26.77
1436-040C	4	10	0	143	41.38
1436-060C	6	4	0	001	139.49
1436-080CF	8	1	0	001	160.42

PVC Reducing Male Adapter

Mipt x Insert



1436-074	1/2X3/4	50	300	140	3.05
1436-075	1/2X1	50	200	140	3.17
1436-101	3/4X1/2	50	600	140	2.76
1436-102	3/4X1	50	400	140	3.17
1436-131	1X3/4	50	0	140	2.85

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Reducing Male Adapter (continued)

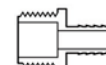
Mipt x Insert

1436-132	1X1-1/4	25	200	140	3.85
1436-133	1X1-1/2	25	0	140	5.80
1436-167	1-1/4X3/4	25	200	140	3.36
1436-168	1-1/4X1	25	200	140	3.61
1436-169	1-1/4X1-1/2	10	120	140	5.80
1436-211	1-1/2X1	25	0	140	4.40
1436-212	1-1/2X1-1/4	25	0	140	4.40
1436-213	1-1/2X2	10	80	140	7.46
1436-251	2X1-1/2	10	80	140	7.40
1436-252 ¹	2X2-1/2	10	0	140	13.44
1436-292 ²	2-1/2X2	10	0	140	59.29

*Assembled molded components

CPVC Reducing Male Adapter

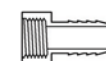
Mipt x Insert



1436-073C	1/2X3/8	50	300	143	1.53
1436-074C	1/2X3/4	50	300	142	3.48
1436-101C	3/4X1/2	50	600	142	3.93
1436-212C	1-1/2X1-1/4	25	0	143	6.09

PVC Female Hose Adapter

Female Hose Thread x Insert



1435-007FHT	3/4	50	400	140	5.56
-------------	-----	----	-----	-----	------

PVC Male Hose Adapter

Male Hose Thread x Insert



1436-007MHT	3/4	50	400	140	2.87
-------------	-----	----	-----	-----	------

PVC Reducing Male Hose Adapter

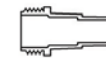
Male Hose Thread x Insert



1436-101MHT	3/4X1/2	50	600	140	2.74
1436-102MHT	3/4X1	50	400	140	3.14

PVC Pool Adapter

Mipt x Hose ID

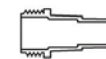


Not NSF Approved

1436-204	1-1/2X1-1/2X1-1/4	25	0	140	5.52
----------	-------------------	----	---	-----	------

PP Pool Adapter

Mipt x Hose ID

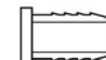


Not NSF Approved

1436-204P	1-1/2X1-1/2X1-1/4	25	0	140	5.52
-----------	-------------------	----	---	-----	------

PVC Plug

Insert



1449-005	1/2	100	600	140	1.75
1449-007	3/4	100	1200	140	1.82
1449-010	1	50	600	140	2.46
1449-012	1-1/4	25	300	140	3.13
1449-015	1-1/2	25	300	140	3.40
1449-020	2	10	120	140	5.99



Barbed Insert Fittings Barbed Insert Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

PVC Lay Flat Plug Insert



For Lay Flat Type Hose

1449-030LF	3	1	4	140	23.21
1449-040LF	4	4	0	140	30.42
1449-060LF	6	1	6	140	165.19

Nipples PVC, CPVC & PE Nipples



PVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/8" Diameter						
1/8XCLOSE	879-005 1.18	1879-005 1.18	879-005P 1.18	25	800	120
1/8X1-1/2	879-015 1.18	1879-015 1.18	879-015P 1.18	25	800	120
1/8X2	879-020 1.34	1879-020 1.34	879-020P 1.34	25	800	120
1/8X2-1/2	879-025 1.41	1879-025 1.41	879-025P 1.41	25	800	120
1/8X3	879-030 1.41	1879-030 1.41	879-030P 1.41	25	800	120
1/8X3-1/2	879-035 1.56	1879-035 1.56	879-035P 1.56	25	800	120
1/8X4	879-040 1.56	1879-040 1.56	879-040P 1.56	25	800	120
1/8X4-1/2	879-045 1.76	1879-045 1.76	879-045P 1.76	25	600	120
1/8X5	879-050 1.76	1879-050 1.76	879-050P 1.76	25	600	120
1/8X5-1/2	879-055 2.01	1879-055 2.01	879-055P 2.01	25	600	120
1/8X6	879-060 2.01	1879-060 2.01	879-060P 2.01	25	600	120
1/8X7	879-070 2.34	1879-070 2.34	879-070P 2.34	25	450	120
1/8X8	879-080 2.65	1879-080 2.65	879-080P 2.65	25	600	120
1/8X9	879-090 2.79	1879-090 2.79	879-090P 2.79	25	400	120
1/8X10	879-100 3.20	1879-100 3.20	879-100P 3.20	25	400	120
1/8X11	879-110 3.47	1879-110 3.47	879-110P 3.47	25	400	120
1/8X12	879-120 3.47	1879-120 3.47	879-120P 3.47	25	400	120
1/8X13	879-130 4.48	1879-130 4.48	879-130P 4.48	25	400	120
1/8X14	879-140 4.89	1879-140 4.89	879-140P 4.89	25	250	120
1/8X15	879-150 5.14	1879-150 5.14	879-150P 5.14	25	300	120
1/8X16	879-160 5.68	1879-160 5.68	879-160P 5.68	25	250	120
1/8X17	879-170 5.91	1879-170 5.91	879-170P 5.91	25	250	120
1/8X18	879-180 6.07	1879-180 6.07	879-180P 6.07	25	0	120
1/8X19	879-190 6.46	1879-190 6.46	879-190P 6.46	5	0	120
1/8X20	879-200 6.89	1879-200 6.89	879-200P 6.89	25	0	120
1/8X22	879-220 7.35	1879-220 7.35	879-220P 7.35	25	0	120
1/8X24	879-240 8.02	1879-240 8.02	879-240P 8.02	25	0	120
1/8X30	879-300 10.22	1879-300 10.22	879-300P 10.22	25	0	120
1/8X36	879-360 12.04	1879-360 12.04	879-360P 12.04	25	0	120
1/8X42	879-420 14.02	1879-420 14.02	879-420P 14.02	25	0	120
1/8X48	879-480 16.03	1879-480 16.03	879-480P 16.03	25	0	120

1/4" Diameter

1/4XCLOSE	880-005 1.23	1880-005 1.23	880-005P 1.23	25	1200	120
1/4X1-1/2	880-015 1.23	1880-015 1.23	880-015P 1.23	25	1200	120
1/4X2	880-020 1.51	1880-020 1.51	880-020P 1.51	25	500	120
1/4X2-1/2	880-025 1.51	1880-025 1.51	880-025P 1.51	25	500	120
1/4X3	880-030 2.01	1880-030 2.01	880-030P 2.01	25	550	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/4" Diameter						
1/4X3-1/2	880-035 2.01	1880-035 2.01	880-035P 2.01	25	500	120
1/4X4	880-040 2.34	1880-040 2.34	880-040P 2.34	25	300	120
1/4X4-1/2	880-045 2.34	1880-045 2.34	880-045P 2.34	25	250	120
1/4X5	880-050 2.54	1880-050 2.54	880-050P 2.54	25	250	120
1/4X5-1/2	880-055 2.54	1880-055 2.54	880-055P 2.54	25	250	120
1/4X6	880-060 2.65	1880-060 2.65	880-060P 2.65	25	250	120
1/4X7	880-070 2.74	1880-070 2.74	880-070P 2.74	25	250	120
1/4X8	880-080 2.89	1880-080 2.89	880-080P 2.89	25	250	120
1/4X9	880-090 2.97	1880-090 2.97	880-090P 2.97	25	250	120
1/4X10	880-100 3.04	1880-100 3.04	880-100P 3.04	25	250	120
1/4X11	880-110 3.26	1880-110 3.26	880-110P 3.26	25	250	120
1/4X12	880-120 3.59	1880-120 3.59	880-120P 3.59	25	250	120
1/4X13	880-130 5.22	1880-130 5.22	880-130P 5.22	25	250	120
1/4X14	880-140 5.26	1880-140 5.26	880-140P 5.26	25	250	120
1/4X15	880-150 5.58	1880-150 5.58	880-150P 5.58	25	500	120
1/4X16	880-160 7.02	1880-160 7.02	880-160P 7.02	25	250	120
1/4X17	880-170 7.38	1880-170 7.38	880-170P 7.38	25	300	120
1/4X18	880-180 7.53	1880-180 7.53	880-180P 7.53	25	300	120
1/4X19	880-190 7.89	1880-190 7.89	880-190P 7.89	25	300	120
1/4X20	880-200 8.01	1880-200 8.01	880-200P 8.01	25	200	120
1/4X22	880-220 8.38	1880-220 8.38	880-220P 8.38	25	300	120
1/4X24	880-240 8.53	1880-240 8.53	880-240P 8.53	25	200	120
1/4X30	880-300 10.47	1880-300 10.47	880-300P 10.47	25	0	120
1/4X36	880-360 12.68	1880-360 12.68	880-360P 12.68	25	0	120
1/4X42	880-420 14.92	1880-420 14.92	880-420P 14.92	25	0	120
1/4X48	880-480 16.59	1880-480 16.59	880-480P 16.59	25	0	120

3/8" Diameter

3/8XCLOSE	881-005 1.28	1881-005 1.28	881-005P 1.28	25	800	120
3/8X1-1/2	881-015 1.28	1881-015 1.28	881-015P 1.28	25	800	120
3/8X2	881-020 1.64	1881-020 1.64	881-020P 1.64	25	600	120
3/8X2-1/2	881-025 1.64	1881-025 1.64	881-025P 1.64	25	600	120
3/8X3	881-030 1.64	1881-030 1.64	881-030P 1.64	25	400	120
3/8X3-1/2	881-035 2.34	1881-035 2.34	881-035P 2.34	25	400	120
3/8X4	881-040 2.54	1881-040 2.54	881-040P 2.54	25	300	120
3/8X4-1/2	881-045 2.54	1881-045 2.54	881-045P 2.54	25	250	120
3/8X5	881-050 2.74	1881-050 2.74	881-050P 2.74	25	250	120
3/8X5-1/2	881-055 2.74	1881-055 2.74	881-055P 2.74	25	250	120



Nipples PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/8" Diameter						
3/8X6	881-060 2.83	1881-060 2.83	881-060P 2.83	25	250	120
3/8X7	881-070 2.91	1881-070 2.91	881-070P 2.91	25	200	120
3/8X8	881-080 3.13	1881-080 3.13	881-080P 3.13	25	200	120
3/8X9	881-090 3.36	1881-090 3.36	881-090P 3.36	25	200	120
3/8X10	881-100 3.47	1881-100 3.47	881-100P 3.47	25	200	120
3/8X11	881-110 3.67	1881-110 3.67	881-110P 3.67	25	200	120
3/8X12	881-120 3.89	1881-120 3.89	881-120P 3.89	25	200	120
3/8X13	881-130 5.60	1881-130 5.60	881-130P 5.60	25	0	120
3/8X14	881-140 5.80	1881-140 5.80	881-140P 5.80	25	200	120
3/8X15	881-150 6.08	1881-150 6.08	881-150P 6.08	25	200	120
3/8X16	881-160 6.24	1881-160 6.24	881-160P 6.24	25	200	120
3/8X17	881-170 6.46	1881-170 6.46	881-170P 6.46	25	0	120
3/8X18	881-180 6.69	1881-180 6.69	881-180P 6.69	25	200	120
3/8X19	881-190 6.83	1881-190 6.83	881-190P 6.83	25	0	120
3/8X20	881-200 7.02	1881-200 7.02	881-200P 7.02	25	250	120
3/8X22	881-220 7.60	1881-220 7.60	881-220P 7.60	25	0	120
3/8X24	881-240 7.78	1881-240 7.78	881-240P 7.78	25	0	120
3/8X30	881-300 10.49	1881-300 10.49	881-300P 10.49	25	0	120
3/8X36	881-360 13.45	1881-360 13.45	881-360P 13.45	25	0	120
3/8X42	881-420 15.13	1881-420 15.13	881-420P 15.13	25	0	120
3/8X48	881-480 17.13	1881-480 17.13	881-480P 17.13	25	0	120

1/2" Diameter

1/2XCLOSE	882-005 1.11	1882-005 1.11	882-005P 1.11	25	675	120
1/2X1-1/2	882-015 1.11	1882-015 1.11	882-015P 1.11	25	600	120
1/2X2	882-020 1.18	1882-020 1.18	882-020P 1.18	25	150	120
1/2X2-1/2	882-025 1.18	1882-025 1.18	882-025P 1.18	50	600	120
1/2X3	882-030 1.34	1882-030 1.34	882-030P 1.34	25	300	120
1/2X3-1/2	882-035 1.34	1882-035 1.34	882-035P 1.34	25	300	120
1/2X4	882-040 1.56	1882-040 1.56	882-040P 1.56	25	300	120
1/2X4-1/2	882-045 1.56	1882-045 1.56	882-045P 1.56	25	300	120
1/2X5	882-050 1.74	1882-050 1.74	882-050P 1.74	25	300	120
1/2X5-1/2	882-055 1.74	1882-055 1.74	882-055P 1.74	25	300	120
1/2X6	882-060 1.82	1882-060 1.82	882-060P 1.82	25	300	120
1/2X7	882-070 2.12	1882-070 2.12	882-070P 2.12	25	200	120
1/2X8	882-080 2.27	1882-080 2.27	882-080P 2.27	25	0	120
1/2X9	882-090 2.34	1882-090 2.34	882-090P 2.34	25	0	120
1/2X10	882-100 2.48	1882-100 2.48	882-100P 2.48	25	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/2" Diameter						
1/2X11	882-110 2.65	1882-110 2.65	882-110P 2.65	25	0	120
1/2X12	882-120 2.74	1882-120 2.74	882-120P 2.74	25	0	120
1/2X13	882-130 3.13	1882-130 3.13	882-130P 3.13	25	0	120
1/2X14	882-140 3.19	1882-140 3.19	882-140P 3.19	100	0	120
1/2X15	882-150 3.44	1882-150 3.44	882-150P 3.44	100	0	120
1/2X16	882-160 3.84	1882-160 3.84	882-160P 3.84	100	0	120
1/2X17	882-170 3.95	1882-170 3.95	882-170P 3.95	100	0	120
1/2X18	882-180 4.19	1882-180 4.19	882-180P 4.19	25	100	120
1/2X19	882-190 4.33	1882-190 4.33	882-190P 4.33	100	0	120
1/2X20	882-200 4.44	1882-200 4.44	882-200P 4.44	100	0	120
1/2X22	882-220 4.44	1882-220 4.44	882-220P 4.44	100	0	120
1/2X24	882-240 5.42	1882-240 5.42	882-240P 5.42	25	100	120
1/2X30	882-300 6.83	1882-300 6.83	882-300P 6.83	25	0	120
1/2X36	882-360 9.25	1882-360 9.25	882-360P 9.25	25	0	120
1/2X42	882-420 12.34	1882-420 12.34	882-420P 12.34	25	0	120
1/2X48	882-480 12.98	1882-480 12.98	882-480P 12.98	25	0	120

3/4" Diameter

3/4XCLOSE	883-005 1.18	1883-005 1.18	883-005P 1.18	25	450	120
3/4X1-1/2	883-015 1.18	1883-015 1.18	883-015P 1.18	25	500	120
3/4X2	883-020 1.18	1883-020 1.18	883-020P 1.18	25	150	120
3/4X2-1/2	883-025 1.34	1883-025 1.34	883-025P 1.34	25	150	120
3/4X3	883-030 1.34	1883-030 1.34	883-030P 1.34	25	300	120
3/4X3-1/2	883-035 1.56	1883-035 1.56	883-035P 1.56	25	300	120
3/4X4	883-040 1.82	1883-040 1.82	883-040P 1.82	25	300	120
3/4X4-1/2	883-045 1.82	1883-045 1.82	883-045P 1.82	25	200	120
3/4X5	883-050 2.18	1883-050 2.18	883-050P 2.18	25	200	120
3/4X5-1/2	883-055 2.18	1883-055 2.18	883-055P 2.18	25	200	120
3/4X6	883-060 2.27	1883-060 2.27	883-060P 2.27	25	200	120
3/4X7	883-070 2.34	1883-070 2.34	883-070P 2.34	25	200	120
3/4X8	883-080 2.65	1883-080 2.65	883-080P 2.65	25	0	120
3/4X9	883-090 2.74	1883-090 2.74	883-090P 2.74	25	0	120
3/4X10	883-100 3.04	1883-100 3.04	883-100P 3.04	25	0	120
3/4X11	883-110 3.26	1883-110 3.26	883-110P 3.26	25	0	120
3/4X12	883-120 3.44	1883-120 3.44	883-120P 3.44	25	0	120
3/4X13	883-130 3.72	1883-130 3.72	883-130P 3.72	25	0	120
3/4X14	883-140 3.72	1883-140 3.72	883-140P 3.72	100	0	120
3/4X15	883-150 3.89	1883-150 3.89	883-150P 3.89	100	0	120

Nipples PVC, CPVC & PE Nipples



PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/4" Diameter						
3/4X16	883-160 4.33	1883-160 4.33	883-160P 4.33	100	0	120
3/4X17	883-170 4.44	1883-170 4.44	883-170P 4.44	100	0	120
3/4X18	883-180 4.54	1883-180 4.54	883-180P 4.54	25	100	120
3/4X19	883-190 5.07	1883-190 5.07	883-190P 5.07	100	0	120
3/4X20	883-200 5.39	1883-200 5.39	883-200P 5.39	100	0	120
3/4X22	883-220 5.59	1883-220 5.59	883-220P 5.59	100	0	120
3/4X24	883-240 6.52	1883-240 6.52	883-240P 6.52	25	100	120
3/4X30	883-300 9.02	1883-300 9.02	883-300P 9.02	25	0	120
3/4X36	883-360 11.17	1883-360 11.17	883-360P 11.17	25	0	120
3/4X42	883-420 13.06	1883-420 13.06	883-420P 13.06	25	0	120
3/4X48	883-480 14.75	1883-480 14.75	883-480P 14.75	25	0	120

1" Diameter

1XCLOSE	884-005 1.56	1884-005 1.56	884-005P 1.56	25	300	120
1X1-1/2	884-015 1.74	1884-015 1.74	884-015P 1.74	25	300	120
1X2	884-020 1.74	1884-020 1.74	884-020P 1.74	25	300	120
1X2-1/2	884-025 1.82	1884-025 1.82	884-025P 1.82	25	300	120
1X3	884-030 1.98	1884-030 1.98	884-030P 1.98	25	200	120
1X3-1/2	884-035 2.12	1884-035 2.12	884-035P 2.12	25	200	120
1X4	884-040 2.27	1884-040 2.27	884-040P 2.27	25	200	120
1X4-1/2	884-045 2.48	1884-045 2.48	884-045P 2.48	25	200	120
1X5	884-050 2.74	1884-050 2.74	884-050P 2.74	25	0	120
1X5-1/2	884-055 3.04	1884-055 3.04	884-055P 3.04	25	0	120
1X6	884-060 3.13	1884-060 3.13	884-060P 3.13	25	0	120
1X7	884-070 3.44	1884-070 3.44	884-070P 3.44	25	0	120
1X8	884-080 3.67	1884-080 3.67	884-080P 3.67	25	0	120
1X9	884-090 4.16	1884-090 4.16	884-090P 4.16	25	0	120
1X10	884-100 4.33	1884-100 4.33	884-100P 4.33	25	0	120
1X11	884-110 4.67	1884-110 4.67	884-110P 4.67	25	0	120
1X12	884-120 5.01	1884-120 5.01	884-120P 5.01	25	0	120
1X13	884-130 5.77	1884-130 5.77	884-130P 5.77	25	0	120
1X14	884-140 5.77	1884-140 5.77	884-140P 5.77	50	0	120
1X15	884-150 6.17	1884-150 6.17	884-150P 6.17	50	0	120
1X16	884-160 6.21	1884-160 6.21	884-160P 6.21	50	0	120
1X17	884-170 7.02	1884-170 7.02	884-170P 7.02	50	0	120
1X18	884-180 7.38	1884-180 7.38	884-180P 7.38	50	0	120
1X19	884-190 7.55	1884-190 7.55	884-190P 7.55	50	0	120
1X20	884-200 7.91	1884-200 7.91	884-200P 7.91	50	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1" Diameter						
1X22	884-220 8.06	1884-220 8.06	884-220P 8.06	50	0	120
1X24	884-240 8.32	1884-240 8.32	884-240P 8.32	50	0	120
1X30	884-300 11.63	1884-300 11.63	884-300P 11.63	15	0	120
1X36	884-360 15.47	1884-360 15.47	884-360P 15.47	15	0	120
1X42	884-420 18.89	1884-420 18.89	884-420P 18.89	15	0	120
1X48	884-480 19.73	1884-480 19.73	884-480P 19.73	15	0	120

1-1/4" Diameter

1-1/4XCLOSE	885-005 2.27	1885-005 2.27	885-005P 2.27	25	200	120
1-1/4X2	885-020 2.34	1885-020 2.34	885-020P 2.34	25	200	120
1-1/4X2-1/2	885-025 2.56	1885-025 2.56	885-025P 2.56	25	200	120
1-1/4X3	885-030 2.65	1885-030 2.65	885-030P 2.65	25	0	120
1-1/4X3-1/2	885-035 3.04	1885-035 3.04	885-035P 3.04	25	0	120
1-1/4X4	885-040 3.04	1885-040 3.04	885-040P 3.04	25	0	120
1-1/4X4-1/2	885-045 3.47	1885-045 3.47	885-045P 3.47	25	0	120
1-1/4X5	885-050 3.47	1885-050 3.47	885-050P 3.47	25	0	120
1-1/4X5-1/2	885-055 3.89	1885-055 3.89	885-055P 3.89	25	0	120
1-1/4X6	885-060 3.89	1885-060 3.89	885-060P 3.89	25	0	120
1-1/4X7	885-070 4.44	1885-070 4.44	885-070P 4.44	25	0	120
1-1/4X8	885-080 4.67	1885-080 4.67	885-080P 4.67	25	0	120
1-1/4X9	885-090 5.07	1885-090 5.07	885-090P 5.07	25	0	120
1-1/4X10	885-100 5.45	1885-100 5.45	885-100P 5.45	25	0	120
1-1/4X11	885-110 5.83	1885-110 5.83	885-110P 5.83	25	0	120
1-1/4X12	885-120 6.17	1885-120 6.17	885-120P 6.17	25	0	120
1-1/4X13	885-130 7.15	1885-130 7.15	885-130P 7.15	25	0	120
1-1/4X14	885-140 7.41	1885-140 7.41	885-140P 7.41	25	0	120
1-1/4X15	885-150 7.82	1885-150 7.82	885-150P 7.82	25	0	120
1-1/4X16	885-160 8.15	1885-160 8.15	885-160P 8.15	25	0	120
1-1/4X17	885-170 8.93	1885-170 8.93	885-170P 8.93	25	0	120
1-1/4X18	885-180 9.74	1885-180 9.74	885-180P 9.74	25	0	120
1-1/4X19	885-190 10.83	1885-190 10.83	885-190P 10.83	25	0	120
1-1/4X20	885-200 11.05	1885-200 11.05	885-200P 11.05	25	0	120
1-1/4X22	885-220 11.26	1885-220 11.26	885-220P 11.26	25	0	120
1-1/4X24	885-240 11.43	1885-240 11.43	885-240P 11.43	25	0	120
1-1/4X30	885-300 14.92	1885-300 14.92	885-300P 14.92	10	0	120
1-1/4X36	885-360 16.31	1885-360 16.31	885-360P 16.31	10	0	120
1-1/4X42	885-420 20.71	1885-420 20.71	885-420P 20.71	10	0	120
1-1/4X48	885-480 21.55	1885-480 21.55	885-480P 21.55	10	0	120



Nipples PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1-1/2" Diameter						
1-1/2XCLOSE	886-005 2.48	1886-005 2.48	886-005P 2.48	25	0	120
1-1/2X2	886-020 2.74	1886-020 2.74	886-020P 2.74	25	0	120
1-1/2X2-1/2	886-025 2.91	1886-025 2.91	886-025P 2.91	25	0	120
1-1/2X3	886-030 3.13	1886-030 3.13	886-030P 3.13	25	0	120
1-1/2X3-1/2	886-035 3.47	1886-035 3.47	886-035P 3.47	25	0	120
1-1/2X4	886-040 4.16	1886-040 4.16	886-040P 4.16	25	0	120
1-1/2X4-1/2	886-045 4.16	1886-045 4.16	886-045P 4.16	25	0	120
1-1/2X5	886-050 4.67	1886-050 4.67	886-050P 4.67	25	0	120
1-1/2X5-1/2	886-055 4.67	1886-055 4.67	886-055P 4.67	25	0	120
1-1/2X6	886-060 5.01	1886-060 5.01	886-060P 5.01	25	0	120
1-1/2X7	886-070 5.59	1886-070 5.59	886-070P 5.59	25	0	120
1-1/2X8	886-080 6.17	1886-080 6.17	886-080P 6.17	25	0	120
1-1/2X9	886-090 6.54	1886-090 6.54	886-090P 6.54	25	0	120
1-1/2X10	886-100 6.89	1886-100 6.89	886-100P 6.89	25	0	120
1-1/2X11	886-110 7.41	1886-110 7.41	886-110P 7.41	25	0	120
1-1/2X12	886-120 8.32	1886-120 8.32	886-120P 8.32	25	0	120
1-1/2X13	886-130 8.54	1886-130 8.54	886-130P 8.54	25	0	120
1-1/2X14	886-140 9.25	1886-140 9.25	886-140P 9.25	25	0	120
1-1/2X15	886-150 9.65	1886-150 9.65	886-150P 9.65	25	0	120
1-1/2X16	886-160 10.41	1886-160 10.41	886-160P 10.41	25	0	120
1-1/2X17	886-170 10.64	1886-170 10.64	886-170P 10.64	25	0	120
1-1/2X18	886-180 11.33	1886-180 11.33	886-180P 11.33	25	0	120
1-1/2X19	886-190 12.58	1886-190 12.58	886-190P 12.58	25	0	120
1-1/2X20	886-200 12.98	1886-200 12.98	886-200P 12.98	25	0	120
1-1/2X22	886-220 13.13	1886-220 13.13	886-220P 13.13	25	0	120
1-1/2X24	886-240 13.51	1886-240 13.51	886-240P 13.51	25	0	120
1-1/2X30	886-300 18.43	1886-300 18.43	886-300P 18.43	5	0	120
1-1/2X36	886-360 19.34	1886-360 19.34	886-360P 19.34	5	0	120
1-1/2X42	886-420 25.96	1886-420 25.96	886-420P 25.96	5	0	120
1-1/2X48	886-480 27.44	1886-480 27.44	886-480P 27.44	5	0	120

2" Diameter

2XCLOSE	887-005 3.26	1887-005 3.26	887-005P 3.26	25	0	120
2X2	887-020 3.79	1887-020 3.79	887-020P 3.79	25	0	120
2X2-1/2	887-025 3.84	1887-025 3.84	887-025P 3.84	25	0	120
2X3	887-030 3.89	1887-030 3.89	887-030P 3.89	25	0	120
2X3-1/2	887-035 4.54	1887-035 4.54	887-035P 4.54	25	0	120
2X4	887-040 5.39	1887-040 5.39	887-040P 5.39	25	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2" Diameter						
2X4-1/2	887-045 5.39	1887-045 5.39	887-045P 5.39	25	0	120
2X5	887-050 5.83	1887-050 5.83	887-050P 5.83	25	0	120
2X5-1/2	887-055 5.83	1887-055 5.83	887-055P 5.83	25	0	120
2X6	887-060 7.15	1887-060 7.15	887-060P 7.15	25	0	120
2X7	887-070 7.41	1887-070 7.41	887-070P 7.41	25	0	120
2X8	887-080 7.91	1887-080 7.91	887-080P 7.91	25	0	120
2X9	887-090 8.54	1887-090 8.54	887-090P 8.54	25	0	120
2X10	887-100 9.25	1887-100 9.25	887-100P 9.25	25	0	120
2X11	887-110 9.68	1887-110 9.68	887-110P 9.68	25	0	120
2X12	887-120 10.43	1887-120 10.43	887-120P 10.43	25	0	120
2X13	887-130 10.83	1887-130 10.83	887-130P 10.83	25	0	120
2X14	887-140 11.04	1887-140 11.04	887-140P 11.04	20	0	120
2X15	887-150 11.95	1887-150 11.95	887-150P 11.95	20	0	120
2X16	887-160 12.75	1887-160 12.75	887-160P 12.75	20	0	120
2X17	887-170 13.92	1887-170 13.92	887-170P 13.92	20	0	120
2X18	887-180 15.53	1887-180 15.53	887-180P 15.53	20	0	120
2X19	887-190 16.63	1887-190 16.63	887-190P 16.63	25	0	120
2X20	887-200 16.86	1887-200 16.86	887-200P 16.86	20	0	120
2X22	887-220 17.29	1887-220 17.29	887-220P 17.29	20	0	120
2X24	887-240 17.38	1887-240 17.38	887-240P 17.38	20	0	120
2X30	887-300 22.44	1887-300 22.44	887-300P 22.44	5	0	120
2X36	887-360 29.81	1887-360 29.81	887-360P 29.81	5	0	120
2X42	887-420 36.26	1887-420 36.26	887-420P 36.26	5	0	120
2X48	887-480 38.37	1887-480 38.37	887-480P 38.37	5	0	120

2-1/2" Diameter

2-1/2XCLOSE	888-005 11.17	1888-005 11.17	888-005P 11.17	25	0	120
2-1/2X2-1/2	888-025 12.73	1888-025 12.73	888-025P 12.73	25	0	121
2-1/2X3	888-030 12.73	1888-030 12.73	888-030P 12.73	30	0	120
2-1/2X3-1/2	888-035 14.55	1888-035 14.55	888-035P 14.55	25	0	120
2-1/2X4	888-040 16.46	1888-040 16.46	888-040P 16.46	25	0	120
2-1/2X4-1/2	888-045 16.46	1888-045 16.46	888-045P 16.46	25	0	120
2-1/2X5	888-050 18.54	1888-050 18.54	888-050P 18.54	25	0	120
2-1/2X5-1/2	888-055 18.54	1888-055 18.54	888-055P 18.54	25	0	120
2-1/2X6	888-060 20.31	1888-060 20.31	888-060P 20.31	25	0	120
2-1/2X7	888-070 21.40	1888-070 21.40	888-070P 21.40	16	0	120
2-1/2X8	888-080 22.44	1888-080 22.44	888-080P 22.44	16	0	120
2-1/2X9	888-090 25.96	1888-090 25.96	888-090P 25.96	16	0	120

Nipples PVC, CPVC & PE Nipples



PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2-1/2" Diameter						
2-1/2X10	888-100 27.51	1888-100 27.51	888-100P 27.51	16	0	120
2-1/2X11	888-110 29.81	1888-110 29.81	888-110P 29.81	16	0	120
2-1/2X12	888-120 30.03	1888-120 30.03	888-120P 30.03	16	0	120
2-1/2X13	888-130 32.40	1888-130 32.40	888-130P 32.40	25	0	120
2-1/2X14	888-140 33.72	1888-140 33.72	888-140P 33.72	25	0	120
2-1/2X15	888-150 36.26	1888-150 38.82	888-150P 36.26	25	0	120
2-1/2X16	888-160 38.82	1888-160 38.82	888-160P 38.82	20	0	120
2-1/2X17	888-170 39.54	1888-170 39.54	888-170P 39.54	20	0	120
2-1/2X18	888-180 40.21	1888-180 40.21	888-180P 40.21	20	0	120
2-1/2X19	888-190 42.79	1888-190 42.79	888-190P 42.79	25	0	120
2-1/2X20	888-200 44.53	1888-200 44.53	888-200P 44.53	12	0	120
2-1/2X22	888-220 49.48	1888-220 49.48	888-220P 49.48	25	0	120
2-1/2X24	888-240 50.47	1888-240 50.47	888-240P 50.47	10	0	120
2-1/2X30	888-300 61.48	1888-300 61.48	888-300P 61.48	3	0	120
2-1/2X36	888-360 75.14	1888-360 75.14	888-360P 75.14	3	0	120
2-1/2X42	888-420 86.80	1888-420 86.80	888-420P 86.80	3	0	120
2-1/2X48	888-480 93.87	1888-480 93.87	888-480P 93.87	3	0	120

3" Diameter

3XCLOSE	889-005 13.34	1889-005 13.34	889-005P 13.34	25	0	120
3X3	889-030 14.55	1889-030 14.55	889-030P 14.55	20	0	120
3X3-1/2	889-035 17.00	1889-035 17.00	889-035P 17.00	30	0	120
3X4	889-040 19.44	1889-040 19.44	889-040P 19.44	30	0	120
3X4-1/2	889-045 19.44	1889-045 19.44	889-045P 19.44	20	0	120
3X5	889-050 21.79	1889-050 21.79	889-050P 21.79	20	0	120
3X5-1/2	889-055 21.79	1889-055 21.79	889-055P 21.79	20	0	120
3X6	889-060 27.23	1889-060 27.23	889-060P 27.23	20	0	120
3X7	889-070 28.74	1889-070 28.74	889-070P 28.74	10	0	120
3X8	889-080 29.58	1889-080 29.58	889-080P 29.58	10	0	120
3X9	889-090 31.11	1889-090 31.11	889-090P 31.11	10	0	120
3X10	889-100 33.86	1889-100 33.86	889-100P 34.18	10	0	120
3X11	889-110 36.26	1889-110 36.26	889-110P 36.26	10	0	120
3X12	889-120 36.88	1889-120 36.88	889-120P 36.88	10	0	120
3X13	889-130 38.23	1889-130 38.23	889-130P 38.23	20	0	120
3X14	889-140 41.47	1889-140 41.47	889-140P 41.47	20	0	120
3X15	889-150 44.03	1889-150 44.03	889-150P 44.03	20	0	120
3X16	889-160 46.60	1889-160 46.60	889-160P 46.60	20	0	120
3X17	889-170 47.93	1889-170 47.93	889-170P 47.93	10	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3" Diameter						
3X18	889-180 50.47	1889-180 50.47	889-180P 50.47	10	0	120
3X19	889-190 58.26	1889-190 58.26	889-190P 58.26	10	0	120
3X20	889-200 61.48	1889-200 61.48	889-200P 61.48	10	0	120
3X22	889-220 62.85	1889-220 62.85	889-220P 62.85	10	0	120
3X24	889-240 69.26	1889-240 69.26	889-240P 69.26	10	0	120
3X30	889-300 88.21	1889-300 88.21	889-300P 88.21	3	0	120
3X36	889-360 91.24	1889-360 91.24	889-360P 91.24	3	0	120
3X42	889-420 106.82	1889-420 106.82	889-420P 106.82	3	0	120
3X48	889-480 119.14	1889-480 119.14	889-480P 119.14	3	0	120

4" Diameter

4XCLOSE	890-005 21.79	1890-005 21.79	890-005P 21.79	25	0	120
4X2-1/2	890-025 22.85	1890-025 22.85	890-025P 22.85	18	0	120
4X3	890-030 22.85	1890-030 22.85	890-030P 22.85	25	0	120
4X3-1/2	890-035 27.33	1890-035 27.33	890-035P 27.33	25	0	120
4X4	890-040 30.25	1890-040 30.25	890-040P 30.25	18	0	120
4X4-1/2	890-045 30.25	1890-045 30.25	890-045P 30.25	12	0	120
4X5	890-050 30.25	1890-050 30.25	890-050P 30.25	12	0	120
4X5-1/2	890-055 30.25	1890-055 30.25	890-055P 30.25	12	0	120
4X6	890-060 32.40	1890-060 32.40	890-060P 32.40	12	0	120
4X7	890-070 35.56	1890-070 35.56	890-070P 35.56	16	0	120
4X8	890-080 37.61	1890-080 37.61	890-080P 37.61	16	0	120
4X9	890-090 37.85	1890-090 37.85	890-090P 37.85	16	0	120
4X10	890-100 40.21	1890-100 40.21	890-100P 40.21	16	0	120
4X11	890-110 45.38	1890-110 45.38	890-110P 45.38	16	0	120
4X12	890-120 52.39	1890-120 52.39	890-120P 52.39	16	0	120
4X13	890-130 54.36	1890-130 54.36	890-130P 54.36	16	0	120
4X14	890-140 55.69	1890-140 55.69	890-140P 55.69	15	0	120
4X15	890-150 58.26	1890-150 58.26	890-150P 58.26	12	0	120
4X16	890-160 60.89	1890-160 60.89	890-160P 60.89	12	0	120
4X17	890-170 64.77	1890-170 64.77	890-170P 64.77	12	0	120
4X18	890-180 73.05	1890-180 73.05	890-180P 73.05	4	0	120
4X19	890-190 73.78	1890-190 73.78	890-190P 73.78	12	0	120
4X20	890-200 78.99	1890-200 78.99	890-200P 78.99	4	0	120
4X22	890-220 81.56	1890-220 81.56	890-220P 81.56	8	0	120
4X24	890-240 86.95	1890-240 86.95	890-240P 86.95	4	0	120
4X30	890-300 103.59	1890-300 103.59	890-300P 103.59	3	0	120
4X36	890-360 123.04	1890-360 123.04	890-360P 123.04	3	0	120



Nipples PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
4" Diameter						
4X42	890-420 150.20	1890-420 150.20	890-420P 150.20	3	0	120
4X48	890-480 184.38	1890-480 184.38	890-480P 184.38	3	0	120

6" Diameter

6XCLOSE	892-005 23.91	1892-005 23.91	892-005P 23.91	8	0	120
6X4	892-040 30.57	1892-040 30.57	892-040P 30.57	4	0	120
6X4-1/2	892-045 33.88	1892-045 33.88	892-045P 33.88	4	0	120
6X5	892-050 37.19	1892-050 37.19	892-050P 37.19	1	2	120
6X5-1/2	892-055 40.54	1892-055 40.54	892-055P 40.54	1	2	120
6X6	892-060 44.23	1892-060 44.23	892-060P 44.23	1	2	120
6X7	892-070 50.82	1892-070 50.82	892-070P 50.82	1	2	120
6X8	892-080 57.55	1892-080 57.55	892-080P 57.55	1	0	120
6X9	892-090 64.19	1892-090 64.19	892-090P 64.19	1	0	120
6X10	892-100 71.26	1892-100 71.26	892-100P 71.26	1	0	120
6X11	892-110 77.93	1892-110 77.93	892-110P 77.93	1	0	120
6X12	892-120 84.58	1892-120 84.58	892-120P 84.58	1	0	120
6X13	892-130 91.22	1892-130 91.22	892-130P 91.22	1	0	120
6X14	892-140 97.87	1892-140 97.87	892-140P 97.87	1	0	120
6X15	892-150 104.52	1892-150 104.52	892-150P 104.52	1	0	120
6X16	892-160 111.18	1892-160 111.18	892-160P 111.18	1	2	120
6X17	892-170 118.58	1892-170 118.58	892-170P 118.58	1	2	120
6X18	892-180 124.45	1892-180 124.45	892-180P 124.45	1	6	120
6X19	892-190 131.99	1892-190 131.99	892-190P 131.99	1	0	120
6X20	892-200 137.76	1892-200 137.76	892-200P 137.76	2	0	120
6X22	892-220 151.71	1892-220 151.71	892-220P 151.71	1	0	120
6X24	892-240 164.98	1892-240 164.98	892-240P 164.98	1	3	120
6X30	892-300 204.89	1892-300 204.89	892-300P 204.89	1	0	120
6X36	892-360 245.80	1892-360 245.80	892-360P 245.80	1	0	120
6X42	892-420 285.67	1892-420 285.67	892-420P 285.67	1	0	120
6X48	892-480 325.75	1892-480 325.75	892-480P 325.75	1	0	120

8" Diameter

8XCLOSE	893-005 66.13	1893-005 66.13	893-005P 66.13	2	0	120
8X4-1/2	893-045 75.69	1893-045 75.69	893-045P 75.69	1	0	120
8X5	893-050 78.91	1893-050 78.91	893-050P 78.91	1	0	120
8X5-1/2	893-055 82.09	1893-055 82.09	893-055P 82.09	1	0	120
8X6	893-060 85.29	1893-060 85.29	893-060P 85.29	4	0	120
8X7	893-070 91.71	1893-070 91.71	893-070P 91.71	4	0	120
8X8	893-080 98.12	1893-080 98.12	893-080P 98.12	4	0	120
8X9	893-090 104.49	1893-090 104.49	893-090P 104.49	2	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
------	--------------------	------------------	-----------	--------	---------	-----------

8" Diameter

8X10	893-100 110.89	1893-100 110.89	893-100P 110.89	1	0	120
8X11	893-110 117.32	1893-110 117.32	893-110P 117.32	1	0	120
8X12	893-120 123.71	1893-120 123.71	893-120P 123.71	1	0	120
8X13	893-130 130.09	1893-130 130.09	893-130P 130.09	1	0	120
8X14	893-140 136.49	1893-140 136.49	893-140P 136.49	1	0	120
8X15	893-150 142.92	1893-150 142.92	893-150P 142.92	1	0	120
8X16	893-160 149.29	1893-160 149.29	893-160P 149.29	1	0	120
8X17	893-170 155.67	1893-170 155.67	893-170P 155.67	4	0	120
8X18	893-180 162.06	1893-180 162.06	893-180P 162.03	4	0	120
8X19	893-190 168.17	1893-190 168.17	893-190P 168.17	2	0	120
8X20	893-200 174.88	1893-200 174.88	893-200P 174.88	2	0	120
8X22	893-220 187.67	1893-220 187.67	893-220P 187.67	1	0	120
8X24	893-240 201.06	1893-240 201.06	893-240P 201.06	1	2	120
8X30	893-300 240.17	1893-300 240.17	893-300P 240.17	4	0	120
8X36	893-360 277.25	1893-360 277.25	893-360P 277.25	4	0	120
8X42	893-420 315.61	1893-420 315.61	893-420P 315.61	1	0	120
8X48	893-480 354.03	1893-480 354.03	893-480P 354.03	1	0	120

10" Diameter

10XCLOSE	894-005 75.89	1894-005 75.89	894-005P 75.89	1	0	120
10X2	894-020 76.74	1894-020 76.74	894-020P 76.74	1	6	120
10X4-1/2	894-045 90.39	1894-045 90.39	894-045P 90.39	1	0	120
10X5	894-050 94.81	1894-050 94.81	894-050P 94.81	1	0	120
10X5-1/2	894-055 100.04	1894-055 100.04	894-055P 100.04	1	0	120
10X6	894-060 104.87	1894-060 104.87	894-060P 104.87	2	0	120
10X7	894-070 114.53	1894-070 114.53	894-070P 114.53	1	0	120
10X8	894-080 124.18	1894-080 124.18	894-080P 124.18	1	0	120
10X9	894-090 133.66	1894-090 133.66	894-090P 133.66	1	0	120
10X10	894-100 143.52	1894-100 143.52	894-100P 143.52	1	0	120
10X11	894-110 153.17	1894-110 153.17	894-110P 153.17	1	0	120
10X12	894-120 162.83	1894-120 162.83	894-120P 162.83	1	0	120
10X13	894-130 172.47	1894-130 172.47	894-130P 172.47	1	0	120
10X14	894-140 182.15	1894-140 182.15	894-140P 182.15	1	0	120
10X15	894-150 191.80	1894-150 191.80	894-150P 191.80	1	0	120
10X16	894-160 201.45	1894-160 201.45	894-160P 201.45	1	0	120
10X17	894-170 211.12	1894-170 211.12	894-170P 211.12	1	0	120
10X18	894-180 220.78	1894-180 220.78	894-180P 220.78	1	2	120
10X19	894-190 230.42	1894-190 230.42	894-190P 230.42	1	0	120

Nipples PVC, CPVC & PE Nipples



PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
------	--------------------	------------------	-----------	--------	---------	-----------

10" Diameter

10X20	894-200 240.09	1894-200 240.09	894-200P 240.09	1	0	120
10X22	894-220 260.21	1894-220 260.21	894-220P 260.21	1	0	120
10X24	894-240 278.74	1894-240 278.74	894-240P 278.74	1	2	120
10X30	894-300 336.68	1894-300 336.68	894-300P 336.68	1	0	120
10X36	894-360 394.63	1894-360 394.63	894-360P 394.63	1	0	120
10X42	894-420 452.59	1894-420 452.59	894-420P 452.59	1	0	120
10X48	894-480 510.56	1894-480 510.56	894-480P 510.56	1	0	120

12" Diameter

12XCLOSE	895-005 92.13	1895-005 92.13	895-005P 92.13	1	0	120
12X5	895-050 113.31	1895-050 113.31	895-050P 113.31	1	0	120
12X5-1/2	895-055 119.96	1895-055 119.60	895-055P 119.96	1	0	120
12X6	895-060 126.59	1895-060 126.61	895-060P 126.59	1	0	120
12X7	895-070 139.85	1895-070 139.85	895-070P 139.85	1	0	120
12X8	895-080 152.67	1895-080 152.67	895-080P 152.67	1	0	120
12X9	895-090 166.43	1895-090 166.43	895-090P 166.43	1	0	120
12X10	895-100 179.69	1895-100 179.69	895-100P 179.69	1	0	120
12X11	895-110 192.99	1895-110 192.99	895-110P 192.99	1	0	120
12X12	895-120 206.25	1895-120 206.25	895-120P 206.25	1	0	120
12X13	895-130 219.54	1895-130 219.54	895-130P 219.54	1	0	120
12X14	895-140 232.82	1895-140 232.82	895-140P 232.82	1	0	120
12X15	895-150 246.12	1895-150 246.12	895-150P 246.12	1	0	120
12X16	895-160 259.38	1895-160 259.38	895-160P 259.38	1	0	120
12X17	895-170 272.65	1895-170 272.65	895-170P 272.65	1	0	120
12X18	895-180 285.93	1895-180 285.93	895-180P 285.93	1	0	120
12X19	895-190 299.20	1895-190 299.20	895-190P 299.20	1	0	120
12X20	895-200 312.47	1895-200 312.47	895-200P 312.47	1	0	120
12X22	895-220 339.05	1895-220 339.05	895-220P 339.05	1	0	120
12X24	895-240 365.61	1895-240 365.61	895-240P 365.61	1	0	120
12X30	895-300 445.27	1895-300 445.27	895-300P 445.27	1	0	120
12X36	895-360 524.96	1895-360 524.96	895-360P 524.96	1	0	120
12X42	895-420 631.17	1895-420 631.17	895-420P 631.17	1	0	120
12X48	895-480 684.27	1895-480 684.27	895-480P 684.27	1	0	120



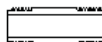
Nipples PVC, CPVC & PE Nipples

The following nipples are normally injection molded, but are optionally available as machined nipples listed below. All other nipples are normally machined.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Schedule 80 Machined Nipples

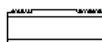
1/4" Diameter



880-005M	1/4XCLOSE	25	1200	120	4.06
880-015M	1/4X1-1/2	25	1200	120	4.32
880-020M	1/4X2	25	500	120	2.96
880-030M	1/4X3	25	500	120	2.01
880-040M	1/4X4	25	250	120	5.13
880-050M	1/4X5	25	250	120	5.39

PVC Schedule 80 Machined Nipples

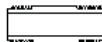
3/8" Diameter



881-015M	3/8X1-1/2	25	800	120	4.63
881-020M	3/8X2	25	600	120	4.63
881-040M	3/8X4	25	300	120	5.86
881-030M	3/8X3	25	400	120	.74

PVC Schedule 80 Machined Nipples

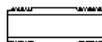
1/2" Diameter



882-005M	1/2XCLOSE	25	450	120	3.42
882-015M	1/2X1-1/2	25	600	120	3.43
882-100M	1/2X10	25	0	120	5.47
882-120M	1/2X12	25	0	120	6.00
882-020M	1/2X2	25	300	120	3.43
882-025M	1/2X2-1/2	25	300	120	3.43
882-030M	1/2X3	25	300	120	3.55
882-040M	1/2X4	25	300	120	3.73
882-045M	1/2X4-1/2	25	300	120	3.99
882-050M	1/2X5	25	300	120	4.16
882-060M	1/2X6	25	300	120	4.34
882-080M	1/2X8	25	0	120	4.94
882-070M	1/2X7	25	200	120	4.59

PVC Schedule 80 Machined Nipples

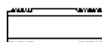
3/4" Diameter



883-005M	3/4X	25	300	120	3.74
883-015M	3/4X1-1/2	25	300	120	3.74
883-100M	3/4X10	25	0	120	6.18
883-120M	3/4X12	25	0	120	6.91
883-020M	3/4X2	25	300	120	4.01
883-025M	3/4X2-1/2	25	300	120	4.06
883-030M	3/4X3	25	300	120	4.09
883-035M	3/4X3-1/2	25	300	120	4.15
883-040M	3/4X4	25	300	120	4.44
883-045M	3/4X4-1/2	25	200	120	4.52
883-050M	3/4X5	25	200	120	4.84
883-060M	3/4X6	25	200	120	5.19
883-080M	3/4X8	25	0	120	5.52

PVC Schedule 80 Machined Nipples

1" Diameter



884-005M	1XCLOSE	25	300	120	4.30
884-100M	1X10	25	0	120	8.63
884-120M	1X12	25	0	120	9.80
884-020M	1X2	25	300	120	4.60
884-025M	1X2-1/2	25	200	120	4.56
884-030M	1X3	25	200	120	4.64
884-040M	1X4	25	200	120	5.18

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

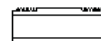
PVC Schedule 80 Machined Nipples (continued)

1" Diameter

884-050M	1X5	25	0	120	5.75
884-060M	1X6	25	0	120	6.29
884-080M	1X8	25	0	120	7.40

PVC Schedule 80 Machined Nipples

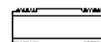
1-1/4" Diameter



885-005M	1-1/4X	25	200	120	4.38
885-120M	1-1/4X12	25	0	120	10.93
885-020M	1-1/4X2	25	200	120	4.69
885-030M	1-1/4X3	25	0	120	5.03
885-040M	1-1/4X4	25	0	120	5.75
885-060M	1-1/4X6	25	0	120	3.89

PVC Schedule 80 Machined Nipples

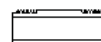
1-1/2" Diameter



886-005M	1-1/2XCLOSE	25	0	120	4.97
886-100M	1-1/2X10	25	0	120	11.76
886-120M	1-1/2X12	25	0	120	13.48
886-020M	1-1/2X2	25	0	120	5.32
886-030M	1-1/2X3	25	0	120	6.63
886-040M	1-1/2X4	25	0	120	6.63
886-060M	1-1/2X6	25	0	120	8.27
886-070M	1-1/2X7	25	0	120	9.17
886-080M	1-1/2X8	25	0	120	10.02

PVC Schedule 80 Machined Nipples

2" Diameter



887-005M	2XCLOSE	25	0	120	5.93
887-030M	2X3	25	0	120	7.21
887-040M	2X4	25	0	120	8.34
887-060M	2X6	25	0	120	10.79

PVC Reducing Nipples

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
882-101	3/4X1/2	50	300	120	1.55
884-130R	1X1/2	25	300	120	2.09
884-131	1X3/4	50	200	120	2.17

CPVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
------	--------------------	------------------	-----------	--------	---------	-----------

1/4" Diameter

1/4XCLOSE	880-005C 2.54	1880-005C 2.54	880-005CP 2.54	25	1200	121
1/4X1-1/2	880-015C 2.74	1880-015C 2.74	880-015CP 2.74	25	1200	121
1/4X2	880-020C 2.96	1880-020C 2.96	880-020CP 2.96	25	500	121
1/4X2-1/2	880-025C 3.44	1880-025C 3.44	880-025CP 3.44	25	500	121
1/4X3	880-030C 3.44	1880-030C 3.44	880-030CP 3.44	25	500	121
1/4X3-1/2	880-035C 3.89	1880-035C 3.89	880-035CP 3.89	25	500	121
1/4X4	880-040C 3.89	1880-040C 3.89	880-040CP 3.89	25	250	121
1/4X4-1/2	880-045C 4.36	1880-045C 4.36	880-045CP 4.36	25	250	121
1/4X5	880-050C 4.36	1880-050C 4.36	880-050CP 4.36	25	250	121

Nipples PVC, CPVC & PE Nipples



CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/4" Diameter						
1/4X5-1/2	880-055C 4.74	1880-055C 4.74	880-055CP 4.74	25	250	121
1/4X6	880-060C 4.74	1880-060C 4.74	880-060CP 4.74	25	250	121
1/4X7	880-070C 7.17	1880-070C 7.17	880-070CP 7.17	25	250	121
1/4X8	880-080C 7.71	1880-080C 7.71	880-080CP 7.71	25	250	121
1/4X9	880-090C 8.19	1880-090C 8.19	880-090CP 8.19	25	250	121
1/4X10	880-100C 8.62	1880-100C 8.62	880-100CP 8.62	25	250	121
1/4X11	880-110C 9.14	1880-110C 9.14	880-110CP 9.14	25	250	121
1/4X12	880-120C 9.53	1880-120C 9.53	880-120CP 9.53	25	250	121
1/4X13	880-130C 12.07	1880-130C 12.07	880-130CP 12.07	25	250	121
1/4X14	880-140C 15.51	1880-140C 15.51	880-140CP 15.51	25	250	121
1/4X15	880-150C 16.13	1880-150C 16.13	880-150CP 16.13	25	500	121
1/4X16	880-160C 16.33	1880-160C 16.33	880-160CP 16.33	25	250	121
1/4X17	880-170C 17.19	1880-170C 17.19	880-170CP 17.19	25	0	121
1/4X18	880-180C 18.59	1880-180C 18.59	880-180CP 18.59	25	300	121
1/4X19	880-190C 18.97	1880-190C 18.97	880-190CP 18.97	25	0	121
1/4X20	880-200C 19.47	1880-200C 19.47	880-200CP 19.47	25	0	121
1/4X22	880-220C 20.18	1880-220C 20.18	880-220CP 20.18	25	300	121
1/4X24	880-240C 23.33	1880-240C 23.33	880-240CP 23.33	25	0	121
1/4X30	880-300C 28.24	1880-300C 28.24	880-300CP 28.24	25	0	121
1/4X36	880-360C 33.34	1880-360C 33.34	880-360CP 33.34	25	0	121
1/4X42	880-420C 39.12	1880-420C 39.12	880-420CP 39.12	25	0	121
1/4X48	880-480C 40.85	1880-480C 40.85	880-480CP 40.85	25	0	121

3/8" Diameter

3/8XCLOSE	881-005C 2.91	1881-005C 2.91	881-005CP 2.91	25	800	121
3/8X1-1/2	881-015C 3.04	1881-015C 3.04	881-015CP 3.04	25	800	121
3/8X2	881-020C 3.44	1881-020C 3.44	881-020CP 3.44	25	600	121
3/8X2-1/2	881-025C 3.88	1881-025C 3.88	881-025CP 3.88	25	600	121
3/8X3	881-030C 4.07	1881-030C 4.07	881-030CP 4.07	25	400	121
3/8X3-1/2	881-035C 4.54	1881-035C 4.54	881-035CP 4.54	25	400	121
3/8X4	881-040C 4.92	1881-040C 4.92	881-040CP 4.92	25	300	121
3/8X4-1/2	881-045C 5.39	1881-045C 5.39	881-045CP 5.39	25	250	121
3/8X5	881-050C 5.80	1881-050C 5.80	881-050CP 5.80	25	250	121
3/8X5-1/2	881-055C 6.37	1881-055C 6.37	881-055CP 6.37	25	250	121
3/8X6	881-060C 7.05	1881-060C 7.05	881-060CP 7.05	25	250	121
3/8X7	881-070C 8.46	1881-070C 8.46	881-070CP 8.46	25	200	121
3/8X8	881-080C 8.85	1881-080C 8.85	881-080CP 8.85	25	200	121
3/8X9	881-090C 9.86	1881-090C 9.86	881-090CP 9.86	25	200	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/8" Diameter						
3/8X10	881-100C 10.04	1881-100C 10.04	881-100CP 10.04	25	200	121
3/8X11	881-110C 10.67	1881-110C 10.67	881-110CP 10.67	25	200	121
3/8X12	881-120C 10.87	1881-120C 10.87	881-120CP 10.87	25	200	121
3/8X13	881-130C 13.94	1881-130C 13.94	881-130CP 13.94	25	0	121
3/8X14	881-140C 16.97	1881-140C 16.97	881-140CP 16.97	25	200	121
3/8X15	881-150C 17.35	1881-150C 17.35	881-150CP 17.35	25	200	121
3/8X16	881-160C 17.76	1881-160C 17.76	881-160CP 17.76	25	200	121
3/8X17	881-170C 18.38	1881-170C 18.38	881-170CP 18.38	25	0	121
3/8X18	881-180C 19.01	1881-180C 19.01	881-180CP 19.01	25	200	121
3/8X19	881-190C 19.60	1881-190C 19.60	881-190CP 19.60	25	0	121
3/8X20	881-200C 20.22	1881-200C 20.22	881-200CP 20.22	25	0	121
3/8X22	881-220C 20.87	1881-220C 20.87	881-220CP 20.87	25	0	121
3/8X24	881-240C 21.82	1881-240C 21.82	881-240CP 21.82	25	0	121
3/8X30	881-300C 33.37	1881-300C 33.37	881-300CP 33.37	25	0	121
3/8X36	881-360C 41.21	1881-360C 41.21	881-360CP 41.21	25	0	121
3/8X42	881-420C 42.19	1881-420C 42.19	881-420CP 42.19	25	0	121
3/8X48	881-480C 43.65	1881-480C 43.65	881-480CP 43.65	25	0	121

1/2" Diameter

1/2XCLOSE	882-005C 2.74	1882-005C 2.74	882-005CP 2.74	25	450	121
1/2X1-1/2	882-015C 2.96	1882-015C 2.96	882-015CP 2.96	25	600	121
1/2X2	882-020C 3.26	1882-020C 3.26	882-020CP 3.26	25	300	121
1/2X2-1/2	882-025C 3.47	1882-025C 3.47	882-025CP 3.47	25	300	121
1/2X3	882-030C 3.72	1882-030C 3.72	882-030CP 3.72	25	300	121
1/2X3-1/2	882-035C 4.36	1882-035C 4.36	882-035CP 4.36	25	300	121
1/2X4	882-040C 4.36	1882-040C 4.36	882-040CP 4.36	25	300	121
1/2X4-1/2	882-045C 4.89	1882-045C 4.89	882-045CP 4.89	25	300	121
1/2X5	882-050C 4.89	1882-050C 4.89	882-050CP 4.89	25	300	121
1/2X5-1/2	882-055C 5.52	1882-055C 5.52	882-055CP 5.52	25	300	121
1/2X6	882-060C 5.52	1882-060C 5.52	882-060CP 5.52	25	300	121
1/2X7	882-070C 8.06	1882-070C 8.06	882-070CP 8.06	25	200	121
1/2X8	882-080C 8.60	1882-080C 8.60	882-080CP 8.60	25	0	121
1/2X9	882-090C 9.28	1882-090C 9.28	882-090CP 9.28	25	0	121
1/2X10	882-100C 9.77	1882-100C 9.77	882-100CP 9.77	25	0	121
1/2X11	882-110C 10.41	1882-110C 10.41	882-110CP 10.41	25	0	121
1/2X12	882-120C 11.04	1882-120C 11.04	882-120CP 11.04	25	0	121
1/2X13	882-130C 13.61	1882-130C 13.61	882-130CP 13.61	25	0	121
1/2X14	882-140C 16.17	1882-140C 16.17	882-140CP 16.17	25	0	121



Nipples PVC, CPVC & PE Nipples

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/2" Diameter						
1/2X15	882-150C 16.67	1882-150C 16.67	882-150CP 16.67	100	0	121
1/2X16	882-160C 17.22	1882-160C 17.22	882-160CP 17.22	100	0	121
1/2X17	882-170C 17.96	1882-170C 17.96	882-170CP 17.96	100	0	121
1/2X18	882-180C 18.26	1882-180C 18.26	882-180CP 18.26	25	100	121
1/2X19	882-190C 18.93	1882-190C 18.93	882-190CP 18.93	100	0	121
1/2X20	882-200C 19.57	1882-200C 19.57	882-200CP 19.57	100	0	121
1/2X22	882-220C 21.07	1882-220C 21.07	882-220CP 21.07	100	0	121
1/2X24	882-240C 22.13	1882-240C 22.13	882-240CP 22.13	100	0	121
1/2X30	882-300C 33.23	1882-300C 33.23	882-300CP 33.23	25	0	121
1/2X36	882-360C 36.56	1882-360C 36.56	882-360CP 36.56	25	0	121
1/2X42	882-420C 40.05	1882-420C 40.05	882-420CP 40.05	25	0	121
1/2X48	882-480C 44.18	1882-480C 44.18	882-480CP 44.18	25	0	121

3/4" Diameter

3/4XCLOSE	883-005C 3.36	1883-005C 3.36	883-005CP 3.36	25	300	121
3/4X1-1/2	883-015C 3.61	1883-015C 3.61	883-015CP 3.61	25	300	121
3/4X2	883-020C 3.89	1883-020C 3.89	883-020CP 3.89	25	300	121
3/4X2-1/2	883-025C 4.44	1883-025C 4.44	883-025CP 4.44	25	300	121
3/4X3	883-030C 4.44	1883-030C 4.44	883-030CP 4.44	25	300	121
3/4X3-1/2	883-035C 5.14	1883-035C 5.14	883-035CP 5.14	25	300	121
3/4X4	883-040C 5.14	1883-040C 5.14	883-040CP 5.14	25	300	121
3/4X4-1/2	883-045C 5.69	1883-045C 5.69	883-045CP 5.69	25	200	121
3/4X5	883-050C 5.69	1883-050C 5.69	883-050CP 5.69	25	200	121
3/4X5-1/2	883-055C 6.36	1883-055C 6.36	883-055CP 6.36	25	200	121
3/4X6	883-060C 6.36	1883-060C 6.36	883-060CP 6.36	25	200	121
3/4X7	883-070C 9.57	1883-070C 9.57	883-070CP 9.57	25	200	121
3/4X8	883-080C 10.11	1883-080C 10.11	883-080CP 10.11	25	0	121
3/4X9	883-090C 10.83	1883-090C 10.83	883-090CP 10.83	25	0	121
3/4X10	883-100C 11.36	1883-100C 11.36	883-100CP 11.36	25	0	121
3/4X11	883-110C 12.06	1883-110C 12.06	883-110CP 12.06	25	0	121
3/4X12	883-120C 12.78	1883-120C 12.78	883-120CP 12.78	25	0	121
3/4X13	883-130C 15.97	1883-130C 15.97	883-130CP 15.97	25	0	121
3/4X14	883-140C 19.15	1883-140C 19.15	883-140CP 19.15	100	0	121
3/4X15	883-150C 19.67	1883-150C 19.67	883-150CP 19.67	100	0	121
3/4X16	883-160C 20.25	1883-160C 20.25	883-160CP 20.25	100	0	121
3/4X17	883-170C 20.92	1883-170C 20.92	883-170CP 20.92	100	0	121
3/4X18	883-180C 21.60	1883-180C 21.60	883-180CP 21.60	25	0	121
3/4X19	883-190C 22.17	1883-190C 22.17	883-190CP 22.17	100	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/4" Diameter						
3/4X20	883-200C 22.75	1883-200C 22.75	883-200CP 22.75	100	0	121
3/4X22	883-220C 24.14	1883-220C 24.14	883-220CP 24.14	100	0	121
3/4X24	883-240C 25.55	1883-240C 25.55	883-240CP 25.55	100	0	121
3/4X30	883-300C 38.96	1883-300C 38.96	883-300CP 38.96	25	0	121
3/4X36	883-360C 42.47	1883-360C 42.47	883-360CP 42.37	25	0	121
3/4X42	883-420C 46.63	1883-420C 46.63	883-420CP 46.63	25	0	121
3/4X48	883-480C 49.72	1883-480C 49.72	883-480CP 49.72	25	0	121

1" Diameter

1XCLOSE	884-005C 4.07	1884-005C 4.07	884-005CP 4.07	25	300	121
1X2	884-020C 4.44	1884-020C 4.44	884-020CP 4.44	25	300	121
1X2-1/2	884-025C 5.52	1884-025C 5.52	884-025CP 5.52	25	200	121
1X3	884-030C 5.52	1884-030C 5.52	884-030CP 5.52	25	200	121
1X3-1/2	884-035C 6.36	1884-035C 6.36	884-035CP 6.36	25	200	121
1X4	884-040C 6.36	1884-040C 6.36	884-040CP 6.36	25	200	121
1X4-1/2	884-045C 7.17	1884-045C 7.17	884-045CP 7.17	25	200	121
1X5	884-050C 7.17	1884-050C 7.17	884-050CP 7.17	25	0	121
1X5-1/2	884-055C 8.32	1884-055C 8.32	884-055CP 8.32	25	0	121
1X6	884-060C 8.32	1884-060C 8.32	884-060CP 8.32	25	0	121
1X7	884-070C 11.63	1884-070C 11.63	884-070CP 11.63	25	0	121
1X8	884-080C 12.74	1884-080C 12.74	884-080CP 12.74	25	0	121
1X9	884-090C 13.82	1884-090C 13.82	884-090CP 13.82	25	0	121
1X10	884-100C 14.84	1884-100C 14.84	884-100CP 14.84	25	0	121
1X11	884-110C 15.52	1884-110C 15.52	884-110CP 15.52	25	0	121
1X12	884-120C 16.68	1884-120C 16.68	884-120CP 16.68	25	0	121
1X13	884-130C 19.95	1884-130C 19.95	884-130CP 19.95	25	0	121
1X14	884-140C 23.26	1884-140C 23.26	884-140CP 23.26	50	0	121
1X15	884-150C 24.38	1884-150C 24.38	884-150CP 24.38	50	0	121
1X16	884-160C 25.52	1884-160C 25.52	884-160CP 25.52	50	0	121
1X17	884-170C 26.59	1884-170C 26.59	884-170CP 26.59	50	0	121
1X18	884-180C 27.67	1884-180C 27.67	884-180CP 27.67	50	0	121
1X19	884-190C 28.26	1884-190C 28.26	884-190CP 28.26	50	0	121
1X20	884-200C 28.94	1884-200C 28.94	884-200CP 28.94	25	0	121
1X22	884-220C 31.41	1884-220C 31.41	884-220CP 31.41	50	0	121
1X24	884-240C 33.26	1884-240C 33.26	884-240CP 33.26	50	0	121
1X30	884-300C 48.81	1884-300C 48.81	884-300CP 48.81	15	0	121
1X36	884-360C 55.32	1884-360C 55.32	884-360CP 55.32	15	0	121
1X42	884-420C 58.63	1884-420C 58.63	884-420CP 58.63	15	0	121

Nipples PVC, CPVC & PE Nipples



CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1" Diameter						
1X48	884-480C 66.57	1884-480C 66.57	884-480CP 66.57	15	0	121

1-1/4" Diameter

1-1/4XCLOSE	885-005C 5.14	1885-005C 5.14	885-005CP 5.14	25	200	121
1-1/4X2	885-020C 5.69	1885-020C 5.69	885-020CP 5.69	25	200	121
1-1/4X2-1/2	885-025C 7.17	1885-025C 7.17	885-025CP 7.17	25	200	121
1-1/4X3	885-030C 7.58	1885-030C 7.58	885-030CP 7.58	25	0	121
1-1/4X3-1/2	885-035C 8.93	1885-035C 8.93	885-035CP 8.93	25	0	121
1-1/4X4	885-040C 8.93	1885-040C 8.93	885-040CP 8.93	25	0	121
1-1/4X4-1/2	885-045C 10.49	1885-045C 10.49	885-045CP 10.49	25	0	121
1-1/4X5	885-050C 10.49	1885-050C 10.49	885-050CP 10.49	25	0	121
1-1/4X5-1/2	885-055C 12.06	1885-055C 12.06	885-055CP 12.06	25	0	121
1-1/4X6	885-060C 12.06	1885-060C 12.06	885-060CP 12.06	25	0	121
1-1/4X7	885-070C 17.71	1885-070C 17.71	885-070CP 17.71	25	0	121
1-1/4X8	885-080C 18.43	1885-080C 18.43	885-080CP 18.43	25	0	121
1-1/4X9	885-090C 19.25	1885-090C 19.25	885-090CP 19.25	25	0	121
1-1/4X10	885-100C 20.95	1885-100C 20.95	885-100CP 20.95	25	0	121
1-1/4X11	885-110C 22.54	1885-110C 22.54	885-110CP 22.54	25	0	121
1-1/4X12	885-120C 24.08	1885-120C 24.08	885-120CP 24.08	25	0	121
1-1/4X13	885-130C 28.22	1885-130C 28.22	885-130CP 28.22	25	0	121
1-1/4X14	885-140C 32.35	1885-140C 32.35	885-140CP 32.35	25	0	121
1-1/4X15	885-150C 33.88	1885-150C 33.88	885-150CP 33.88	25	0	121
1-1/4X16	885-160C 35.42	1885-160C 35.42	885-160CP 35.42	25	0	121
1-1/4X17	885-170C 37.00	1885-170C 37.00	885-170CP 37.00	25	0	121
1-1/4X18	885-180C 39.32	1885-180C 39.32	885-180CP 39.32	25	0	121
1-1/4X19	885-190C 40.25	1885-190C 40.25	885-190CP 40.25	25	0	121
1-1/4X20	885-200C 41.93	1885-200C 41.93	885-200CP 41.93	25	0	121
1-1/4X22	885-220C 45.04	1885-220C 45.04	885-220CP 45.04	25	0	121
1-1/4X24	885-240C 51.47	1885-240C 51.47	885-240CP 51.47	25	0	121
1-1/4X30	885-300C 67.77	1885-300C 67.77	885-300CP 67.77	10	0	121
1-1/4X36	885-360C 71.54	1885-360C 71.54	885-360CP 71.54	10	0	121
1-1/4X42	885-420C 86.74	1885-420C 86.74	885-420CP 86.74	10	0	121
1-1/4X48	885-480C 96.33	1885-480C 96.33	885-480CP 96.33	10	0	121

1-1/2" Diameter

1-1/2XCLOSE	886-005C 5.69	1886-005C 5.69	886-005CP 5.69	25	0	121
1-1/2X2	886-020C 6.36	1886-020C 6.36	886-020CP 6.36	25	0	121
1-1/2X2-1/2	886-025C 7.91	1886-025C 7.91	886-025CP 7.91	25	0	121
1-1/2X3	886-030C 7.91	1886-030C 7.91	886-030CP 7.91	25	0	121
1-1/2X3-1/2	886-035C 9.57	1886-035C 9.57	886-035CP 9.57	25	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1-1/2" Diameter						

1-1/2X4	886-040C 9.57	1886-040C 9.57	886-040CP 9.57	25	0	121
1-1/2X4-1/2	886-045C 11.17	1886-045C 11.17	886-045CP 11.17	25	0	121
1-1/2X5	886-050C 12.73	1886-050C 12.73	886-050CP 12.73	25	0	121
1-1/2X5-1/2	886-055C 12.73	1886-055C 12.73	886-055CP 12.73	25	0	121
1-1/2X6	886-060C 12.73	1886-060C 12.73	886-060CP 12.73	25	0	121
1-1/2X7	886-070C 19.09	1886-070C 19.09	886-070CP 19.09	25	0	121
1-1/2X8	886-080C 20.68	1886-080C 20.68	886-080CP 20.68	25	0	121
1-1/2X9	886-090C 21.28	1886-090C 21.28	886-090CP 21.28	25	0	121
1-1/2X10	886-100C 23.20	1886-100C 23.20	886-100CP 23.20	25	0	121
1-1/2X11	886-110C 23.93	1886-110C 23.93	886-110CP 23.93	25	0	121
1-1/2X12	886-120C 25.52	1886-120C 25.52	886-120CP 25.52	25	0	121
1-1/2X13	886-130C 30.22	1886-130C 30.22	886-130CP 30.22	25	0	121
1-1/2X14	886-140C 34.91	1886-140C 34.91	886-140CP 34.91	25	0	121
1-1/2X15	886-150C 36.96	1886-150C 36.96	886-150CP 36.96	25	0	121
1-1/2X16	886-160C 39.68	1886-160C 39.68	886-160CP 39.68	25	0	121
1-1/2X17	886-170C 40.16	1886-170C 40.16	886-170CP 40.16	25	0	121
1-1/2X18	886-180C 41.34	1886-180C 41.34	886-180CP 41.34	25	0	121
1-1/2X19	886-190C 42.98	1886-190C 42.98	886-190CP 42.98	25	0	121
1-1/2X20	886-200C 44.59	1886-200C 44.59	886-200CP 44.59	25	0	121
1-1/2X22	886-220C 47.79	1886-220C 47.79	886-220CP 47.79	25	0	121
1-1/2X24	886-240C 51.00	1886-240C 51.00	886-240CP 51.00	25	0	121
1-1/2X30	886-300C 73.15	1886-300C 73.15	886-300CP 73.15	5	0	121
1-1/2X36	886-360C 82.69	1886-360C 82.69	886-360CP 82.69	5	0	121
1-1/2X42	886-420C 92.38	1886-420C 92.38	886-420CP 92.38	5	0	121
1-1/2X48	886-480C 101.98	1886-480C 101.98	886-480CP 101.98	5	0	121

2" Diameter

2XCLOSE	887-005C 8.81	1887-005C 8.81	887-005CP 8.81	25	0	121
2X2	887-020C 10.49	1887-020C 10.49	887-020CP 10.49	25	0	121
2X2-1/2	887-025C 10.49	1887-025C 10.49	887-025CP 10.49	25	0	121
2X3	887-030C 12.44	1887-030C 12.44	887-030CP 12.44	25	0	121
2X3-1/2	887-035C 12.44	1887-035C 12.44	887-035CP 12.44	25	0	121
2X4	887-040C 14.38	1887-040C 14.38	887-040CP 14.38	25	0	121
2X4-1/2	887-045C 14.38	1887-045C 14.38	887-045CP 14.38	25	0	121
2X5	887-050C 16.31	1887-050C 16.31	887-050CP 16.31	25	0	121
2X5-1/2	887-055C 16.31	1887-055C 16.31	887-055CP 16.31	25	0	121
2X6	887-060C 22.93	1887-060C 22.93	887-060CP 22.93	25	0	121
2X7	887-070C 23.63	1887-070C 23.63	887-070CP 23.63	25	0	121



Nipples PVC, CPVC & PE Nipples

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2" Diameter						
2X8	887-080C 24.87	1887-080C 24.87	887-080CP 24.87	25	0	121
2X9	887-090C 27.04	1887-090C 27.04	887-090CP 27.04	25	0	121
2X10	887-100C 28.99	1887-100C 28.99	887-100CP 28.99	25	0	121
2X11	887-110C 30.69	1887-110C 30.69	887-110CP 30.69	25	0	121
2X12	887-120C 32.65	1887-120C 32.65	887-120CP 32.65	25	0	121
2X13	887-130C 39.20	1887-130C 39.20	887-130CP 39.20	25	0	121
2X14	887-140C 45.88	1887-140C 45.88	887-140CP 45.88	25	0	121
2X15	887-150C 47.77	1887-150C 47.77	887-150CP 47.77	25	0	121
2X16	887-160C 49.71	1887-160C 49.71	887-160CP 49.71	25	0	121
2X17	887-170C 52.92	1887-170C 52.92	887-170CP 52.92	20	0	121
2X18	887-180C 56.09	1887-180C 56.09	887-180CP 56.09	20	0	121
2X19	887-190C 59.68	1887-190C 59.68	887-190CP 59.68	25	0	121
2X20	887-200C 60.76	1887-200C 60.76	887-200CP 60.76	20	0	121
2X22	887-220C 62.21	1887-220C 62.21	887-220CP 62.21	20	0	121
2X24	887-240C 65.27	1887-240C 65.27	887-240CP 65.27	20	0	121
2X30	887-300C 95.57	1887-300C 95.57	887-300CP 95.57	5	0	121
2X36	887-360C 114.47	1887-360C 114.47	887-360CP 114.47	5	0	121
2X42	887-420C 131.79	1887-420C 131.79	887-420CP 131.79	5	0	121
2X48	887-480C 149.63	1887-480C 149.63	887-480CP 149.63	5	0	121

2-1/2" Diameter

2-1/2XCLOSE	888-005C 15.99	1888-005C 15.99	888-005CP 15.99	25	0	121
2-1/2X3	888-030C 17.55	1888-030C 17.55	888-030CP 17.55	25	0	121
2-1/2X3-1/2	888-035C 21.40	1888-035C 21.40	888-035CP 21.40	25	0	121
2-1/2X4	888-040C 21.40	1888-040C 21.40	888-040CP 21.40	25	0	121
2-1/2X4-1/2	888-045C 25.57	1888-045C 25.57	888-045CP 25.57	25	0	121
2-1/2X5	888-050C 25.57	1888-050C 25.57	888-050CP 25.57	25	0	121
2-1/2X5-1/2	888-055C 30.00	1888-055C 30.00	888-055CP 30.00	25	0	121
2-1/2X6	888-060C 30.00	1888-060C 30.00	888-060CP 30.00	25	0	121
2-1/2X7	888-070C 38.37	1888-070C 38.45	888-070CP 38.37	16	0	121
2-1/2X8	888-080C 42.76	1888-080C 42.76	888-080CP 42.76	16	0	121
2-1/2X9	888-090C 46.92	1888-090C 46.92	888-090CP 46.92	25	0	121
2-1/2X10	888-100C 51.11	1888-100C 51.11	888-100CP 51.11	16	0	121
2-1/2X11	888-110C 55.54	1888-110C 55.54	888-110CP 55.54	16	0	121
2-1/2X12	888-120C 59.97	1888-120C 59.97	888-120CP 59.97	16	0	121
2-1/2X13	888-130C 68.35	1888-130C 68.35	888-130CP 68.35	25	0	121
2-1/2X14	888-140C 76.72	1888-140C 76.72	888-140CP 76.72	25	0	121
2-1/2X15	888-150C 82.01	1888-150C 82.01	888-150CP 82.01	25	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2-1/2" Diameter						
2-1/2X16	888-160C 87.49	1888-160C 87.49	888-160CP 87.49	20	0	121
2-1/2X17	888-170C 90.42	1888-170C 90.42	888-170CP 90.42	20	0	121
2-1/2X18	888-180C 93.85	1888-180C 93.85	888-180CP 93.85	20	0	121
2-1/2X19	888-190C 98.03	1888-190C 98.03	888-190CP 98.03	25	0	121
2-1/2X20	888-200C 102.22	1888-200C 102.22	888-200CP 102.22	12	0	121
2-1/2X22	888-220C 111.06	1888-220C 111.06	888-220CP 111.06	25	0	121
2-1/2X24	888-240C 120.17	1888-240C 120.17	888-240CP 120.17	10	0	121
2-1/2X30	888-300C 125.79	1888-300C 125.79	888-300CP 125.79	3	0	121
2-1/2X36	888-360C 151.76	1888-360C 151.76	888-360CP 151.76	3	0	121
2-1/2X42	888-420C 174.42	1888-420C 174.42	888-420CP 174.42	3	0	121
2-1/2X48	888-480C 198.63	1888-480C 198.63	888-480CP 198.63	3	0	121

3" Diameter

3XCLOSE	889-005C 20.71	1889-005C 20.71	889-005CP 20.71	25	0	121
3X3	889-030C 20.71	1889-030C 20.71	889-030CP 20.71	20	0	121
3X3-1/2	889-035C 27.08	1889-035C 27.08	889-035CP 27.08	30	0	121
3X4	889-040C 27.08	1889-040C 27.08	889-040CP 27.08	30	0	121
3X4-1/2	889-045C 31.53	1889-045C 31.53	889-045CP 31.53	20	0	121
3X5	889-050C 36.01	1889-050C 36.01	889-050CP 36.01	20	0	121
3X5-1/2	889-055C 36.01	1889-055C 36.01	889-055CP 36.01	20	0	121
3X6	889-060C 42.38	1889-060C 42.38	889-060CP 42.38	20	0	121
3X7	889-070C 45.38	1889-070C 45.38	889-070CP 45.38	10	0	121
3X8	889-080C 52.29	1889-080C 52.29	889-080CP 52.29	10	0	121
3X9	889-090C 58.46	1889-090C 58.46	889-090CP 58.46	10	0	121
3X10	889-100C 68.43	1889-100C 68.43	889-100CP 68.43	10	0	121
3X11	889-110C 74.25	1889-110C 74.25	889-110CP 74.25	10	0	121
3X12	889-120C 78.74	1889-120C 78.74	889-120CP 78.74	10	0	121
3X13	889-130C 81.40	1889-130C 81.40	889-130CP 81.40	20	0	121
3X14	889-140C 90.71	1889-140C 90.71	889-140CP 90.71	20	0	121
3X15	889-150C 101.16	1889-150C 101.16	889-150CP 101.16	20	0	121
3X16	889-160C 104.59	1889-160C 104.59	889-160CP 104.59	20	0	121
3X17	889-170C 114.91	1889-170C 114.91	889-170CP 114.91	10	0	121
3X18	889-180C 116.97	1889-180C 116.97	889-180CP 116.97	10	0	121
3X19	889-190C 126.39	1889-190C 126.39	889-190CP 126.39	10	0	121
3X20	889-200C 133.85	1889-200C 133.85	889-200CP 133.85	10	0	121
3X22	889-220C 138.63	1889-220C 138.63	889-220CP 138.63	10	0	121
3X24	889-240C 144.19	1889-240C 144.19	889-240CP 144.19	10	0	121
3X30	889-300C 191.79	1889-300C 191.79	889-300CP 191.79	3	0	121

Nipples PVC, CPVC & PE Nipples



CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3" Diameter						
3X36	889-360C 233.88	1889-360C 233.88	889-360CP 233.88	3	0	121
3X42	889-420C 266.00	1889-420C 266.00	889-420CP 266.00	3	0	121
3X48	889-480C 288.32	1889-480C 288.32	889-480CP 288.32	3	0	121

4" Diameter

4XCLOSE	890-005C 31.93	1890-005C 31.93	890-005CP 31.93	25	0	121
4X3	890-030C 36.47	1890-030C 36.47	890-030CP 36.47	25	0	121
4X3-1/2	890-035C 36.47	1890-035C 36.47	890-035CP 36.47	25	0	121
4X4	890-040C 38.33	1890-040C 38.33	890-040CP 38.33	18	0	121
4X4-1/2	890-045C 44.64	1890-045C 44.64	890-045CP 44.64	12	0	121
4X5	890-050C 44.64	1890-050C 44.64	890-050CP 44.64	12	0	121
4X5-1/2	890-055C 51.01	1890-055C 51.01	890-055CP 51.01	12	0	121
4X6	890-060C 60.60	1890-060C 60.60	890-060CP 60.60	12	0	121
4X7	890-070C 64.03	1890-070C 64.03	890-070CP 64.03	16	0	121
4X8	890-080C 76.60	1890-080C 76.60	890-080CP 76.60	16	0	121
4X9	890-090C 82.95	1890-090C 82.95	890-090CP 82.95	16	0	121
4X10	890-100C 89.36	1890-100C 89.36	890-100CP 89.36	16	0	121
4X11	890-110C 98.60	1890-110C 98.60	890-110CP 98.60	16	0	121
4X12	890-120C 102.06	1890-120C 102.06	890-120CP 102.06	16	0	121
4X13	890-130C 113.16	1890-130C 113.16	890-130CP 113.16	16	0	121
4X14	890-140C 121.79	1890-140C 121.79	890-140CP 121.79	16	0	121
4X15	890-150C 137.20	1890-150C 137.20	890-150CP 137.20	12	0	121
4X16	890-160C 153.18	1890-160C 153.47	890-160CP 153.18	12	0	121
4X17	890-170C 159.55	1890-170C 159.55	890-170CP 159.55	12	0	121
4X18	890-180C 165.92	1890-180C 165.92	890-180CP 165.92	4	0	121
4X19	890-190C 178.66	1890-190C 178.66	890-190CP 178.66	12	0	121
4X20	890-200C 185.28	1890-200C 185.28	890-200CP 185.28	8	0	121
4X22	890-220C 189.68	1890-220C 189.68	890-220CP 189.68	8	0	121
4X24	890-240C 206.68	1890-240C 206.68	890-240CP 206.68	4	0	121
4X30	890-300C 274.42	1890-300C 274.39	890-300CP 274.42	3	0	121
4X36	890-360C 334.55	1890-360C 334.55	890-360CP 334.55	3	0	121
4X42	890-420C 370.95	1890-420C 370.95	890-420CP 370.95	3	0	120
4X48	890-480C 401.48	1890-480C 401.48	890-480CP 401.48	3	0	121

6" Diameter

6XCLOSE	892-005C 75.56	1892-005C 75.56	892-005CP 75.56	1	8	121
6X3	892-030C 85.77	1892-030C 85.77	892-030CP 85.77	1	4	121
6X4	892-040C 117.32	1892-040C 117.32	892-040CP 117.32	1	0	121
6X4-1/2	892-045C 122.74	1892-045C 122.74	892-045CP 122.74	1	4	121
6X5	892-050C 131.57	1892-050C 131.57	892-050CP 131.57	1	2	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
6" Diameter						
6X5-1/2	892-055C 139.36	1892-055C 139.99	892-055CP 139.36	1	2	121
6X6	892-060C 153.55	1892-060C 153.55	892-060CP 153.55	1	0	121
6X7	892-070C 162.82	1892-070C 162.82	892-070CP 162.82	1	2	121
6X8	892-080C 180.55	1892-080C 180.55	892-080CP 180.55	1	0	121
6X9	892-090C 196.09	1892-090C 196.09	892-090CP 196.09	1	0	121
6X10	892-100C 211.60	1892-100C 211.60	892-100CP 211.60	1	0	121
6X11	892-110C 227.14	1892-110C 227.14	892-110CP 227.14	1	0	121
6X12	892-120C 242.65	1892-120C 242.65	892-120CP 242.65	1	0	121
6X13	892-130C 258.19	1892-130C 258.19	892-130CP 258.19	1	0	121
6X14	892-140C 273.74	1892-140C 273.74	892-140CP 273.74	1	0	121
6X15	892-150C 289.24	1892-150C 289.24	892-150CP 289.24	1	0	121
6X16	892-160C 304.78	1892-160C 304.52	892-160CP 304.78	1	0	121
6X17	892-170C 320.32	1892-170C 320.32	892-170CP 320.32	1	0	121
6X18	892-180C 330.73	1892-180C 330.73	892-180CP 330.73	1	6	121
6X19	892-190C 351.41	1892-190C 351.41	892-190CP 351.41	1	0	121
6X20	892-200C 366.89	1892-200C 366.89	892-200CP 366.89	1	0	121
6X22	892-220C 397.96	1892-220C 397.96	892-220CP 397.96	1	0	121
6X24	892-240C 458.37	1892-240C 458.37	892-240CP 458.37	1	3	121
6X30	892-300C 522.18	1892-300C 522.18	892-300CP 522.18	1	0	121
6X36	892-360C 615.38	1892-360C 615.38	892-360CP 615.38	1	0	121
6X42	892-420C 708.56	1892-420C 708.56	892-420CP 708.56	1	0	121
6X48	892-480C 801.75	1892-480C 801.75	892-480CP 801.75	1	0	121

8" Diameter

8XCLOSE	893-005C 110.80	1893-005C 110.80	893-005CP 110.80	2	0	121
8X4-1/2	893-045C 142.73	1893-045C 142.73	893-045CP 142.73	1	0	121
8X5	893-050C 153.36	1893-050C 153.36	893-050CP 153.36	1	0	121
8X5-1/2	893-055C 164.01	1893-055C 164.01	893-055CP 164.01	1	0	121
8X6	893-060C 174.64	1893-060C 174.64	893-060CP 174.64	1	0	121
8X7	893-070C 195.94	1893-070C 195.94	893-070CP 195.94	1	0	121
8X8	893-080C 217.22	1893-080C 217.22	893-080CP 217.22	4	0	121
8X9	893-090C 240.35	1893-090C 240.35	893-090CP 240.35	1	0	121
8X10	893-100C 259.80	1893-100C 259.80	893-100CP 259.80	1	0	121
8X11	893-110C 281.07	1893-110C 281.07	893-110CP 281.07	1	0	121
8X12	893-120C 308.71	1893-120C 308.71	893-120CP 308.71	1	0	121
8X13	893-130C 323.65	1893-130C 323.65	893-130CP 323.65	1	0	121
8X14	893-140C 344.95	1893-140C 344.95	893-140CP 344.95	1	0	121
8X15	893-150C 366.22	1893-150C 366.22	893-150CP 366.22	1	0	121



Nipples PVC, CPVC & PE Nipples

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
8" Diameter						
8X16	893-160C 387.52	1893-160C 387.52	893-160CP 387.52	1	0	121
8X17	893-170C 408.80	1893-170C 408.53	893-170CP 408.80	1	0	121
8X18	893-180C 430.07	1893-180C 430.07	893-180CP 430.07	4	0	121
8X19	893-190C 451.39	1893-190C 451.39	893-190CP 451.39	1	0	121
8X20	893-200C 472.67	1893-200C 472.67	893-200CP 472.67	2	0	121
8X22	893-220C 493.96	1893-220C 493.96	893-220CP 493.96	1	0	121
8X24	893-240C 515.24	1893-240C 515.24	893-240CP 515.24	2	2	121
8X30	893-300C 742.57	1893-300C 742.57	893-300CP 742.57	4	0	121
8X36	893-360C 905.78	1893-360C 905.78	893-360CP 905.78	4	0	121
8X42	893-420C 958.58	1893-420C 958.58	893-420CP 958.58	1	0	121
8X48	893-480C 1051.26	1893-480C 1051.26	893-480CP 1051.26	1	0	121

10" Diameter

10XCLOSE	894-005C 154.63	1894-005C 154.63	894-005CP 154.63	1	0	121
10X4-1/2	894-045C 208.47	1894-045C 208.47	894-045CP 208.47	1	0	121
10X5	894-050C 226.39	1894-050C 226.39	894-050CP 226.39	1	0	121
10X5-1/2	894-055C 244.36	1894-055C 244.36	894-055CP 244.36	1	0	121
10X6	894-060C 262.31	1894-060C 262.31	894-060CP 262.31	1	0	121
10X7	894-070C 298.21	1894-070C 298.21	894-070CP 298.21	1	0	121
10X8	894-080C 334.11	1894-080C 334.11	894-080CP 334.11	1	0	121
10X9	894-090C 370.00	1894-090C 370.00	894-090CP 370.00	1	0	121
10X10	894-100C 405.91	1894-100C 405.91	894-100CP 405.91	1	0	121
10X11	894-110C 441.81	1894-110C 441.81	894-110CP 441.81	1	0	121
10X12	894-120C 477.72	1894-120C 477.72	894-120CP 477.72	1	0	121
10X13	894-130C 525.89	1894-130C 525.89	894-130CP 525.89	1	0	121
10X14	894-140C 558.64	1894-140C 558.64	894-140CP 558.64	1	0	121
10X15	894-150C 585.41	1894-150C 585.41	894-150CP 585.41	1	0	121
10X16	894-160C 657.03	1894-160C 657.03	894-160CP 657.03	1	0	121
10X17	894-170C 663.81	1894-170C 663.81	894-170CP 663.81	1	0	121
10X18	894-180C 693.09	1894-180C 693.09	894-180CP 693.09	1	0	121
10X19	894-190C 760.53	1894-190C 760.53	894-190CP 760.53	1	0	121
10X20	894-200C 801.32	1894-200C 801.32	894-200CP 801.32	1	0	121
10X22	894-220C 840.21	1894-220C 840.21	894-220CP 840.21	1	0	121
10X24	894-240C 991.55	1894-240C 991.55	894-240CP 991.55	1	2	121
10X30	894-300C 1074.47	1894-300C 1074.47	894-300CP 1074.47	1	0	121
10X36	894-360C 1309.05	1894-360C 1309.05	894-360CP 1309.05	1	0	121
10X42	894-420C 1526.43	1894-420C 1526.43	894-420CP 1526.43	1	0	121
10X48	894-480C 1726.49	1894-480C 1726.49	894-480CP 1726.49	1	0	121

CPVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
12" Diameter						
12XCLOSE	895-005C 217.04	1895-005C 217.04	895-005CP 217.04	1	0	121
12X5	895-050C 290.24	1895-050C 290.24	895-050CP 290.24	1	0	121
12X5-1/2	895-055C 314.55	1895-055C 314.55	895-055CP 314.55	1	0	121
12X6	895-060C 337.78	1895-060C 337.78	895-060CP 337.78	1	0	121
12X7	895-070C 387.57	1895-070C 387.57	895-070CP 387.57	1	0	121
12X8	895-080C 436.24	1895-080C 436.24	895-080CP 436.24	1	0	121
12X9	895-090C 433.31	1895-090C 433.31	895-090CP 433.31	1	0	121
12X10	895-100C 533.56	1895-100C 533.56	895-100CP 533.56	1	0	121
12X11	895-110C 582.23	1895-110C 582.23	895-110CP 582.23	1	0	121
12X12	895-120C 630.88	1895-120C 630.88	895-120CP 630.88	1	0	121
12X13	895-130C 679.54	1895-130C 679.54	895-130CP 679.54	1	0	121
12X14	895-140C 728.23	1895-140C 728.23	895-140CP 728.23	1	0	121
12X15	895-150C 776.86	1895-150C 776.86	895-150CP 776.86	1	0	121
12X16	895-160C 825.54	1895-160C 825.54	895-160CP 825.54	1	0	121
12X17	895-170C 874.20	1895-170C 874.20	895-170CP 874.20	1	0	121
12X18	895-180C 922.86	1895-180C 922.86	895-180CP 922.86	1	0	121
12X19	895-190C 971.52	1895-190C 971.52	895-190CP 971.52	1	0	121
12X20	895-200C 1020.20	1895-200C 1020.20	895-200CP 1020.20	1	0	121
12X22	895-220C 1068.85	1895-220C 1068.85	895-220CP 1068.85	1	0	121
12X24	895-240C 1316.74	1895-240C 1316.74	895-240CP 1316.74	1	0	121
12X30	895-300C 1527.00	1895-300C 1527.00	895-300CP 1527.00	1	0	121
12X36	895-360C 1798.81	1895-360C 1798.81	895-360CP 1798.81	1	0	121
12X42	895-420C 2010.58	1895-420C 2010.58	895-420CP 2010.58	1	0	121
12X48	895-480C 2382.77	1895-480C 2382.77	895-480CP 2382.77	1	0	121

Nipples PVC, CPVC & PE Nipples



The following nipples are normally injection molded, but are optionally available as machined nipples listed below. All other nipples are normally machined.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Schedule 80 Machined Nipples

1/4" Diameter

880-005CM	1/4XCLOSE	25	1200	121	4.76
-----------	-----------	----	------	-----	------

CPVC Schedule 80 Machined Nipples

1/2" Diameter

882-020CM	1/2X2	25	300	121	3.95
882-040CM	1/2X4	25	150	121	5.61
882-030CM	1/2X3	25	300	121	4.93

CPVC Schedule 80 Machined Nipples

3/4" Diameter

883-060CM	3/4X6	25	200	121	10.00
883-030CM	3/4X3	25	300	121	7.14

CPVC Schedule 80 Machined Nipples

1" Diameter

884-005CM	1X	25	300	121	7.52
884-020CM	1X2	25	300	121	7.02

Polyethylene Schedule 40 Nipple

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

1/2" Diameter

P42-005	1/2XCLOSE	25	450	120	.94
P42-015	1/2X1-1/2	25	300	120	.94
P42-020	1/2X2	25	300	120	.94
P42-025	1/2X2-1/2	25	300	120	1.11
P42-030	1/2X3	25	300	120	1.11
P42-035	1/2X3-1/2	25	300	120	1.18
P42-040	1/2X4	25	300	120	1.18
P42-045	1/2X4-1/2	25	300	120	1.34
P42-050	1/2X5	25	300	120	1.34
P42-055	1/2X5-1/2	25	300	120	1.56
P42-060	1/2X6	25	300	120	1.56
P42-070	1/2X7	25	200	120	2.34
P42-080	1/2X8	25	0	120	2.38
P42-090	1/2X9	25	0	120	2.48
P42-100	1/2X10	25	0	120	2.53
P42-110	1/2X11	25	0	120	2.65
P42-120	1/2X12	25	0	120	2.66
P42-140	1/2X14	100	0	120	3.67
P42-150	1/2X15	100	0	120	4.07
P42-160	1/2X16	100	0	120	4.44
P42-180	1/2X18	100	0	120	4.81
P42-240	1/2X24	100	0	120	7.02

Polyethylene Schedule 40 Nipple

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

3/4" Diameter

P43-005	3/4XCLOSE	25	300	120	1.11
P43-020	3/4X2	25	300	120	1.11
P43-025	3/4X2-1/2	25	300	120	1.56
P43-030	3/4X3	25	300	120	1.56
P43-035	3/4X3-1/2	25	300	120	1.74
P43-040	3/4X4	25	300	120	1.74
P43-045	3/4X4-1/2	25	200	120	1.82
P43-050	3/4X5	25	200	120	1.82
P43-055	3/4X5-1/2	25	200	120	1.98

Polyethylene Schedule 40 Nipple (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

3/4" Diameter

P43-060	3/4X6	25	200	120	1.98
P43-070	3/4X7	25	200	120	6.09
P43-080	3/4X8	25	0	120	6.37
P43-090	3/4X9	25	0	120	6.95
P43-100	3/4X10	25	0	120	7.49
P43-110	3/4X11	25	0	120	7.86
P43-120	3/4X12	25	0	120	8.06

Polyethylene Cut-Off Nipples

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

491-060	1/2"MPTx6"Cut-Off	50	400	120	.94
492-060	1/2"x3/4"MPTx6"Cut-Off	50	350	120	1.41
493-060	3/4"MPTx6"Cut-Off	50	300	120	1.41

Polyethylene Cut-Off Riser Extension

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

FIPT x MIPT Cut-Off

(1/2" = 3 - Section Cut-Off; 3/4" = 4 - Section Cut-Off)

M434-005-3	1/2X3	50	600	120	1.42
M434-007-4	3/4X4	50	0	120	1.88

PVC Schedule 80 Grooved Nipple

Size	Groove X Groove	Plain X Groove	Thread X Groove	Std Pk	Mstr Pk	Disc Code
------	-----------------	----------------	-----------------	--------	---------	-----------

1-1/2" Diameter

1-1/2X3	886-030GG 4.33	886-030PG 3.72	886-030TG 4.33	25	0	120
1-1/2X4	886-040GG 5.39	886-040PG 4.89	886-040TG 5.39	25	0	120
1-1/2X6	886-060GG 7.58	886-060PG 7.17	886-060TG 7.17	25	0	120

2" Diameter

2X3	887-030GG 6.83	887-030PG 6.83	887-030TG 6.83	25	0	120
2X4	887-040GG 7.91	887-040PG 7.91	887-040TG 7.91	25	0	120
2X6	887-060GG 10.49	887-060PG 10.79	887-060TG 10.79	25	0	120

3" Diameter

3X3	889-030GG 13.75	889-030PG 12.26	889-030TG 13.75	20	0	120
3X4	889-040GG 19.44	889-040PG 19.44	889-040TG 19.44	30	0	120
3X6	889-060GG 27.23	889-060PG 27.23	889-060TG 27.23	20	0	120

4" Diameter

4X3	890-030GG 22.85	890-030PG 22.85	890-030TG 22.85	25	0	120
4X4	890-040GG 30.25	890-040PG 30.25	890-040TG 30.25	18	0	120
4X6	890-060GG 30.45	890-060PG 30.45	890-060TG 30.45	12	0	120

6" Diameter

6X3	892-030GG 25.68	892-030PG 43.51	892-030TG 25.68	1	4	121
6X4	892-040GG 56.15	892-040PG 56.15	892-040TG 56.15	4	0	120
6X6	892-060GG 44.23	892-060PG 44.23	892-060TG 44.23	2	0	120

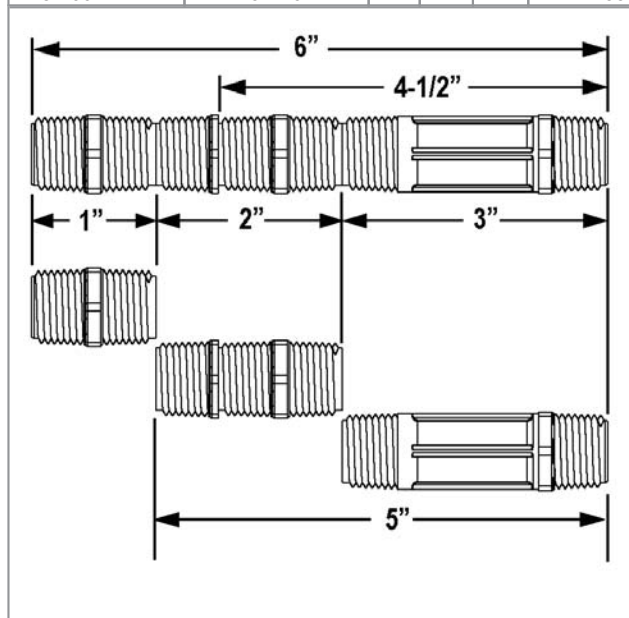


Nipples Four-In-One • Cut-Off Nipples

- High quality polyethylene construction
- Choice of sizes from just one nipple
- Reduces inventory
- Eliminates waste
- Reduces contractor down time

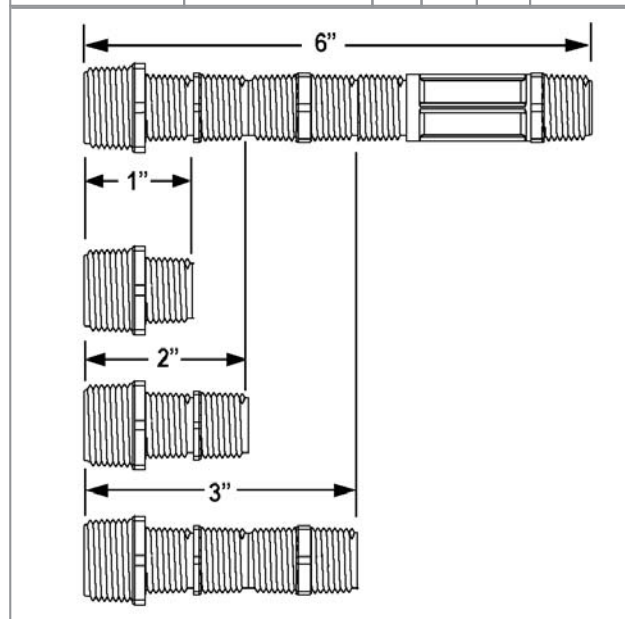
Four-In-One Cut-Off Nipple

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-005	1/2X6	50	350	123	1.08
M481-007	3/4X6	25	200	123	1.55



Four-In-One Cut-Off Nipple - Reducing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-101	3/4X1/2X6	50	300	123	1.18



Schedule 80 PVC Industrial Products & Accessories
Schedule 80 PVC Industrial Pipe



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

PD-800-001-10	1/8	10	0	744	1.97
PD-800-002-10	1/4	10	0	744	2.94
PD-800-003-10	3/8	10	0	744	4.08
PD-800-005-10	1/2	10	0	744	1.23
PD-800-007-10	3/4	10	0	744	1.66
PD-800-010-10	1	10	0	744	2.44
PD-800-012-10	1-1/4	10	0	744	3.37
PD-800-015-10	1-1/2	10	0	744	3.82
PD-800-020-10	2	10	0	744	5.29
PD-800-025-10	2-1/2	10	0	744	8.92
PD-800-030-10	3	10	0	744	10.82
PD-800-040-10	4	10	0	744	15.83
PD-800-060-10	6	10	0	744	30.23
PD-800-080-10	8	10	0	744	45.85
PD-800-100-10	10	10	0	744	68.03
PD-800-120-10	12	10	0	744	93.53
PD-800-140-10	14	10	0	947	121.80
PD-800-160-10	16	10	0	947	145.75
PD-800-180-10	18	10	0	947	203.76
PD-800-200-10	20	10	0	947	256.70
PD-800-240-10	24	10	0	947	322.07

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001	1/8	20	0	744	1.97
PD-800-002	1/4	20	0	744	2.94
PD-800-003	3/8	20	0	744	4.08
PD-800-005	1/2	20	0	744	1.23
PD-800-007	3/4	20	0	744	1.66
PD-800-010	1	20	0	744	2.44
PD-800-012	1-1/4	20	0	744	3.37
PD-800-015	1-1/2	20	0	744	3.82
PD-800-020	2	20	0	744	5.29
PD-800-025	2-1/2	20	0	744	8.92
PD-800-030	3	20	0	744	10.82
PD-800-040	4	20	0	744	15.83
PD-800-060	6	20	0	744	30.23
PD-800-080	8	20	0	744	45.85
PD-800-100	10	20	0	744	68.03
PD-800-120	12	20	0	744	93.53
PD-800-140	14	20	0	947	128.21
PD-800-160	16	20	0	947	145.75
PD-800-180	18	20	0	947	214.48
PD-800-200	20	20	0	947	270.21
PD-800-240	24	20	0	947	339.02

• Pipe sold in individual lengths or lift quantities. No cut lengths.

• No return on Pipe

• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

• See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

PVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

20' Lengths, Price Per Foot

ASTM D-1784 ASTM D-1785		Schedule 80 PVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	0.063
1/4"	1130	0.540	0.119	2850/285	5700/285	0.105
3/8"	920	0.675	0.126	2850/285	5700/285	0.146
1/2"	850	0.840	0.147	2430/243	4860/243	0.213
3/4"	690	1.050	0.154	1540/154	3080/154	0.289
1"	630	1.315	0.179	2520/252	5040/252	0.124
1-1/4"	520	1.660	0.191	1230/123	2460/123	0.586
1-1/2"	470	1.900	0.200	1720/172	3440/172	0.717
2"	400	2.375	0.218	1230/123	2460/123	0.984
2-1/2"	420	2.875	0.276	540/54	1080/54	1.500
3"	370	3.500	0.300	460/46	920/46	2.010
4"	320	4.500	0.337	340/34	680/34	2.938
6"	280	6.625	0.432	170/17	340/17	5.610
8"	250	8.625	0.500	90/9	180/9	8.522
10"	230	10.750	0.593	110/11	220/11	12.635
12"	230	12.750	0.687	80/8	160/8	17.384



Schedule 80 PVC Industrial Products & Accessories
Schedule 80 Clear Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

PVC Clear Schedule 80 Pipe

10' Lengths, Price Per Foot



List Price Per Foot

PD-800-002L-10	1/4	190	0	742	1.29
PD-800-003L-10	3/8	100	0	742	1.79
PD-800-005L-10	1/2	90	0	742	2.62
PD-800-007L-10	3/4	100	0	742	3.54
PD-800-010L-10	1	90	0	742	5.21
PD-800-012L-10	1-1/4	90	0	742	7.18
PD-800-015L-10	1-1/2	50	0	742	8.73
PD-800-020L-10	2	50	0	742	12.07
PD-800-025L-10	2-1/2	40	0	742	18.40
PD-800-030L-10	3	30	0	742	24.67
PD-800-040L-10	4	10	0	742	36.06
PD-800-060L-10	6	10	0	742	68.88

Schedule 80 PVC Industrial Products & Accessories

Spears® Low VOC Solvent Cements & Primers & PVC Low VOC Cements



Essential solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

PVC Low VOC Cements

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

PVC-00 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4". Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-05 CLEAR: Medium bodied, fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter in industrial, plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-00 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC00C-005	1/4 Pint	24	0	705	6.55
PVC00C-010	1/2 Pint	24	0	705	9.52
PVC00C-020	Pint	12	0	705	14.67
PVC00C-030	Quart	12	0	705	24.75
PVC00C-040	Gallon	6	0	705	80.35

PVC-05 Clear Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC05C-005	1/4 Pint	24	0	705	7.39
PVC05C-010	1/2 Pint	24	0	705	10.69
PVC05C-020	Pint	12	0	705	18.76
PVC05C-030	Quart	12	0	705	29.84
PVC05C-040	Gallon	6	0	705	101.68

PVC-02 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4" diameter. Goes on clear, dries clearest and is slightly thicker than PVC-00. Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-21 BLUE: Medium bodied, fast setting, high strength PVC cement. It is suitable for use on rigid PVC with interference fit Schedule 40 thru 6" and Schedule 80 thru 4". Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems through 4" if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-02 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC02C-005	1/4 Pint	24	0	705	7.27
PVC02C-010	1/2 Pint	24	0	705	10.58
PVC02C-020	Pint	12	0	705	16.29
PVC02C-030	Quart	12	0	705	27.49
PVC02C-040	Gallon	6	0	705	89.19

PVC-21 Blue Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC21B-005	1/4 Pint	24	0	705	7.89
PVC21B-010	1/2 Pint	24	0	705	12.99
PVC21B-020	Pint	12	0	705	22.23
PVC21B-030	Quart	12	0	705	37.35
PVC21B-040	Gallon	6	0	705	128.39



Schedule 80 PVC Industrial Products & Accessories PVC Low VOC Cements

PVC-25 AQUA BLUE WET-N-DRY: Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, DWV, SW, U.P. Code.



PVC-25 Aqua Blue Wet-N-Dry Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC25B-005	1/4 Pint	24	0	705	7.89
PVC25B-010	1/2 Pint	24	0	705	12.82
PVC25B-020	Pint	12	0	705	21.83
PVC25B-030	Quart	12	0	705	36.56
PVC25B-040	Gallon	6	0	705	126.09

PVC-27 CLEAR COLD-N-HOT: Medium bodied, very fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. Formulated for -15°F to 110°F (-26°C to 43°C) weather conditions. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-27 Clear Cold-N-Hot Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC27C-040	Gallon	6	0	705	133.09
PVC27C-020	Pint	12	0	705	22.79
PVC27C-030	Quart	12	0	705	38.36

PVC-50 HOT BLUE: Medium bodied, very fast setting, high strength PVC cement. Can be used on PVC with interference fit for Schedule 40 thru 6" and Schedule 80 thru 4". Hot Blue premium all-weather formulation is excellent for use in challenging conditions including wet, damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-50 HOT BLUE Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC50B-005	1/4 Pint	24	0	705	7.12
PVC50B-010	1/2 Pint	24	0	705	11.71
PVC50B-020	Pint	12	0	705	20.04
PVC50B-030	Quart	12	0	705	33.65
PVC50B-040	Gallon	6	0	705	115.67

PVC-11 GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter. Medium set allows more working time in warm weather and has good gap filling properties. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2.



PVC-11 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC11G-010	1/2 Pint	24	0	706	17.47
PVC11G-020	Pint	12	0	706	23.29
PVC11G-030	Quart	12	0	706	39.19
PVC11G-040	Gallon	6	0	706	132.53

PVC-17 CLEAR/GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter (non-pressure applications only up to 18"). Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code (Clear/Gray); CSA B137.3, B181.2 (Gray only).



PVC-17 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17G-010	1/2 Pint	24	0	706	13.11
PVC17G-020	Pint	12	0	706	23.01
PVC17G-030	Quart	12	0	706	38.85
PVC17G-040	Gallon	6	0	706	130.91

PVC-17 Clear Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17C-010	1/2 Pint	24	0	706	13.11
PVC17C-020	Pint	12	0	706	23.01
PVC17C-030	Quart	12	0	706	38.85
PVC17C-040	Gallon	6	0	706	130.91



PVC-19 Gray Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-020	Pint	12	0	706	35.20
PVC19G-030	Quart	12	0	706	46.92
PVC19G-040	Gallon	4	0	706	154.71
PVC19G-040-F*	Gallon	6	0	706	154.71
PVC19G-050	5 Gallon	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"

Schedule 80 PVC Industrial Products & Accessories CPVC Low VOC Cements



Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 2-Year Shelf Life

CPVC-24 GRAY/ORANGE: Heavy bodied, medium setting CPVC cement for all classes and schedules with interference fit through 24" diameter. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code.



The Most Chemically Resistant Cement Available for Both PVC & CPVC Applications

CPVC-24 Gray Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24G-005	1/4 Pint	24	0	707	9.01
CPVC24G-010	1/2 Pint	24	0	707	14.34
CPVC24G-020	Pint	12	0	707	26.09
CPVC24G-030	Quart	12	0	707	46.08
CPVC24G-040	Gallon	6	0	707	159.13



CPVC-24 Orange Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24O-005	1/4 Pint	24	0	707	9.01
CPVC24O-010	1/2 Pint	24	0	707	14.34
CPVC24O-020	Pint	12	0	707	26.09
CPVC24O-030	Quart	12	0	707	46.08
CPVC24O-040	Gallon	6	0	707	159.13



Schedule 80 PVC Industrial Products & Accessories Low VOC Solvent Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with SCAQMD Rule 1168/316A.
- Spears® Primers are certified for use with potable water by NSF® International.
- 3-Year Shelf Life

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR:

Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	1/4 Pint	24	0	709	7.89
PRIM70C-010	1/2 Pint	24	0	709	10.75
PRIM70C-020	Pint	12	0	709	21.51
PRIM70C-030	Quart	12	0	709	34.83
PRIM70C-040	Gallon	6	0	709	114.44



PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	1/4 Pint	24	0	709	7.89
PRIM70P-010	1/2 Pint	24	0	709	10.75
PRIM70P-020	Pint	12	0	709	21.51
PRIM70P-030	Quart	12	0	709	34.83
PRIM70P-040	Gallon	6	0	709	114.44



CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



CLEANER-65 Clear Cleaner

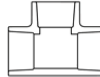
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	1/4 Pint	24	0	709	5.82
CLEAN65-010	1/2 Pint	24	0	709	8.67
CLEAN65-020	Pint	12	0	709	15.06
CLEAN65-030	Quart	12	0	709	22.12
CLEAN65-040	Gallon	6	0	709	70.83

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee
Soc



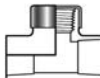
801-002	1/4	50	300	080	9.32
801-003	3/8	25	150	080	9.32
801-005	1/2	25	200	080	9.32
801-007	3/4	15	120	080	9.77
801-010	1	15	0	080	12.22
801-012	1-1/4	10	0	080	33.57
801-015	1-1/2	10	0	080	33.57
801-020	2	10	0	080	41.97
801-025	2-1/2	10	0	080	45.64
801-030	3	5	0	080	57.04
801-040	4	5	0	080	66.09
801-050	5	5	0	080	161.21
801-050F	5	1	4	083	376.81
801-060	6	2	0	080	225.66
801-080	8	2	0	080	523.37
801-080F	8	1	0	083	493.67
801-100	10	1	0	081	1729.11
801-100F	10	1	0	083	877.32
801-120	12	1	0	081	2441.99
801-120F	12	1	0	083	1236.18
801-140F	14	1	0	083	2593.45
801-160F	16	1	0	083	3372.26
801-180F	18	1	0	083	4017.12
801-200F	20	1	0	083	5179.05
801-240F	24	1	0	083	6883.12

Tee
Soc x Fipt



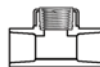
802-002	1/4	25	150	080	21.55
802-005	1/2	20	160	080	14.74
802-007	3/4	20	160	080	19.07
802-010	1	15	0	080	22.32
802-012	1-1/4	15	0	080	23.85
802-015	1-1/2	10	0	080	28.03
802-020	2	10	0	080	34.57
802-030	3	5	0	080	73.78
802-040	4	5	0	080	138.62

Special Reinforced Tee
Soc x SR Fipt - Stainless Steel Collar



802-005SR	1/2	25	200	086	8.06
802-007SR	3/4	15	120	086	11.40
802-010SR	1	15	0	086	13.39
802-012SR	1-1/4	25	0	086	15.93
802-020SR	2	10	0	086	32.93
802-030SR	3	5	0	086	71.16
802-040SR	4	5	0	086	133.45

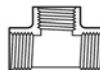
Transition Tee
Soc x Fipt With Brass Thread Insert



802-005BR	1/2	20	160	086	32.92
802-007BR	3/4	20	80	086	65.97

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee
Fipt



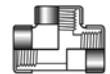
805-002	1/4	25	150	080	10.77
805-003	3/8	25	150	080	10.77

Tee (continued)

Fipt

805-005	1/2	20	240	080	10.77
805-007	3/4	15	120	080	11.99
805-010	1	15	0	080	26.47
805-012	1-1/4	10	0	080	28.06
805-015	1-1/2	10	0	080	34.02
805-020	2	10	0	080	36.57
805-025	2-1/2	5	0	080	133.15
805-030	3	5	0	080	139.06
805-040	4	5	0	080	226.00
805-060F	6	1	2	083	355.13
805-080F	8	1	0	083	655.33

Special Reinforced Tee
SR Fipt - Stainless Steel Collar



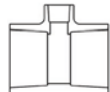
805-002SR	1/4	25	150	086	9.38
805-003SR	3/8	25	150	086	9.38
805-005SR	1/2	25	150	086	9.68
805-007SR	3/4	25	100	086	10.64
805-010SR	1	15	0	086	25.29
805-015SR	1-1/2	10	0	086	29.60
805-020SR	2	10	0	086	31.12

Street Tee
Spig x Soc x Soc



844-005	1/2	25	200	080	11.65
844-007	3/4	15	120	080	12.22
844-010	1	15	0	080	15.27
844-012	1-1/4	10	0	080	41.97
844-015	1-1/2	10	0	080	41.97
844-020	2	10	0	080	52.45

Reducing Tee
Soc



801-101	3/4X1/2	15	120	080	7.14
801-130	1X1/2	15	0	080	10.33
801-131	1X3/4	15	0	080	10.33
801-157	1-1/4X1X3/4	15	0	080	17.04
801-158	1-1/4X1X1	15	0	080	17.04
801-159	1-1/4X1X1-1/4	15	0	080	17.04
801-166 ¹	1-1/4X1/2	10	0	080	28.48
801-167	1-1/4X3/4	10	0	080	22.41
801-168	1-1/4X1	15	0	080	22.41
801-202	1-1/2X1-1/4X1	10	0	080	22.41
801-209	1-1/2X1/2	10	0	080	22.41
801-210	1-1/2X3/4	15	0	080	22.41
801-211	1-1/2X1	10	0	080	22.41
801-212	1-1/2X1-1/4	10	0	080	22.41
801-247	2X1/2	10	0	080	28.40
801-248	2X3/4	10	0	080	28.40
801-249	2X1	10	0	080	28.40
801-250 ¹	2X1-1/4	10	0	080	43.29
801-251	2X1-1/2	10	0	080	28.40
801-287	2-1/2X1/2	10	0	080	43.41
801-288	2-1/2X3/4	10	0	080	43.41
801-289	2-1/2X1	10	0	080	37.05
801-290	2-1/2X1-1/4	10	0	080	37.05
801-291	2-1/2X1-1/2	10	0	080	37.05
801-292	2-1/2X2	10	0	080	37.05
801-333 ¹	3X1/2	5	0	080	52.05
801-334 ¹	3X3/4	5	0	080	58.74
801-335	3X1	5	0	080	52.05
801-336 ¹	3X1-1/4	5	0	080	52.05



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc

801-337	3X1-1/2	5	0	080	52.05
801-338	3X2	5	0	080	52.05
801-339	3X2-1/2	6	0	080	52.05
801-416 ¹	4X3/4	5	0	080	102.95
801-417 ¹	4X1	5	0	080	102.95
801-418 ¹	4X1-1/4	5	0	080	102.95
801-419	4X1-1/2	5	0	080	84.11
801-420	4X2	5	0	080	84.11
801-421 ¹	4X2-1/2	5	0	080	151.42
801-422	4X3	5	0	080	84.11
801-426 ¹	4X6	4	0	080	412.22
801-482F	5X1-1/4	1	5	083	222.99
801-484F	5X1-1/2	1	5	083	227.20
801-486F	5X2	1	5	083	227.20
801-487F	5X2-1/2	1	4	083	259.08
801-488F	5X3	1	3	083	267.56
801-490 ¹	5X4	4	0	080	250.94
801-490F	5X4	1	4	083	285.62
801-523 ¹	6X1/2	4	0	080	218.75
801-525	6X1	4	0	080	168.07
801-526 ¹	6X1-1/4	4	0	080	218.75
801-527 ¹	6X1-1/2	4	0	080	218.75
801-528	6X2	4	0	080	168.07
801-529 ¹	6X2-1/2	4	0	080	218.57
801-530	6X3	4	0	080	168.07
801-532	6X4	5	0	080	225.66
801-533F	6X5	1	3	083	475.01
801-537F	6X10	1	0	083	1848.89
801-539F	6X12	1	0	083	2052.88
801-573 ¹	8X1/2	2	0	080	642.20
801-575 ¹	8X1	2	0	080	642.59
801-578 ¹	8X2	2	0	080	611.02
801-578F	8X2	1	2	083	419.13
801-579 ¹	8X2-1/2	2	0	080	672.29
801-579F	8X2-1/2	1	2	083	423.02
801-580 ¹	8X3	2	0	080	611.02
801-580F	8X3	1	2	083	427.76
801-582 ¹	8X4	2	0	080	611.02
801-582F	8X4	1	2	083	449.80
801-583F	8X5	1	0	083	608.07
801-585	8X6	2	0	080	523.37
801-591 ¹	8X12	1	0	081	3733.67
801-621F	10X2	1	2	083	629.60
801-622F	10X2-1/2	1	0	083	657.58
801-623 ¹	10X3	1	0	081	1611.03
801-623F	10X3	1	0	083	675.24
801-624 ¹	10X4	1	0	081	1611.03
801-624F	10X4	1	0	083	699.53
801-625F	10X5	1	0	083	752.27
801-626 ¹	10X6	1	0	081	1521.63
801-626F	10X6	1	0	083	791.13
801-628 ¹	10X8	1	0	081	1790.76
801-628F	10X8	1	0	083	887.53
801-632F	10X12	1	0	083	2186.24
801-661F	12X2	1	0	083	814.14
801-662F	12X2-1/2	1	0	083	849.28
801-663F	12X3	1	0	083	876.99
801-664 ¹	12X4	1	0	081	2920.84
801-664F	12X4	1	0	083	930.33
801-665F	12X5	1	0	083	974.92
801-666 ¹	12X6	1	0	081	2755.74
801-666F	12X6	1	0	083	1027.26
801-668	12X8	1	0	081	2263.74
801-668F	12X8	1	0	083	1102.11
801-670 ¹	12X10	1	0	081	3031.45

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc

801-670F	12X10	1	0	083	1224.68
801-678F	12X18	1	0	083	5458.97
801-691F	14X2	1	0	083	1020.11
801-692F	14X2-1/2	1	0	083	1071.69
801-693F	14X3	1	0	083	1252.40
801-694F	14X4	1	0	083	1380.16
801-696F	14X6	1	0	083	1489.88
801-698F	14X8	1	0	083	1566.69
801-700F	14X10	1	0	083	1673.75
801-702F	14X12	1	0	083	1767.38
801-706F	14X16	1	0	083	5718.92
801-751F	16X2	1	0	083	1308.13
801-752F	16X2-1/2	1	0	083	1391.37
801-753F	16X3	1	0	083	1411.31
801-754F	16X4	1	0	083	1544.03
801-756F	16X6	1	0	083	1642.60
801-758F	16X8	1	0	083	1824.44
801-760F	16X10	1	0	083	1977.71
801-762F	16X12	1	0	083	2179.49
801-764F	16X14	1	0	083	2513.14
801-781F	18X2	1	0	083	1503.78
801-783F	18X3	1	0	083	1830.92
801-784F	18X4	1	0	083	2811.82
801-786F	18X6	1	0	083	3045.48
801-788F	18X8	1	0	083	3175.88
801-790F	18X10	1	0	083	3402.34
801-792F	18X12	1	0	083	3595.58
801-794F	18X14	1	0	083	3821.21
801-796F	18X16	1	0	083	3870.03
801-814F	20X4	1	0	083	3448.54
801-816F	20X6	1	0	083	3641.28
801-818F	20X8	1	0	083	3753.20
801-820F	20X10	1	0	083	3908.31
801-822F	20X12	1	0	083	4190.71
801-824F	20X14	1	0	083	4493.97
801-826F	20X16	1	0	083	4816.71
801-828F	20X18	1	0	083	5062.75
801-904F	24X4	1	0	083	4293.87
801-906F	24X6	1	0	083	4458.31
801-908F	24X8	1	0	083	4574.25
801-910F	24X10	1	0	083	4855.74
801-912F	24X12	1	0	083	5034.93
801-914F	24X14	1	0	083	5242.69
801-916F	24X16	1	0	083	5484.55
801-918F	24X18	1	0	083	6633.87
801-920F	24X20	1	0	083	6759.89

¹ Sized with Bushing

Reducing Tee Soc x Fipt



802-101	3/4X1/2	15	120	080	13.54
802-130	1X1/2	50	0	080	14.07
802-131	1X3/4	15	0	080	18.08
802-166	1-1/4X1/2	25	0	080	23.01
802-167 ¹	1-1/4X3/4	15	0	080	23.01
802-168	1-1/4X1	10	0	080	45.67
802-209	1-1/2X1/2	25	0	080	28.48
802-210 ¹	1-1/2X3/4	20	0	080	28.48
802-211	1-1/2X1	10	0	080	28.48
802-212	1-1/2X1-1/4	10	0	080	28.48
802-247	2X1/2	10	0	080	32.54
802-248	2X3/4	10	0	080	32.54
802-249 ¹	2X1	10	0	080	43.29

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc x Fipt

802-250 ¹	2X1-1/4	10	0	080	43.29
802-251 ¹	2X1-1/2	10	0	080	60.36
802-287	2-1/2X1/2	10	0	080	74.92
802-288 ¹	2-1/2X3/4	10	0	080	74.92
802-289 ¹	2-1/2X1	10	0	080	74.92
802-290 ¹	2-1/2X1-1/4	10	0	080	74.92
802-291 ¹	2-1/2X1-1/2	10	0	080	74.92
802-292 ¹	2-1/2X2	10	0	080	83.65
802-333 ¹	3X1/2	5	0	080	58.74
802-334 ¹	3X3/4	5	0	080	58.74
802-335 ¹	3X1	5	0	080	70.65
802-336 ¹	3X1-1/4	5	0	080	70.65
802-337 ¹	3X1-1/2	5	0	080	70.65
802-338 ¹	3X2	5	0	080	90.22
802-339 ¹	3X2-1/2	5	0	080	126.89
802-415 ¹	4X1/2	5	0	080	103.37
802-416 ¹	4X3/4	5	0	080	103.37
802-417 ¹	4X1	5	0	080	103.37
802-418 ¹	4X1-1/4	5	0	080	103.37
802-419 ¹	4X1-1/2	5	0	080	103.37
802-420 ¹	4X2	5	0	080	154.52
802-421 ¹	4X2-1/2	5	0	080	154.52
802-422 ¹	4X3	5	0	080	172.98
802-525 ¹	6X1	4	0	080	240.54
802-526 ¹	6X1-1/4	4	0	080	240.54
802-527 ¹	6X1-1/2	4	0	080	240.54
802-528 ¹	6X2	4	0	080	240.54
802-528F ¹	6X2	1	3	083	438.05
802-529 ¹	6X2-1/2	4	0	080	240.54
802-530 ¹	6X3	4	0	080	335.81
802-532 ¹	6X4	2	0	080	351.83
802-532F ¹	6X4	1	4	083	542.85
802-578 ¹	8X2	2	0	080	655.62
802-578F	8X2	1	2	083	586.67
802-580 ¹	8X3	2	0	080	655.62
802-580F	8X3	1	2	083	586.67
802-582 ¹	8X4	2	0	080	655.62
802-582F ¹	8X4	1	2	083	650.24
802-621 ¹	10X2	1	0	081	1674.26
802-621F	10X2	1	0	083	712.39
802-623 ¹	10X3	1	0	080	1674.26
802-623F	10X3	1	0	083	770.05
802-624 ¹	10X4	1	0	081	1674.26
802-624F ¹	10X4	1	0	083	855.49
802-661 ¹	12X2	1	0	081	2652.85
802-661F	12X2	1	0	083	904.88
802-663 ¹	12X3	1	0	081	2652.85
802-663F	12X3	1	0	083	981.88
802-664 ¹	12X4	1	0	081	2652.85
802-664F	12X4	1	0	083	1083.75

¹ Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Reducing Tee

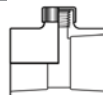
Soc x Fipt x Soc



803-095	3/4X1/2X3/4	50	0	080	12.69
---------	-------------	----	---	-----	-------

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar



802-072SR	1/2X1/4	25	150	086	8.06
802-098SR	3/4X1/4	25	100	086	10.47

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Reducing Tee (continued)

Soc x SR Fipt - Stainless Steel Collar

802-101SR	3/4X1/2	50	0	086	10.47
802-128SR ¹	1X1/4	10	80	086	24.79
802-130SR	1X1/2	50	0	086	12.92
802-131SR	1X3/4	15	0	086	24.79
802-164SR ¹	1-1/4X1/4	5	0	086	26.43
802-166SR	1-1/4X1/2	25	0	086	17.52
802-168SR	1-1/4X1	10	0	086	17.87
802-207SR ¹	1-1/2X1/4	10	0	086	30.84
802-211SR	1-1/2X1	10	0	086	19.35
802-212SR	1-1/2X1-1/4	10	0	086	19.35
802-245SR ¹	2X1/4	10	0	086	35.62
802-247SR	2X1/2	10	0	086	35.62
802-248SR	2X3/4	10	0	086	35.62
802-287SR	2-1/2X1/2	10	0	086	26.25
802-331SR ¹	3X1/4	5	0	086	68.00
802-333SR ¹	3X1/2	5	0	086	69.97
802-413SR ¹	4X1/4	5	0	086	93.64
802-415SR ¹	4X1/2	5	0	086	101.77

¹ Sized with Bushing

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar x Soc

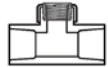


(See also Gauge & Instrument Fittings for additional configurations)

803-095SR	3/4X1/2X3/4	15	0	086	13.19
-----------	-------------	----	---	-----	-------

Transition Reducing Tee

Soc x Fipt With Brass Thread Insert



802-101BR	3/4X1/2	50	0	086	41.08
-----------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell

Soc



806-002	1/4	25	150	080	3.31
806-003	3/8	20	120	080	3.31
806-005	1/2	20	240	080	3.31
806-007	3/4	20	160	080	4.22
806-010	1	25	0	080	6.80
806-012	1-1/4	10	0	080	9.11
806-015	1-1/2	10	0	080	9.76
806-020	2	25	0	080	11.79
806-025	2-1/2	5	0	080	27.59
806-030	3	5	0	080	31.01
806-040	4	5	0	080	47.16
806-045F	4-1/2	1	2	083	216.82
806-050	5	4	0	080	120.91
806-050F	5	1	4	083	242.08
806-060	6	4	0	080	134.19
806-080	8	2	0	080	369.86
806-100	10	1	0	081	1655.26
806-100F	10	1	0	083	660.59
806-120	12	1	0	081	2157.75
806-120F	12	1	0	083	1079.76
806-140F	14	1	0	083	1377.35
806-160F	16	1	0	083	1712.98
806-180F	18	1	0	083	2448.07
806-200F	20	1	0	083	2923.53
806-240F	24	1	0	083	4489.44
806-338 ¹	3X2	5	0	080	76.01
806-422 ¹	4X3	5	0	080	113.54

¹ Sized with Bushing



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° EII Sweep Soc x Soc



806-005S	1/2	25	150	080	8.24
806-007S	3/4	25	100	080	10.67
806-010S	1	25	0	080	17.19
806-012S	1-1/4	25	0	080	22.73
806-015S	1-1/2	25	0	080	24.43
806-020S	2	25	0	080	29.60

Long Sweep 90° EII Soc



806-005LSF	1/2	1	25	083	28.57
806-007LSF	3/4	1	25	083	32.06
806-010LSF	1	1	25	083	35.84
806-012LSF	1-1/4	1	25	083	60.62
806-015LSF	1-1/2	1	25	083	61.39
806-020LSF	2	1	10	083	66.37
806-025LSF	2-1/2	1	7	083	113.97
806-030LSF	3	1	5	083	124.34
806-040LSF	4	1	4	083	139.43
806-060LSF	6	1	2	083	213.55

Not Listed for Electrical Conduit Use

90° EII Soc x Fipt



807-002	1/4	25	450	080	13.00
807-003	3/8	25	150	080	13.00
807-005	1/2	20	240	080	13.00
807-007	3/4	20	160	080	15.29
807-010	1	20	0	080	16.54
807-012	1-1/4	10	0	080	19.07
807-015	1-1/2	10	0	080	22.75
807-020	2	10	0	080	29.47
807-030	3	5	0	080	70.39
807-040	4	5	0	080	132.74
807-060 ¹	6	3	0	080	307.99

¹Thread outlet sized with Female Adapter

Special Reinforced 90° EII Soc x SR Fipt - Stainless Steel Collar



807-005SR	1/2	20	240	086	7.72
807-007SR	3/4	75	0	086	9.18
807-010SR	1	50	0	086	9.28
807-012SR	1-1/4	25	0	086	12.47
807-015SR	1-1/2	10	0	086	15.41
807-020SR	2	10	0	086	17.68
807-030SR	3	5	0	086	44.89
807-040SR	4	5	0	086	79.32

Transition 90° EII Soc x Fipt With Brass Thread Insert



807-005BR	1/2	20	240	086	28.92
807-007BR	3/4	20	160	086	51.19

Not intended to convey or dispense water for human consumption through drinking or cooking

90° EII Fipt



808-002	1/4	25	450	080	8.20
808-003	3/8	25	150	080	8.20

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° EII (continued)

Fipt

808-005	1/2	20	120	080	7.65
808-007	3/4	20	240	080	9.53
808-010	1	15	120	080	11.99
808-012	1-1/4	10	0	080	12.92
808-015	1-1/2	10	0	080	18.32
808-020	2	10	0	080	20.64
808-025	2-1/2	5	0	080	80.37
808-030	3	5	0	080	129.60
808-040	4	5	0	080	228.04

90° Street EII Mipt x Fipt



812-002	1/4	50	300	080	17.63
812-005 ¹	1/2	20	240	080	14.64
812-010 ¹	1	20	0	080	22.60
812-012 ¹	1-1/4	10	0	080	25.97
812-015 ¹	1-1/2	10	0	080	42.56

¹ Sized with Adapter

Special Reinforced 90° EII SR Fipt - Stainless Steel Collar



808-003SR	3/8	25	150	086	4.51
808-005SR	1/2	20	120	086	4.51
808-007SR	3/4	20	120	086	5.67
808-010SR	1	50	0	086	6.60
808-012SR	1-1/4	25	0	086	7.05
808-015SR	1-1/2	10	0	086	11.00
808-020SR	2	10	0	086	12.39

90° Street EII Spig x Soc



809-005	1/2	50	200	080	4.14
809-007	3/4	50	0	080	5.28
809-010	1	50	0	080	8.52
809-012	1-1/4	25	0	080	11.40
809-015	1-1/2	10	0	080	12.22
809-020	2	25	0	080	14.75
809-030	3	5	0	080	41.38
809-040	4	4	0	080	62.87
809-060	6	1	0	080	178.93
809-080	8	2	0	080	493.16
809-100	10	1	0	081	2206.41
809-120	12	1	0	081	2876.12

Reducing 90° EII Soc x Fipt



807-101	3/4X1/2	10	60	080	7.88
807-130 ¹	1X1/2	10	80	080	12.58
807-131 ¹	1X3/4	10	80	080	12.58

¹ Sized with Bushing

Special Reinforced Reducing 90° EII Soc x SR Fipt - Stainless Steel Collar



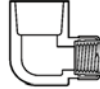
807-101SR	3/4X1/2	50	0	086	9.16
807-130SR	1X1/2	50	0	086	10.28

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Transition Reducing 90° EII
Soc x Fipt With Brass Thread Insert



807-101BR	3/4X1/2	20	120	086	36.09
-----------	---------	----	-----	-----	-------

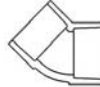
Not intended to convey or dispense water for human consumption through drinking or cooking

60° EII
Soc



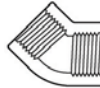
824-005F	1/2	1	7	083	74.22
824-007F	3/4	1	6	083	87.64
824-010F	1	1	25	083	95.36
824-012F	1-1/4	1	16	083	97.22
824-015F	1-1/2	1	16	083	103.85
824-020F	2	1	16	083	131.75
824-025F	2-1/2	1	10	083	155.11
824-030F	3	1	4	083	155.39
824-040F	4	1	4	083	199.67
824-060F	6	1	2	083	356.59
824-080F	8	1	2	083	432.20
824-100F	10	1	2	083	738.44
824-120F	12	1	0	083	964.51
824-140F	14	1	0	083	1201.02
824-160F	16	1	0	083	1357.04
824-180F	18	1	0	083	2403.19
824-200F	20	1	0	083	2651.38
824-240F	24	1	0	083	4421.29

45° EII
Soc



817-002	1/4	25	450	080	11.87
817-003	3/8	25	150	080	11.87
817-005	1/2	20	240	080	6.22
817-007	3/4	20	240	080	9.51
817-010	1	15	120	080	14.25
817-012	1-1/4	10	80	080	18.15
817-015	1-1/2	10	0	080	21.46
817-020	2	10	0	080	27.83
817-025	2-1/2	5	0	080	58.42
817-030	3	5	0	080	71.11
817-040	4	5	0	080	128.05
817-045F	4-1/2	1	2	083	88.71
817-050	5	4	0	080	153.20
817-050F	5	1	4	083	121.05
817-060	6	4	0	080	161.26
817-080	8	2	0	080	349.63
817-100	10	1	0	081	1100.75
817-100F	10	1	2	083	464.54
817-120	12	1	0	081	1419.89
817-120F	12	1	0	083	653.56
817-140F	14	1	0	083	1065.27
817-160F	16	1	0	083	1304.15
817-180F	18	1	0	083	1587.37
817-200F	20	1	0	083	2180.34
817-240F	24	1	0	083	2700.68

45° EII
Fipt



819-002	1/4	25	450	080	13.46
819-003	3/8	25	150	080	13.46
819-005	1/2	20	120	080	12.28
819-007	3/4	10	120	080	13.20
819-010	1	10	120	080	16.56

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

45° EII (continued)

Fipt

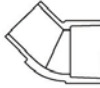
819-012	1-1/4	10	80	080	25.26
819-015	1-1/2	10	0	080	31.76
819-020	2	10	0	080	47.08
819-025	2-1/2	5	0	080	93.16
819-030	3	5	0	080	149.84
819-040	4	5	0	080	215.01

Special Reinforced 45° EII
SR Fipt - Stainless Steel Collar



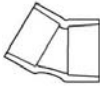
819-007SR	3/4	10	120	086	7.76
-----------	-----	----	-----	-----	------

45° Street EII
Spig x Soc



827-005	1/2	50	400	080	6.22
827-007	3/4	50	0	080	9.51
827-010	1	50	0	080	14.25
827-012	1-1/4	25	0	080	18.15
827-015	1-1/2	25	0	080	21.46
827-020	2	10	0	080	27.83
827-025	2-1/2	12	0	080	36.69
827-030	3	10	0	080	71.11
827-040	4	5	0	080	128.05
827-050F	5	1	2	083	154.92
827-060	6	4	0	080	189.69
827-080	8	2	0	080	411.35
827-100	10	1	0	081	1295.03
827-120	12	1	0	081	1670.46
827-140F	14	1	0	083	983.22
827-160F	16	1	0	083	1577.21
827-180F	18	1	0	083	1763.17
827-200F	20	1	0	083	2319.57
827-240F	24	1	0	083	3688.31

30° EII
Soc



815-005F	1/2	1	25	083	26.75
815-007F	3/4	1	25	083	26.94
815-010F	1	1	30	083	29.47
815-012F	1-1/4	1	15	083	31.92
815-015F	1-1/2	1	25	083	32.36
815-020F	2	1	25	083	35.28
815-025F	2-1/2	1	18	083	39.09
815-030F	3	1	20	083	42.65
815-040F	4	1	6	083	55.93
815-045F	4-1/2	1	18	083	85.19
815-050F	5	1	2	083	102.17
815-060	6	5	0	080	189.69
815-080F	8	1	3	083	171.15
815-100F	10	1	2	083	303.33
815-120F	12	1	2	083	443.33
815-140F	14	1	0	083	678.69
815-160F	16	1	0	083	907.22
815-180F	18	1	0	083	1393.67
815-200F	20	1	0	083	2020.52
815-240F	24	1	0	083	2410.66

22-1/2° EII
Soc



816-005	1/2	20	240	080	7.34
816-007	3/4	20	240	080	11.20



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

22-1/2° EII (continued)

Soc

816-010	1	20	160	080	16.78
816-010F	1	1	25	083	16.18
816-015F	1-1/2	1	25	083	28.22
816-012	1-1/4	20	0	080	21.36
816-015	1-1/2	20	0	080	25.25
816-020	2	20	0	080	32.71
816-025	2-1/2	5	0	080	67.20
816-025F	2-1/2	1	18	083	39.09
816-030	3	5	0	080	83.84
816-040	4	4	0	080	150.66
816-045F	4-1/2	1	18	083	85.19
816-050F	5	1	8	083	102.17
816-060	6	4	0	080	189.69
816-060F	6	1	8	083	104.56
816-080	8	4	0	080	411.35
816-080F	8	1	4	083	171.15
816-100F	10	1	2	083	303.33
816-120F	12	1	2	083	443.33
816-140F	14	1	0	083	678.69
816-160F	16	1	0	083	907.22
816-180F	18	1	0	083	1171.17
816-200F	20	1	0	083	2020.52
816-240F	24	1	0	083	2410.66

22-1/2° Street EII Spig x Soc



842-005	1/2	50	400	080	7.62
842-007	3/4	50	0	080	11.71
842-010	1	50	0	080	18.40
842-012	1-1/4	20	0	080	22.91
842-015	1-1/2	25	0	080	25.97
842-020	2	20	0	080	32.71
842-025	2-1/2	5	0	080	85.38
842-030	3	5	0	080	93.73
842-040	4	4	0	080	164.84
842-040F	4	1	5	084	105.02
842-060	6	6	0	080	234.28
842-060F	6	1	6	083	131.75
842-080	8	1	2	080	506.54
842-080F	8	1	4	083	173.88
842-100F	10	1	0	083	355.36
842-120F	12	1	2	084	463.03

15° EII Soc



818-005F	1/2	1	25	083	26.75
818-007F	3/4	1	23	083	26.94
818-010F	1	1	20	083	29.47
818-012F	1-1/4	15	0	083	31.92
818-015F	1-1/2	1	25	083	32.36
818-020F	2	1	25	083	35.28
818-025F	2-1/2	1	18	083	115.19
818-030F	3	1	35	083	42.65
818-040F	4	1	20	083	55.93
818-045F	4-1/2	1	18	083	85.19
818-050F	5	1	2	083	102.17
818-060F	6	1	8	083	104.56
818-080F	8	1	4	083	171.15
818-100F	10	1	2	083	303.33
818-120F	12	1	2	083	443.33
818-140F	14	1	0	083	678.69
818-160F	16	1	0	083	907.22
818-180F	18	1	0	083	1171.17

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

15° EII (continued)

Soc

818-200F	20	1	0	083	2020.52
818-240F	24	1	0	083	2410.66

11-1/4° EII

Soc



811-005F	1/2	1	52	083	26.75
811-007F	3/4	1	52	083	26.94
811-010F	1	1	50	083	29.47
811-012F	1-1/4	1	26	083	31.92
811-015	1-1/2	25	0	080	26.68
811-020	2	10	0	080	32.71
811-025F	2-1/2	1	25	083	39.09
811-030	3	10	0	080	83.84
811-040	4	4	0	080	150.66
811-045F	4-1/2	1	18	083	85.19
811-050F	5	1	4	083	102.17
811-060F	6	1	10	083	104.56
811-080F	8	1	4	083	171.15
811-100F	10	1	2	083	303.33
811-120F	12	1	2	083	443.33
811-140F	14	1	0	083	678.69
811-160F	16	1	0	083	907.22
811-180F	18	1	0	083	1171.17
811-200F	20	1	0	083	2020.52
811-240F	24	1	0	083	2410.66

Wye Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
 2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
 8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-005	1/2	25	100	080	13.68
875-007	3/4	25	0	080	14.38
875-010	1	20	0	080	23.01
875-012	1-1/4	20	0	080	35.28
875-015	1-1/2	20	0	080	35.28
875-020	2	10	0	080	101.22
875-025 ¹	2-1/2	4	0	080	461.20
875-030	3	5	0	080	325.38
875-040	4	4	0	080	403.17
875-050F ¹	5	1	2	083	630.71
875-060	6	2	0	080	550.66
875-080	8	1	0	080	1107.40
875-080F	8	1	0	083	853.29
875-100F ¹	10	1	0	083	1338.99
875-120F ¹	12	1	0	083	1701.91
875-140F ¹	14	1	0	083	2842.43
875-160F ¹	16	1	0	083	3733.88
875-180F ¹	18	1	0	083	4186.18
875-200F ¹	20	1	0	083	5591.94
875-240F ¹	24	1	0	083	7442.15

¹ Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**Reducing Wye
Soc**



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
3" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-101 ¹	3/4X1/2	25	0	080	16.60
875-130 ¹	1X1/2	20	0	080	29.11
875-131 ¹	1X3/4	20	0	080	29.11
875-166 ¹	1-1/4X1/2	20	0	080	44.84
875-167 ¹	1-1/4X3/4	20	0	080	44.84
875-168 ¹	1-1/4X1	20	0	080	44.84
875-209 ¹	1-1/2X1/2	20	0	080	48.03
875-210 ¹	1-1/2X3/4	20	0	080	48.03
875-211 ¹	1-1/2X1	20	0	080	48.03
875-212 ¹	1-1/2X1-1/4	20	0	080	48.03
875-247 ¹	2X1/2	10	0	080	120.41
875-248 ¹	2X3/4	10	0	080	120.41
875-249 ¹	2X1	10	0	080	120.41
875-250 ¹	2X1-1/4	10	0	080	120.41
875-251 ¹	2X1-1/2	10	0	080	120.41
875-292 ¹	2-1/2X2-1/2X2	4	0	080	468.76
875-335 ¹	3X1	5	0	080	379.27
875-336 ¹	3X1-1/4	5	0	080	379.27
875-337 ¹	3X1-1/2	5	0	080	379.27
875-338 ¹	3X2	4	0	080	379.27
875-339 ¹	3X2-1/2	5	0	080	379.27
875-420	4X2	1	5	083	397.41
875-420F ⁺	4X2	1	5	083	397.41
875-421 ¹	4X2-1/2	4	0	080	528.54
875-421F ⁺	4X2-1/2	1	4	083	444.12
875-422 ¹	4X3	4	0	080	476.83
875-525 ¹	6X1	5	0	080	584.64
875-528 ¹	6X2	5	0	080	519.19
875-528F ⁺	6X2	1	3	083	408.28
875-530 ¹	6X3	5	0	080	519.19
875-530F ⁺	6X3	1	2	083	443.57
875-532	6X4	5	0	080	419.66
875-578 ¹	8X2	1	0	080	1448.65
875-578F ⁺	8X2	1	2	083	660.56
875-579F ⁺	8X2-1/2	1	2	083	675.37
875-580 ¹	8X3	1	0	080	1448.65
875-580F ⁺	8X3	1	2	083	670.95
875-582 ¹	8X4	1	0	080	1448.65
875-582F ⁺	8X4	1	2	083	711.42
875-585 ¹	8X6	1	0	080	1351.33
875-585F ⁺	8X6	1	0	083	838.92
875-621F ⁺	10X2	1	0	083	889.24
875-622F ⁺	10X2-1/2	1	0	083	895.43
875-623F ⁺	10X3	1	0	083	906.56
875-624F ⁺	10X4	1	0	083	988.04
875-625F ⁺	10X5	1	0	083	1107.33
875-626	10X6	1	0	081	1564.51
875-626F ⁺	10X6	1	0	083	1124.31
875-628	10X8	1	0	081	1991.86
875-628F ⁺	10X8	1	0	083	1300.27
875-661F ⁺	12X2	1	0	083	986.82
875-662F ⁺	12X2-1/2	1	0	083	1075.84
875-663F ⁺	12X3	1	0	083	1177.29
875-664F ⁺	12X4	1	0	083	1246.79
875-666F ⁺	12X6	1	0	083	1421.92
875-668F ⁺	12X8	1	0	083	1557.75
875-670F ⁺	12X10	1	0	083	1650.80
875-694F ⁺	14X4	1	0	083	1542.98
875-696F ⁺	14X6	1	0	083	1632.80

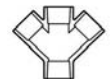
Reducing Wye (continued)

Soc

875-698F ⁺	14X8	1	0	083	1670.46
875-700F ⁺	14X10	1	0	083	1865.06
875-702F ⁺	14X12	1	0	083	2113.86
875-754F ⁺	16X4	1	0	083	1680.47
875-756F ⁺	16X6	1	0	083	1687.76
875-758F ⁺	16X8	1	0	083	1904.77
875-760F ⁺	16X10	1	0	083	2144.28
875-762F ⁺	16X12	1	0	083	2336.28
875-764F ⁺	16X14	1	0	083	2705.55
875-784F ⁺	18X4	1	0	083	3016.78
875-786F ⁺	18X6	1	0	083	3406.48
875-788F ⁺	18X8	1	0	083	3533.01
875-790F ⁺	18X10	1	0	083	3797.31
875-792F ⁺	18X12	1	0	083	3811.79
875-794F ⁺	18X14	1	0	083	4116.92
875-796F ⁺	18X16	1	0	083	4145.94
875-814F ⁺	20X4	1	0	083	3727.95
875-816F ⁺	20X6	1	0	083	4017.12
875-818F ⁺	20X8	1	0	083	4245.20
875-820F ⁺	20X10	1	0	083	4388.98
875-822F ⁺	20X12	1	0	083	4546.60
875-824F ⁺	20X14	1	0	083	4908.17
875-826F ⁺	20X16	1	0	083	5314.37
875-828F ⁺	20X18	1	0	083	5516.26
875-904F ⁺	24X4	1	0	083	4638.11
875-906F ⁺	24X6	1	0	083	4797.68
875-908F ⁺	24X8	1	0	083	4920.49
875-910F ⁺	24X10	1	0	083	5143.16
875-912F ⁺	24X12	1	0	083	5470.07
875-914F ⁺	24X14	1	0	083	5682.24
875-916F ⁺	24X16	1	0	083	6062.14
875-918F ⁺	24X18	1	0	083	6990.88
875-920F ⁺	24X20	1	0	083	7318.35

¹ Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.



**Double Wye
Soc**

100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

876-020F ⁺	2	1	4	083	334.67
876-030F ⁺	3	1	4	083	421.77
876-040F ⁺	4	1	2	083	765.93
876-060F ⁺	6	1	0	083	895.23
876-080F ⁺	8	1	0	083	1066.61
876-100F ⁺	10	1	0	083	1900.60
876-120F ⁺	12	1	0	083	2676.48

For larger sizes please contact your Regional Spears® Distribution Center.



**Reducing Double Wye
Soc**

Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

876-338	3X2	5	0	080	406.99
876-420F ⁺	4X2	1	2	083	531.52
876-421F ⁺	4X2-1/2	1	2	083	601.79
876-422F ⁺	4X3	1	2	083	622.46
876-528F ⁺	6X2	1	2	083	625.44
876-529F ⁺	6X2-1/2	1	2	083	653.28
876-530F ⁺	6X3	1	2	083	657.53
876-532F ⁺	6X4	1	0	083	783.78
876-578F ⁺	8X2	1	2	083	806.75



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Double Wye (continued)

Soc

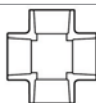
876-579F*	8X2-1/2	1	2	083	844.83
876-580F*	8X3	1	0	083	849.99
876-582F*	8X4	1	0	083	877.41
876-585F*	8X6	1	0	083	990.69
876-621F*	10X2	1	0	083	1075.73
876-622F*	10X2-1/2	1	0	083	1157.96
876-623F*	10X3	1	0	083	1164.83
876-624F*	10X4	1	0	083	1209.04
876-626F*	10X6	1	0	083	1265.54
876-628F*	10X8	1	0	083	1626.46
876-661F*	12X2	1	0	083	1201.98
876-662F*	12X2-1/2	1	0	083	1273.29
876-663F*	12X3	1	0	083	1293.39
876-664F*	12X4	1	0	083	1377.71
876-666F*	12X6	1	0	083	1598.79
876-668F*	12X8	1	0	083	1909.69
876-670F*	12X10	1	0	083	2178.07

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Cross

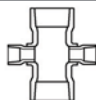
Soc



820-002	1/4	25	150	080	45.94
820-005	1/2	50	0	080	45.94
820-007	3/4	50	0	080	48.35
820-010	1	50	0	080	56.61
820-012	1-1/4	25	0	080	67.93
820-015	1-1/2	25	0	080	73.23
820-020	2	10	0	080	90.67
820-025	2-1/2	10	0	080	123.63
820-030	3	5	0	080	154.20
820-040	4	3	0	080	268.29
820-060F	6	1	0	083	644.71
820-080F	8	1	0	083	942.69
820-100F	10	1	0	083	1520.48
820-120F	12	1	0	083	2141.20
820-140F	14	1	0	083	3441.27
820-160F	16	1	0	083	3900.04
820-180F	18	1	0	083	4090.77
820-200F	20	1	0	083	5956.54
820-240F	24	1	0	083	8950.91

Reducing Cross

Soc



820-101 ¹	3/4X1/2	50	0	080	53.26
820-130 ¹	1X1/2	25	0	080	69.00
820-131	1X3/4	20	0	080	69.00
820-166 ¹	1-1/4X1/2	25	0	080	66.27
820-167	1-1/4X3/4	25	0	080	61.15
820-168 ¹	1-1/4X1	25	0	080	87.14
820-209 ¹	1-1/2X1/2	20	0	080	98.83
820-210	1-1/2X3/4	15	0	080	98.83
820-211 ¹	1-1/2X1	25	0	080	98.83
820-212 ¹	1-1/2X1-1/4	25	0	080	98.83
820-247 ¹	2X1/2	10	0	080	126.80
820-248 ¹	2X3/4	10	0	080	126.80
820-249 ¹	2X1	10	0	080	126.80
820-250 ¹	2X1-1/4	10	0	080	126.80
820-251 ¹	2X1-1/2	10	0	080	126.80
820-289	2-1/2X1	15	0	080	126.80
820-290 ¹	2-1/2X1-1/4	10	0	080	185.73

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Cross (continued)

Soc

820-291 ¹	2-1/2X1-1/2	10	0	080	185.73
820-292 ¹	2-1/2X2	4	0	080	185.73
820-335 ¹	3X1	4	0	080	251.86
820-336 ¹	3X1-1/4	4	0	080	251.86
820-337 ¹	3X1-1/2	4	0	080	251.86
820-338 ¹	3X2	4	0	080	251.86
820-339 ¹	3X2-1/2	4	0	080	251.86
820-420 ¹	4X2	3	0	080	404.64
820-420F*	4X2	1	4	083	395.17
820-422 ¹	4X3	3	0	080	404.64
820-528F	6X2	1	4	083	500.35
820-530F	6X3	1	2	083	526.02
820-532F	6X4	1	2	083	626.97
820-533F*	6X5	1	2	083	743.35
820-578F	8X2	1	0	083	645.65
820-580F	8X3	1	0	083	679.67
820-582F	8X4	1	0	083	701.95
820-585F	8X6	1	0	083	758.55
820-621F	10X2	1	0	083	859.47
820-622F	10X2-1/2	1	0	083	883.56
820-623F	10X3	1	0	083	931.92
820-624F	10X4	1	0	083	967.35
820-626F	10X6	1	0	083	1012.33
820-628F	10X8	1	0	083	1301.89
820-661F	12X2	1	0	083	961.58
820-663F	12X3	1	0	083	1035.99
820-664F	12X4	1	0	083	1102.59
820-666F	12X6	1	0	083	1280.39
820-668F	12X8	1	0	083	1529.51
820-670F	12X10	1	0	083	1040.24
820-691F	14X2	1	0	083	1379.79
820-693F	14X3	1	0	083	1484.94
820-694F	14X4	1	0	083	1630.41
820-696F	14X6	1	0	083	1800.81
820-698F	14X8	1	0	083	2048.53
820-700F	14X10	1	0	083	2366.88
820-702F	14X12	1	0	083	2677.14
820-751F	16X2	1	0	083	1726.16
820-753F	16X3	1	0	083	1858.93
820-754F	16X4	1	0	083	2062.17
820-756F	16X6	1	0	083	2230.31
820-758F	16X8	1	0	083	2494.58
820-760F	16X10	1	0	083	2718.33
820-762F	16X12	1	0	083	3053.15
820-764F	16X14	1	0	083	3823.62
820-784F	18X4	1	0	083	2910.95
820-786F	18X6	1	0	083	3038.26
820-788F	18X8	1	0	083	3260.62
820-790F	18X10	1	0	083	3482.81
820-792F	18X12	1	0	083	3647.03
820-794F	18X14	1	0	083	3864.17
820-796F	18X16	1	0	083	4026.45
820-814F	20X4	1	0	083	3650.09
820-816F	20X6	1	0	083	4204.38
820-818F	20X8	1	0	083	4251.60
820-820F	20X10	1	0	083	4545.29
820-822F	20X12	1	0	083	4873.76
820-824F	20X14	1	0	083	5442.01
820-826F	20X16	1	0	083	5548.12
820-828F	20X18	1	0	083	5847.82
820-904F	24X4	1	0	083	4357.68
820-906F	24X6	1	0	083	4631.88
820-908F	24X8	1	0	083	4812.75
820-910F	24X10	1	0	083	4881.51
820-912F	24X12	1	0	083	5104.49

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Cross (continued)

Soc

820-914F	24X14	1	0	083	6073.65
820-916F	24X16	1	0	083	6486.02
820-918F	24X18	1	0	083	7442.09
820-920F	24X20	1	0	083	8898.58

¹ Sized with Bushing

Coupling

Soc



829-002	1/4	25	450	080	9.57
829-003	3/8	25	150	080	9.57
829-005	1/2	25	150	080	5.98
829-007	3/4	25	300	080	8.09
829-010	1	25	200	080	8.32
829-012	1-1/4	10	80	080	12.67
829-015	1-1/2	10	80	080	13.66
829-020	2	20	0	080	14.67
829-025	2-1/2	10	0	080	36.11
829-030	3	5	0	080	41.46
829-040	4	5	0	080	51.93
829-050	5	5	0	080	102.98
829-050F	5	1	5	083	64.27
829-060	6	4	0	080	111.76
829-080	8	4	0	080	152.09
829-100	10	1	0	081	522.01
829-100F	10	1	0	083	175.80
829-120	12	1	0	081	601.61
829-120F	12	1	0	083	202.64
829-140	14	1	0	081	765.42
829-140F	14	1	0	083	405.21
829-160F	16	1	0	083	481.75
829-180F	18	1	0	083	949.59
829-200F	20	1	0	083	1170.80
829-240F	24	1	0	083	1285.55

Grooved Coupling Adapter

Groove x Soc



833-012	1-1/4	10	60	080	16.60
833-015	1-1/2	10	80	080	18.55
833-020	2	10	80	080	21.58
833-025	2-1/2	5	0	080	46.60
833-030	3	5	0	080	55.55
833-040	4	5	0	080	63.04
833-050F	5	1	7	084	121.01
833-060	6	5	0	080	136.12
833-080F	8	1	4	084	156.09
833-100F	10	1	0	084	191.68
833-120F	12	1	0	084	258.95

Coupling

Fipt



830-002	1/4	25	450	080	7.17
830-003	3/8	25	150	080	7.17
830-005	1/2	25	150	080	6.69
830-007	3/4	25	300	080	9.54
830-010	1	15	90	080	10.24
830-012	1-1/4	10	120	080	12.67
830-015	1-1/2	10	80	080	28.20
830-020	2	10	0	080	29.60
830-025	2-1/2	5	0	080	70.66
830-030	3	5	0	080	82.86
830-040	4	5	0	080	143.48

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

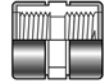
Coupling (continued)

Fipt

830-060F	6	1	8	083	180.83
830-080F	8	1	6	083	265.92
830-100F	10	1	2	083	361.68

Special Reinforced Coupling

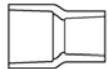
SR Fipt - Stainless Steel Collar



830-005SR	1/2	25	150	086	3.69
830-007SR	3/4	25	150	086	5.25
830-010SR	1	25	200	086	5.61
830-012SR	1-1/4	10	120	086	6.99
830-015SR	1-1/2	10	80	086	15.47
830-020SR	2	10	0	086	16.22

Reducer Coupling

Soc



829-101	3/4X1/2	50	400	080	7.32
829-130	1X1/2	25	200	080	10.22
829-131	1X3/4	25	200	080	10.67
829-166	1-1/4X1/2	25	0	080	21.67
829-167	1-1/4X3/4	25	0	080	21.67
829-168	1-1/4X1	25	0	080	21.67
829-209	1-1/2X1/2	25	0	080	22.68
829-210	1-1/2X3/4	25	0	080	22.68
829-211	1-1/2X1	25	0	080	22.68
829-212	1-1/2X1-1/4	25	0	080	28.03
829-247	2X1/2	25	0	080	25.58
829-248	2X3/4	10	80	080	25.58
829-249	2X1	16	0	080	25.58
829-250	2X1-1/4	10	40	080	25.58
829-251	2X1-1/2	10	40	080	25.58
829-291	2-1/2X1-1/2	10	0	080	34.12
829-292	2-1/2X2	10	0	080	34.12
829-335 ¹	3X1	8	0	080	78.02
829-336 ¹	3X1-1/4	6	0	080	78.02
829-337 ¹	3X1-1/2	8	0	080	78.02
829-338	3X2	8	0	080	62.83
829-339	3X2-1/2	5	0	080	89.59
829-339F	3X2-1/2	1	9	083	109.27
829-416 ¹	4X3/4	6	0	080	129.75
829-417 ¹	4X1	6	0	080	129.75
829-419 ¹	4X1-1/2	6	0	080	129.75
829-420	4X2	6	0	080	119.78
829-421	4X2-1/2	4	0	080	119.78
829-422	4X3	4	0	080	118.37
829-460F	4-1/2X4	1	20	083	78.36
829-487F	5X2-1/2	1	6	083	116.34
829-488F	5X3	1	6	083	112.79
829-490F	5X4	1	8	083	60.84
829-491F	5X4-1/2	1	10	083	85.89
829-528 ¹	6X2	6	0	080	296.38
829-529 ¹	6X2-1/2	4	0	080	355.41
829-530 ¹	6X3	12	0	080	299.40
829-530F	6X3	1	10	083	111.73
829-532	6X4	4	0	080	241.43
829-534F	6X4-1/2	1	5	083	97.68
829-533F	6X5	1	5	083	102.43
829-579F	8X2-1/2	1	6	083	309.23
829-580F	8X3	1	6	083	283.37
829-582F	8X4	1	6	083	264.44
829-583F	8X5	1	4	083	290.69
829-585	8X6	2	0	080	731.23
829-621F	10X2	1	2	083	456.13
829-623F	10X3	1	2	083	427.03



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Coupling (continued)

Soc

829-624F	10X4	1	2	083	403.03
829-625F	10X5	1	4	083	366.45
829-626	10X6	1	0	081	856.06
829-626F	10X6	1	4	083	330.28
829-628	10X8	1	0	081	856.06
829-663F	12X3	1	2	083	658.40
829-664F	12X4	1	2	083	562.44
829-665F	12X5	1	2	083	521.81
829-666F	12X6	1	0	083	486.53
829-668	12X8	1	0	081	974.12
829-668F	12X8	1	0	083	376.71
829-670F	12X10	1	0	083	254.49
829-691F	14X2	1	0	083	981.38
829-694F	14X4	1	0	083	819.47
829-696F	14X6	1	0	083	692.18
829-698F	14X8	1	0	083	633.39
829-700F	14X10	1	0	083	619.49
829-702F	14X12	1	0	083	371.57
829-754F	16X4	1	0	083	1216.69
829-756F	16X6	1	0	083	1100.40
829-758F	16X8	1	0	083	966.45
829-760F	16X10	1	0	083	858.45
829-762F	16X12	1	0	083	723.59
829-764F	16X14	1	0	083	549.29
829-783F	18X3	1	0	083	2640.07
829-784F	18X4	1	0	083	2567.20
829-786F	18X6	1	0	083	2399.75
829-788F	18X8	1	0	083	2272.17
829-790F	18X10	1	0	083	2055.42
829-792F	18X12	1	0	083	1691.86
829-794F	18X14	1	0	083	1145.33
829-796F	18X16	1	0	083	977.80
829-814F	20X4	1	0	083	2541.55
829-816F	20X6	1	0	083	2340.06
829-818F	20X8	1	0	083	2236.65
829-820F	20X10	1	0	083	2158.20
829-822F	20X12	1	0	083	1867.04
829-824F	20X14	1	0	083	1862.11
829-826F	20X16	1	0	083	1710.54
829-828F	20X18	1	0	083	1179.55
829-904F	24X4	1	0	083	4065.45
829-906F	24X6	1	0	083	4003.55
829-908F	24X8	1	0	083	3916.79
829-910F	24X10	1	0	083	3822.32
829-912F	24X12	1	0	083	3477.16
829-914F	24X14	1	0	083	3207.22
829-916F	24X16	1	0	083	2922.93
829-918F	24X18	1	0	083	2669.89
829-920F	24X20	1	0	083	2520.93

¹ Sized with Bushing

Eccentric Reducer Coupling

Soc

829-101FE	3/4X1/2	1	25	083	38.56
829-130FE	1X1/2	1	16	083	27.05
829-131FE	1X3/4	1	15	083	39.69
829-168FE	1-1/4X1	1	12	083	31.46
829-209FE	1-1/2X1/2	1	20	083	49.82
829-210FE	1-1/2X3/4	1	25	083	51.56
829-212FE	1-1/2X1-1/4	1	20	083	32.67
829-249FE	2X1	1	25	083	46.59
829-250FE	2X1-1/4	1	25	083	43.29
829-251FE	2X1-1/2	1	10	083	41.31
829-290FE ²	2-1/2X1-1/4	1	10	083	64.17



Eccentric Reducer Coupling (continued)

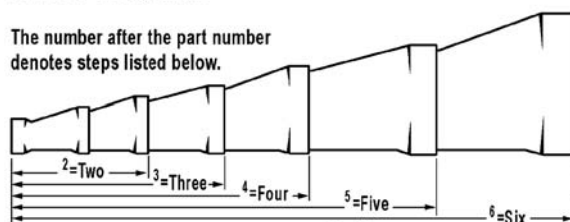
Soc

829-291FE ²	2-1/2X1-1/2	1	20	083	62.38
829-292FE	2-1/2X2	1	10	083	48.17
829-335FE ²	3X1	1	10	083	63.21
829-336FE ²	3X1-1/4	1	10	083	60.88
829-337FE ²	3X1-1/2	1	10	083	58.49
829-338E	3X2	15	0	080	62.83
829-338FE	3X2	1	20	083	37.36
829-339FE	3X2-1/2	1	10	083	121.31
829-417FE ³	4X1	1	18	083	153.63
829-418FE ³	4X1-1/4	1	6	083	150.91
829-419FE ³	4X1-1/2	1	6	083	146.11
829-420FE ²	4X2	1	10	083	102.01
829-421FE ²	4X2-1/2	1	6	083	85.06
829-422FE	4X3	1	10	083	77.15
829-490FE	5X4	1	8	083	102.66
829-528FE ³	6X2	1	6	083	180.80
829-529FE ³	6X2-1/2	1	2	083	165.03
829-530FE ²	6X3	1	6	083	159.27
829-532FE	6X4	1	5	083	115.31
829-533FE	6X5	1	5	083	106.34
829-575FE ⁵	8X1	1	0	083	368.84
829-577FE ⁵	8X1-1/2	1	0	083	360.56
829-578FE ⁴	8X2	1	0	083	320.35
829-580FE ³	8X3	1	2	083	244.15
829-582FE ²	8X4	1	2	083	199.43
829-583FE ²	8X5	1	2	083	199.01
829-585FE	8X6	1	4	083	153.36
829-624FE ³	10X4	1	0	083	337.48
829-625FE ³	10X5	1	0	083	384.21
829-626FE ²	10X6	1	2	083	286.43
829-628FE	10X8	1	2	083	264.67
829-664FE ⁴	12X4	1	0	083	516.08
829-666FE ³	12X6	1	0	083	424.73
829-668FE ²	12X8	1	0	083	366.94
829-670FE	12X10	1	2	083	234.55
829-696FE ³	14X6	1	0	083	840.68
829-698FE ²	14X8	1	0	083	691.34
829-700FE	14X10	1	0	083	573.39
829-702FE	14X12	1	0	083	368.36
829-756FE ⁴	16X6	1	0	083	1553.20
829-758FE ³	16X8	1	0	083	1422.29
829-760FE ²	16X10	1	0	083	1034.67
829-762FE ²	16X12	1	0	083	918.62
829-764FE	16X14	1	0	083	711.53
829-786FE ⁵	18X6	1	0	083	2144.06
829-788FE ⁴	18X8	1	0	083	2052.44
829-790FE ³	18X10	1	0	083	1917.95
829-792FE ³	18X12	1	0	083	1711.92
829-794FE ²	18X14	1	0	083	1411.37
829-796FE	18X16	1	0	083	1377.17

Eccentric Reducer Coupling Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.



Example: 829-582 FE² (2= 2 Step)

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Coupling
Fipt



830-073 ¹	1/2X3/8	25	150	080	9.02
830-101	3/4X1/2	50	200	080	7.96
830-211 ¹	1-1/2X1	10	40	080	38.80

¹ Sized with Bushing

Special Reinforced Reducer Coupling
SR Fipt - Stainless Steel Collar



830-101SR	3/4X1/2	50	200	086	4.78
830-130SR	1X1/2	50	0	086	7.09
830-131SR	1X3/4	25	200	086	7.09
830-168SR	1-1/4X1	25	0	086	15.22
830-210SR	1-1/2X3/4	25	0	086	22.59
830-211SR	1-1/2X1	10	80	086	22.59
830-212SR	1-1/2X1-1/4	10	80	086	22.59
830-249SR	2X1	25	0	086	29.94
830-251SR	2X1-1/2	10	0	086	29.94

Fabricated Repair Coupling
Gasket



828-020F	2	1	15	083	82.17
828-030F	3	1	5	083	104.67
828-040F	4	1	4	083	130.43
828-060F	6	1	2	083	151.11
828-080F	8	1	2	083	198.66
828-100F	10	1	0	083	355.72
828-120F	12	1	0	083	453.13
828-140F	14	1	0	083	1038.74
828-160F	16	1	0	083	1239.54
828-180F	18	1	0	083	2139.17
828-200F	20	1	0	083	2310.32
828-240F	24	1	0	083	3170.72

Female Adapter
Soc x Fipt



835-002	1/4	25	450	080	10.12
835-003	3/8	25	400	080	10.12
835-005	1/2	25	150	080	5.60
835-007	3/4	25	150	080	8.32
835-010	1	15	90	080	12.26
835-012	1-1/4	10	120	080	19.86
835-015	1-1/2	10	80	080	24.35
835-020	2	10	0	080	42.48
835-025	2-1/2	5	0	080	67.07
835-030	3	5	0	080	75.51
835-040	4	5	0	080	129.77
835-060	6	6	0	080	153.66
835-060F	6	1	8	083	201.78
835-080	8	3	0	080	288.88
835-080F	8	1	6	083	238.53
835-100F	10	1	2	083	261.45
835-120F	12	1	0	083	329.96

Special Reinforced Female Adapter
Soc x SR Fipt - Stainless Steel Collar



835-002SR	1/4	25	450	086	5.59
835-003SR	3/8	25	300	086	5.59
835-005SR	1/2	25	300	086	3.11
835-007SR	3/4	25	300	086	4.52
835-010SR	1	25	200	086	6.72

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

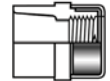
Special Reinforced Female Adapter (continued)

Soc x SR Fipt - Stainless Steel Collar

835-012SR	1-1/4	10	60	086	10.86
835-015SR	1-1/2	10	80	086	13.37
835-020SR	2	10	0	086	23.32
835-025SR	2-1/2	5	0	086	36.79
835-030SR	3	15	0	086	41.45
835-040SR	4	5	0	086	71.24
835-060SR	6	6	0	086	92.56

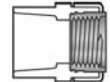
Encapsulated Special Reinforced Female Adapter

Soc x ESR Fipt



835-002ESR	1/4	25	450	086	8.09
835-003ESR	3/8	25	300	086	8.09
835-005ESR	1/2	25	300	086	5.02
835-007ESR	3/4	25	300	086	7.41
835-010ESR	1	25	200	086	9.81
835-012ESR	1-1/4	10	80	086	15.83
835-015ESR	1-1/2	10	80	086	22.87
835-020ESR	2	10	0	086	34.00

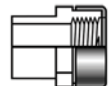
Transition Female Adapter
Soc x Fipt With Brass Thread Insert



835-005BR	1/2	25	150	086	24.97
835-007BR	3/4	25	150	086	35.86
835-010BR	1	15	90	086	61.80
835-012BR	1-1/4	15	60	086	101.77
835-015BR	1-1/2	10	40	086	133.69
835-020BR	2	8	32	086	165.59

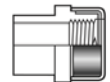
Not intended to convey or dispense water for human consumption through drinking or cooking

Special Reinforced Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



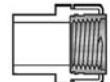
878-005SR	1/2	50	600	086	4.08
878-007SR	3/4	25	300	086	4.81
878-010SR	1	50	0	086	7.41
878-012SR	1-1/4	25	0	086	11.80
878-015SR	1-1/2	25	0	086	14.15
878-020SR	2	15	0	086	23.55
878-030SR	3	5	0	086	43.28
878-040SR	4	5	0	086	73.48

Encapsulated Special Reinforced Spigot Female Adapter
Spig x ESR Fipt



878-005ESR	1/2	50	600	086	5.57
878-007ESR	3/4	25	300	086	7.67
878-010ESR	1	50	0	086	10.53
878-012ESR	1-1/4	25	0	086	16.20
878-015ESR	1-1/2	25	0	086	23.00
878-020ESR	2	15	0	086	34.66

Transition Female Adapter
Spig x Fipt With Brass Thread Insert



878-005BR	1/2	25	150	086	21.00
878-010BR	1	15	90	086	66.81

Not intended to convey or dispense water for human consumption through drinking or cooking

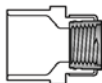


Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Transition Reducing Female Adapter Soc x Fipt With Brass Thread Insert



835-101BR	3/4X1/2	50	0	086	37.07
-----------	---------	----	---	-----	-------

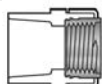
Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Male Adapter w/ Brass Thread Brass Mipt x Socket



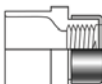
836-005BR	1/2	40	160	086	27.48
836-007BR	3/4	40	160	086	41.44
836-010BR	1	10	60	086	67.39
836-012BR	1-1/4	10	60	086	113.52
836-015BR	1-1/2	10	40	086	150.63
836-020BR	2	8	32	086	187.13

Transition Female Adapter Soc x Fipt With 316 Stainless Steel Thread Insert



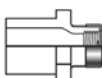
835-005SS	1/2	25	300	086	48.93
835-007SS	3/4	15	90	086	70.32
835-010SS	1	15	90	086	119.65
835-012SS	1-1/4	15	60	086	199.83
835-015SS	1-1/2	10	40	086	261.04
835-020SS	2	8	32	086	334.87

Special Reinforced Reducing Female Adapter Soc x SR Fipt - Stainless Steel Collar



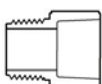
835-074SR	1/2X3/4	50	400	086	4.52
835-101SR	3/4X1/2	50	400	086	4.52
835-102SR	3/4X1	50	0	086	6.72
835-130SR	1X1/2	50	0	086	6.72
835-131SR	1X3/4	25	200	086	6.72

Special Reinforced Reducing Spigot Female Adapter Spig x SR Fipt - Stainless Steel Collar



878-072SR	1/2X1/4	25	450	086	11.35
878-098SR	3/4X1/4	50	400	086	15.64
878-128SR	1X1/4	50	400	086	16.13

Male Adapter Mipt x Soc

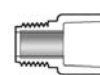


836-053	3/8X1/2	50	900	080	6.96
836-005	1/2	25	150	080	6.99
836-007	3/4	25	300	080	7.71
836-102	3/4X1	50	0	080	16.51
836-131	1X3/4	50	400	080	16.51
836-010	1	20	120	080	13.34
836-012	1-1/4	10	120	080	15.60
836-015	1-1/2	10	120	080	22.41
836-251 ¹	2X1-1/2	10	0	083	12.07
836-020	2	10	80	080	32.41
836-025	2-1/2	5	0	080	36.84
836-030	3	5	0	080	40.89
836-040	4	4	0	080	72.76
836-050F	5	1	8	083	221.20
836-060	6	5	0	080	161.62
836-080F	8	1	2	083	174.26
836-100F	10	1	2	083	208.56
836-120F	12	1	0	083	309.94

1- Sized With Bushing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reinforced Male Adapter R Mipt x Soc - Stainless Steel Sleeve



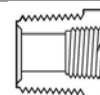
836-005R	1/2	25	150	086	3.84
836-007R	3/4	25	300	086	4.21
836-010R	1	10	60	086	7.38

Male Adapter Spig x Mipt



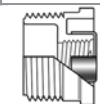
861-005	1/2	50	300	080	7.03
861-007	3/4	25	300	080	10.37
861-010	1	50	0	080	15.32
861-131	1X3/4	50	200	080	15.80
861-012	1-1/4	25	0	080	16.60
861-015	1-1/2	25	0	080	18.55
861-020	2	25	0	080	21.58

Reducer (T.T.) Bushing Flush Style Mipt x Fipt



839-041	1/4X1/8	25	500	080	12.05
839-052	3/8X1/4	50	450	080	12.05
839-072	1/2X1/4	50	300	080	12.05
839-073	1/2X3/8	50	300	080	12.05
839-098	3/4X1/4	50	300	080	8.98
839-099	3/4X3/8	50	300	080	8.98
839-101	3/4X1/2	50	300	080	7.40
839-128	1X1/4	25	150	080	14.49
839-129	1X3/8	50	600	080	11.59
839-130	1X1/2	50	300	080	11.59
839-131	1X3/4	50	700	080	11.59
839-166	1-1/4X1/2	25	150	080	12.29
839-167	1-1/4X3/4	25	150	080	12.29
839-168	1-1/4X1	25	300	080	12.29
839-209	1-1/2X1/2	25	150	080	14.57
839-210	1-1/2X3/4	25	300	080	14.57
839-211	1-1/2X1	25	300	080	14.57
839-212	1-1/2X1-1/4	25	300	080	14.57
839-247	2X1/2	10	60	080	21.35
839-248	2X3/4	10	60	080	21.35
839-249	2X1	10	60	080	21.35
839-250	2X1-1/4	10	60	080	21.35
839-251	2X1-1/2	10	60	080	21.35
839-292	2-1/2X2	10	80	080	28.91
839-337	3X1-1/2	10	0	080	39.29
839-338	3X2	10	0	080	39.29
839-339	3X2-1/2	10	0	080	39.29
839-420	4X2	6	0	080	80.99
839-422	4X3	6	0	080	103.43
839-532	6X4	5	0	080	135.89

Special Reinforced Reducer Bushing Mipt x SR Fipt - Stainless Steel Collar



839-128SR	1X1/4	25	150	086	5.98
839-209SR	1-1/2X1/2	25	300	086	8.74
839-210SR	1-1/2X3/4	25	300	086	8.74
839-247SR	2X1/2	10	60	086	12.83
839-248SR	2X3/4	10	60	086	12.83
839-249SR	2X1	10	120	086	12.83
839-420SR	4X2	6	0	086	48.59

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style
Spig x Soc



837-052	3/8X1/4	50	450	080	5.28
837-072	1/2X1/4	50	300	080	5.28
837-073	1/2X3/8	50	600	080	5.28
837-101	3/4X1/2	50	600	080	1.93
837-129 ¹	1X3/8	50	200	080	11.01
837-130	1X1/2	50	300	080	5.52
837-131	1X3/4	50	400	080	5.52
837-166	1-1/4X1/2	25	150	080	8.65
837-167	1-1/4X3/4	25	300	080	8.65
837-168	1-1/4X1	25	200	080	8.65
837-209	1-1/2X1/2	25	200	080	11.79
837-210	1-1/2X3/4	25	200	080	11.79
837-211	1-1/2X1	25	200	080	11.79
837-212	1-1/2X1-1/4	25	200	080	11.79
837-247	2X1/2	10	120	080	16.81
837-248	2X3/4	10	120	080	16.81
837-249	2X1	10	120	080	16.81
837-250	2X1-1/4	10	120	080	16.81
837-251	2X1-1/2	10	120	080	16.81
837-287 ¹	2-1/2X1/2	10	40	080	39.04
837-288 ¹	2-1/2X3/4	10	40	080	39.04
837-289	2-1/2X1	10	40	080	39.04
837-290	2-1/2X1-1/4	10	80	080	29.19
837-291	2-1/2X1-1/2	10	40	080	29.19
837-292	2-1/2X2	15	0	080	29.19
837-333 ¹	3X1/2	10	0	080	53.75
837-334 ¹	3X3/4	10	0	080	52.04
837-335	3X1	10	0	080	46.31
837-336	3X1-1/4	10	0	080	46.31
837-337	3X1-1/2	10	0	080	46.31
837-338	3X2	10	0	080	46.31
837-339	3X2-1/2	15	0	080	46.31
837-415 ¹	4X1/2	6	0	080	82.32
837-416 ¹	4X3/4	6	0	080	82.32
837-417 ¹	4X1	6	0	080	82.32
837-418 ¹	4X1-1/4	6	0	080	82.32
837-419 ¹	4X1-1/2	6	0	080	82.32
837-420	4X2	6	0	080	64.12
837-421	4X2-1/2	6	0	080	64.12
837-422	4X3	6	0	080	64.12
837-486 ¹	5X2	3	0	080	72.17
837-488 ¹	5X3	5	0	080	95.05
837-490	5X4	4	0	080	84.71
837-490F	5X4	1	4	083	90.34
837-524 ¹	6X3/4	5	0	080	107.02
837-525 ¹	6X1	5	0	080	101.67
837-526 ¹	6X1-1/4	5	0	080	107.02
837-527 ¹	6X1-1/2	5	0	080	107.02
837-528	6X2	5	0	080	89.16
837-529 ¹	6X2-1/2	5	0	080	138.23
837-530	6X3	5	0	080	89.16
837-532	6X4	5	0	080	89.16
837-533F	6X5	1	5	083	290.07
837-534	6X5	5	0	080	89.16
837-577 ¹	8X1-1/2	4	0	080	329.85
837-578 ¹	8X2	4	0	080	312.28
837-580 ¹	8X3	6	0	080	312.28
837-582 ¹	8X4	6	0	080	216.89
837-583 ¹	8X5	2	0	080	315.54
837-583F	8X5	1	6	083	513.40
837-585	8X6	4	0	080	216.89
837-621 ¹	10X2	2	0	081	603.87
837-622 ¹	10X2-1/2	2	0	081	657.96

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style (continued)

Spig x Soc

837-623 ¹	10X3	2	0	081	603.87
837-624 ¹	10X4	2	0	081	603.87
837-625F	10X5	1	4	083	786.54
837-626	10X6	4	0	081	509.51
837-628	10X8	4	0	081	509.51
837-628F	10X8	1	6	083	197.05
837-663 ¹	12X3	2	0	081	894.88
837-664 ¹	12X4	2	0	081	894.88
837-666 ¹	12X6	2	0	081	822.16
837-666F ¹	12X6	1	2	083	578.84
837-668	12X8	2	0	081	588.82
837-668F ¹	12X8	1	2	083	560.07
837-670	12X10	2	0	081	588.82
837-670F	12X10	1	3	083	224.34
837-694F	14X4	1	3	083	1276.08
837-696F	14X6	1	3	083	1136.21
837-698F	14X8	1	0	083	814.08
837-700F	14X10	1	3	083	508.22
837-702F	14X12	1	3	083	218.02
837-754F	16X4	1	0	083	1457.79
837-756F	16X6	1	0	083	1353.68
837-758F	16X8	1	0	083	1065.78
837-760F	16X10	1	0	083	772.51
837-762F	16X12	1	2	083	455.93
837-764F	16X14	1	2	083	445.39
837-786F	18X6	1	0	083	2294.89
837-788F	18X8	1	0	083	2102.60
837-790F	18X10	1	0	083	1725.99
837-792F	18X12	1	0	083	1099.87
837-794F	18X14	1	0	083	1089.40
837-796F	18X16	1	0	083	503.14
837-816F	20X6	1	0	083	3201.57
837-818F	20X8	1	0	083	2960.99
837-820F	20X10	1	0	083	2741.03
837-822F	20X12	1	0	083	2430.46
837-824F	20X14	1	0	083	1998.45
837-826F	20X16	1	0	083	1568.04
837-828F	20X18	1	0	083	818.56
837-906F	24X6	1	0	083	5029.45
837-908F	24X8	1	0	083	4876.32
837-910F	24X10	1	0	083	4283.33
837-912F	24X12	1	0	083	3864.53
837-914F	24X14	1	0	083	3619.45
837-916F	24X16	1	0	083	3423.78
837-918F	24X18	1	0	083	2967.67
837-920F	24X20	1	0	083	2452.61

¹ Sized with Bushing

Reducer Bushing Flush Style
Spig x Fipt



838-052	3/8X1/4	50	450	080	5.28
838-071	1/2X1/8	50	600	080	5.28
838-072	1/2X1/4	50	350	080	5.28
838-073	1/2X3/8	50	500	080	5.28
838-098	3/4X1/4	50	600	080	3.49
838-099	3/4X3/8	50	600	080	3.49
838-101	3/4X1/2	50	300	080	3.49
838-127	1X1/8	25	150	080	5.52
838-129	1X3/8	50	400	080	5.52
838-130	1X1/2	50	300	080	5.52
838-131	1X3/4	50	400	080	5.52
838-166	1-1/4X1/2	25	300	080	11.21
838-167	1-1/4X3/4	25	300	080	11.21
838-168	1-1/4X1	25	300	080	11.21



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style (continued)

Spig x Fipt

838-206	1-1/2X1/8	25	100	080	14.04
838-207	1-1/2X1/4	25	200	080	13.34
838-209	1-1/2X1/2	25	200	080	14.04
838-210	1-1/2X3/4	25	200	080	14.04
838-211	1-1/2X1	25	200	080	14.04
838-212	1-1/2X1-1/4	25	200	080	14.04
838-247	2X1/2	10	60	080	17.18
838-248	2X3/4	10	60	080	17.18
838-249	2X1	10	120	080	17.18
838-250	2X1-1/4	10	120	080	17.18
838-251	2X1-1/2	10	120	080	17.18
838-287	2-1/2X1/2	10	0	080	36.37
838-288	2-1/2X3/4	10	40	080	36.37
838-289	2-1/2X1	10	40	080	36.37
838-290	2-1/2X1-1/4	10	0	080	36.37
838-291	2-1/2X1-1/2	10	0	080	36.37
838-292	2-1/2X2	10	40	080	36.37
838-334	3X3/4	10	0	080	67.33
838-335	3X1	10	0	080	67.33
838-336	3X1-1/4	10	0	080	67.33
838-337	3X1-1/2	10	0	080	67.33
838-338	3X2	10	0	080	67.33
838-339	3X2-1/2	10	0	080	67.33
838-419	4X1-1/2	6	0	080	130.13
838-420	4X2	6	0	080	103.43
838-421	4X2-1/2	6	0	080	103.43
838-422	4X3	6	0	080	103.43
838-528	6X2	5	0	080	119.14
838-530	6X3	5	0	080	119.14
838-532	6X4	5	0	080	119.14

Special Reinforced Reducer Bushing Flush Style

Spig x SR Fipt - Stainless Steel Collar

838-128SR	1X1/4	25	150	086	3.31
838-207SR	1-1/2X1/4	25	200	086	8.43
838-166SR	1-1/4X1/2	25	100	086	6.04
838-209SR	1-1/2X1/2	10	60	086	8.43
838-210SR	1-1/2X3/4	25	200	086	8.43
838-247SR	2X1/2	10	80	086	10.32
838-248SR	2X3/4	10	80	086	10.32
838-249SR	2X1	10	80	086	10.32
838-334SR	3X3/4	10	0	086	40.38
838-335SR	3X1	10	0	086	40.38
838-336SR	3X1-1/4	10	0	086	40.38
838-337SR	3X1-1/2	10	0	086	40.38
838-528SR	6X2	5	0	086	71.48
838-530SR	6X3	5	0	086	64.35
838-532SR	6X4	5	0	086	71.48

Cap Soc

847-002	1/4	25	450	080	7.60
847-003	3/8	25	450	080	7.60
847-005	1/2	25	150	080	5.85
847-007	3/4	25	300	080	6.17
847-010	1	15	90	080	10.96
847-012	1-1/4	10	120	080	13.22
847-015	1-1/2	10	120	080	13.22
847-020	2	10	80	080	26.11
847-025	2-1/2	5	40	080	53.31
847-030	3	5	0	080	62.38
847-040	4	5	0	080	105.19
847-050F	5	1	6	083	133.59

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cap (continued)

Soc

847-060	6	4	0	080	261.68
847-080	8	3	0	080	335.98
847-100F	10	1	5	083	343.68
847-120F	12	1	4	083	515.79
847-140F	14	1	2	083	571.21
847-160F	16	1	2	083	740.00
847-180F	18	1	0	083	1080.38
847-200F	20	1	0	083	1448.29
847-240F	24	1	0	083	2694.45

Cap Fipt

848-002	1/4	25	450	080	7.32
848-003	3/8	25	450	080	7.32
848-005	1/2	25	300	080	7.32
848-007	3/4	25	300	080	8.20
848-010	1	15	90	080	10.33
848-012	1-1/4	10	120	080	12.29
848-015	1-1/2	10	120	080	14.04
848-020	2	10	40	080	27.59
848-025	2-1/2	5	40	080	55.19
848-030	3	5	0	080	64.97
848-040	4	5	0	080	114.40
848-060F	6	1	4	083	190.86
848-080F	8	1	3	083	248.39

Special Reinforced Cap SR Fipt - Stainless Steel Collar

848-002SR	1/4	25	500	086	4.03
848-003SR	3/8	25	450	086	4.03
848-005SR	1/2	50	300	086	4.41
848-007SR	3/4	25	300	086	5.65
848-030SR	3	5	0	086	34.84

Plug Spig

849-005	1/2	50	300	080	5.47
849-007	3/4	50	300	080	6.09
849-010	1	50	200	080	6.87
849-012	1-1/4	25	100	080	8.77
849-015	1-1/2	10	120	080	9.62
849-020	2	10	120	080	12.73
849-025F ⁴	2-1/2	1	4	083	29.80
849-030F ⁴	3	1	4	083	35.94
849-040F ⁴	4	1	4	083	78.61
849-060F ⁴	6	1	6	083	218.58
849-080F ⁴	8	1	6	083	284.60
849-100F ⁴	10	1	2	083	462.79
849-120F ⁴	12	1	0	083	857.31

⁴ Plug fabricated using Cap and pipe spigot.

Plug Mipt

850-002	1/4	50	900	080	6.32
850-003	3/8	50	600	080	6.32
850-005	1/2	50	500	080	5.63
850-007	3/4	50	300	080	5.85
850-010	1	15	180	080	7.17
850-012	1-1/4	10	120	080	10.57
850-015	1-1/2	10	120	080	12.85

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Plug (continued)

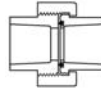
Mipt

850-020	2	10	120	080	13.20
850-025	2-1/2	5	60	080	36.84
850-030	3	5	40	080	42.99
850-040	4	6	0	080	83.69
850-060	6	6	0	080	99.49
850-080F ⁴	8	1	2	083	245.58
850-100F ⁴	10	1	3	083	359.93
850-120F ⁴	12	1	0	083	492.98

⁴ Plug fabricated using Cap and threaded pipe.

Union 2000

Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure rating @ 73°F (23°C)

857-002	1/4	25	150	080	22.91
857-003	3/8	25	150	080	22.91
8057-005	1/2	20	120	080	12.26
8057-007	3/4	20	80	080	15.58
8057-010	1	15	90	080	17.77
8057-012	1-1/4	10	0	080	35.31
8057-015	1-1/2	10	0	080	39.99
8057-020	2	5	0	080	54.21
8057-025	2-1/2	5	0	080	86.82
8057-030	3	5	0	080	100.94
8057-040	4	4	0	080	140.59
8057-060	6	1	0	080	312.46

Union 2000

Soc with EPDM O-ring Seal

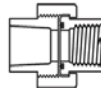


235 psi Maximum Internal Pressure rating @ 73°F (23°C)

897-002	1/4	25	150	080	22.62
897-003	3/8	25	150	080	22.62
8097-005	1/2	20	120	080	12.08
8097-007	3/4	20	80	080	15.38
8097-010	1	15	90	080	17.60
8097-012	1-1/4	10	0	080	34.89
8097-015	1-1/2	10	0	080	39.48
8097-020	2	5	0	080	53.57
8097-025	2-1/2	5	0	080	85.16
8097-030	3	5	0	080	99.68
8097-040	4	4	0	080	137.88
8097-060	6	1	0	080	306.41

Union 2000

Soc x Fipt with FKM O-ring Seal



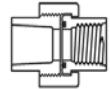
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002	1/4	25	150	080	24.67
859-003	3/8	25	150	080	24.67
8059-005	1/2	20	120	080	14.93
8059-007	3/4	20	80	080	20.88
8059-010	1	15	90	080	27.77
8059-012	1-1/4	10	0	080	53.05
8059-015	1-1/2	10	0	080	65.66
8059-020	2	5	0	080	101.09
8059-025	2-1/2	5	0	080	179.63
8059-030	3	5	0	080	238.58
8059-040	4	4	0	080	274.19
8059-060	6	1	0	080	609.34

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Union 2000

Soc x Fipt with EPDM O-ring Seal

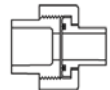


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002	1/4	25	150	080	24.38
899-003	3/8	25	150	080	24.38
8099-005	1/2	20	120	080	14.74
8099-007	3/4	20	80	080	20.62
8099-010	1	15	90	080	27.42
8099-012	1-1/4	10	0	080	52.42
8099-015	1-1/2	10	0	080	64.88
8099-020	2	5	0	080	99.83
8099-025	2-1/2	5	0	080	141.15
8099-030	3	5	0	080	235.59
8099-040	4	4	0	080	270.51
8099-060	6	1	0	080	601.12

Union 2000

Soc x Spig with FKM O-ring Seal

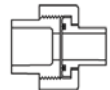


235 psi Maximum Internal Pressure rating @ 73°F (23°C)

8056-005	1/2	20	120	080	12.26
8056-007	3/4	20	160	080	15.58
8056-010	1	15	90	080	17.77
8056-012	1-1/4	10	0	080	35.31
8056-015	1-1/2	10	0	080	39.99
8056-020	2	5	0	080	54.21
8056-025	2-1/2	5	0	080	86.82
8056-030	3	5	0	080	100.94
8056-040	4	4	0	080	140.59
8056-060	6	1	0	080	312.46

Union 2000

Soc x Spig with EPDM O-ring Seal

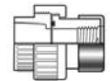


235 psi Maximum Internal Pressure rating @ 73°F (23°C)

8096-005	1/2	20	160	080	12.08
8096-007	3/4	20	80	080	15.38
8096-010	1	15	90	080	17.60
8096-012	1-1/4	10	0	080	34.89
8096-015	1-1/2	10	0	080	39.48
8096-020	2	5	0	080	53.57
8096-025	2-1/2	5	0	080	85.16
8096-030	3	5	0	080	99.68
8096-040	4	4	0	080	137.88
8096-060	6	1	0	080	306.41

Special Reinforced Union 2000

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005SR	1/2	20	160	086	8.32
8059-007SR	3/4	20	80	086	11.45
8059-010SR	1	15	90	086	14.88
8059-012SR	1-1/4	10	0	086	28.44
8059-015SR	1-1/2	10	0	086	35.09
8059-020SR	2	5	0	086	53.59
8059-025SR	2-1/2	5	0	086	115.19
8059-030SR	3	5	0	086	130.95
8059-040SR	4	4	0	086	150.35
8059-060SR	6	1	0	086	334.11



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Union 2000

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005SR	1/2	20	160	086	8.00
8099-007SR	3/4	20	80	086	11.40
8099-010SR	1	15	90	086	14.71
8099-012SR	1-1/4	10	0	086	25.58
8099-015SR	1-1/2	10	0	086	33.15
8099-020SR	2	5	0	086	53.35
8099-025SR	2-1/2	5	0	086	114.12
8099-030SR	3	5	0	086	127.04
8099-040SR	4	4	0	086	144.99
8099-060SR	6	1	0	086	322.21

Union 2000

Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

858-002	1/4	25	150	080	24.67
858-003	3/8	25	150	080	24.67
8058-005	1/2	20	120	080	14.21
8058-007	3/4	20	80	080	19.91
8058-010	1	15	90	080	26.48
8058-012	1-1/4	10	0	080	50.53
8058-015	1-1/2	10	0	080	62.57
8058-020	2	5	0	080	96.26
8058-025	2-1/2	5	0	080	162.82
8058-030	3	5	0	080	244.18
8058-040	4	4	0	080	286.98
8058-060	6	1	0	080	637.71

Union 2000

Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

898-002	1/4	25	150	080	24.38
898-003	3/8	25	150	080	24.38
8098-005	1/2	20	240	080	14.04
8098-007	3/4	20	80	080	19.64
8098-010	1	15	90	080	26.16
8098-012	1-1/4	10	0	080	49.89
8098-015	1-1/2	10	0	080	61.78
8098-020	2	5	0	080	95.06
8098-025	2-1/2	5	0	080	127.31
8098-030	3	5	0	080	241.16
8098-040	4	4	0	080	282.05
8098-060	6	1	0	080	626.59

Special Reinforced Union 2000

SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005SR	1/2	20	120	086	8.56
8058-007SR	3/4	20	80	086	11.59
8058-010SR	1	15	90	086	15.51
8058-012SR	1-1/4	10	0	086	29.54
8058-015SR	1-1/2	10	0	086	36.35
8058-020SR	2	5	0	086	56.44
8058-025SR	2-1/2	5	0	086	118.02
8058-030SR	3	5	0	086	134.25
8058-040SR	4	4	0	086	158.04
8058-060SR	6	1	0	086	351.19

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Union 2000

SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8098-005SR	1/2	20	120	086	8.43
8098-007SR	3/4	20	80	086	11.48
8098-010SR	1	15	90	086	15.20
8098-012SR	1-1/4	10	0	086	28.26
8098-015SR	1-1/2	10	0	086	35.55
8098-020SR	2	5	0	086	55.86
8098-025SR	2-1/2	5	0	086	112.75
8098-030SR	3	5	0	086	132.97
8098-040SR	4	4	0	086	152.65
8098-060SR	6	1	0	086	339.26

Union (Old Style)

Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

857-005	1/2	15	90	080	12.26
857-007	3/4	10	60	080	15.58
857-010	1	10	40	080	17.77
857-012	1-1/4	5	20	080	35.31
857-015	1-1/2	5	0	080	39.99
857-020	2	5	0	080	54.21
857-025	2-1/2	5	0	080	86.82
857-030	3	5	0	080	100.94
857-040	4	4	0	080	140.59

Union (Old Style)

Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

897-005	1/2	15	90	080	12.08
897-007	3/4	10	60	080	15.38
897-010	1	10	40	080	17.60
897-012	1-1/4	5	20	080	34.89
897-015	1-1/2	5	0	080	39.48
897-020	2	5	0	080	53.57
897-025	2-1/2	5	0	080	85.16
897-030	3	5	0	080	99.68
897-040	4	4	0	080	137.88

Union (Old Style)

Soc x Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-005	1/2	15	90	080	14.93
859-007	3/4	10	60	080	20.88
859-010	1	10	40	080	27.77
859-012	1-1/4	5	20	080	53.05
859-015	1-1/2	5	0	080	65.66
859-020	2	5	0	080	101.09
859-025	2-1/2	5	0	080	179.63
859-030	3	5	0	080	238.58
859-040	4	4	0	080	274.19

Union (Old Style)

Soc x Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-005	1/2	15	90	080	14.74
899-007	3/4	10	60	080	20.62
899-010	1	10	40	080	27.42
899-012	1-1/4	5	20	080	52.42

Schedule 80 PVC Industrial Products & Accessories
PVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Union (Old Style) (continued)

Soc x Fipt with EPDM O-ring Seal

899-015	1-1/2	5	0	080	64.88
899-020	2	5	0	080	99.83
899-025	2-1/2	5	0	080	141.15
899-030	3	5	0	080	235.59
899-040	4	4	0	080	270.51

Special Reinforced Union (Old Style)

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002SR	1/4	25	150	086	15.32
859-003SR	3/8	25	100	086	15.32
859-005SR	1/2	10	60	086	8.32
859-007SR	3/4	10	40	086	11.45
859-010SR	1	10	40	086	14.88
859-012SR	1-1/4	5	20	086	28.44
859-015SR	1-1/2	5	0	086	35.09
859-020SR	2	5	0	086	53.59
859-030SR	3	5	0	086	130.95
859-040SR	4	4	0	086	150.35

Special Reinforced Union (Old Style)

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002SR	1/4	25	150	086	15.11
899-003SR	3/8	25	100	086	15.11
899-005SR	1/2	10	60	086	8.00
899-007SR	3/4	10	40	086	11.40
899-010SR	1	10	40	086	14.71
899-012SR	1-1/4	5	20	086	25.58
899-015SR	1-1/2	5	0	086	33.15
899-020SR	2	5	0	086	53.35
899-030SR	3	5	0	086	127.04
899-040SR	4	4	0	086	144.99

Union

Soc x Fipt with Brass Thread Insert & FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-007BR	3/4	10	40	086	53.19
859-010BR	1	10	0	086	65.64
859-012BR	1-1/4	5	20	086	113.29
859-015BR	1-1/2	5	0	086	149.94
859-020BR	2	5	0	086	199.26

Not intended to convey or dispense water for human consumption through drinking or cooking

Union

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

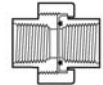
899-007BR	3/4	10	40	086	47.96
899-010BR	1	10	0	086	64.68
899-012BR	1-1/4	5	20	086	108.77
899-015BR	1-1/2	5	0	086	143.96
899-020BR	2	5	0	086	191.89

Not intended to convey or dispense water for human consumption through drinking or cooking

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Union (Old Style)

Fipt with FKM O-ring Seal

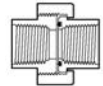


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

858-005	1/2	15	90	080	14.21
858-007	3/4	10	60	080	19.91
858-010	1	10	40	080	26.48
858-012	1-1/4	5	20	080	50.53
858-015	1-1/2	5	0	080	62.57
858-020	2	5	0	080	96.26
858-025	2-1/2	5	0	080	162.82
858-030	3	5	0	080	244.18
858-040	4	4	0	080	286.98

Union (Old Style)

Fipt with EPDM O-ring Seal

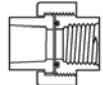


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

898-005	1/2	15	90	080	14.04
898-007	3/4	10	60	080	19.64
898-010	1	10	40	080	26.16
898-012	1-1/4	5	20	080	49.89
898-015	1-1/2	5	0	080	61.78
898-020	2	5	0	080	95.06
898-025	2-1/2	5	0	080	127.31
898-030	3	5	0	080	241.16
898-040	4	4	0	080	282.05

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

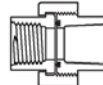


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8298-016	16 DN X 1/2	20	160	197	13.26
8298-020	20 DN X 3/4	20	80	197	18.56
8298-025	25 DN X 1	15	90	197	24.69
8298-030	30 DN X 1-1/4	10	0	197	46.94
8298-040	40 DN X 1-1/2	10	0	197	58.38
8298-050	50 DN X 2	5	0	197	89.84
8298-075	75 DN X 3	5	0	197	212.03
8298-100	100 DN X 4	4	0	197	243.45

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Soc with FKM O-ring Seal

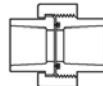


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8359-005	1/2	20	160	197	13.45
8359-007	3/4	20	80	197	18.80
8359-010	1	15	90	197	25.01
8359-012	1-1/4	10	0	197	47.76
8359-015	1-1/2	10	0	197	59.12
8359-020	2	5	0	197	90.96
8359-030	3	5	0	197	214.72
8359-040	4	4	0	197	246.77

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8657-020	20 d X 1/2	10	60	197	11.01
8657-025	25 d X 3/4	10	40	197	14.02
8657-032	32 d X 1	10	40	197	16.00
8657-040	40 d X 1-1/4	10	0	197	31.78
8657-050	50 d X 1-1/2	10	0	197	35.99
8657-063	63 d X 2	5	0	197	48.81
8657-090	90 d X 3	5	0	197	90.85



Schedule 80 PVC Industrial Products & Accessories

PVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Transition Union (continued)

DIN (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal

8657-110	110 d X 4	4	0	197	126.54
----------	-----------	---	---	-----	--------

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8658-020	20 d X 1/2	10	60	197	13.45
8658-025	25 d X 3/4	20	80	197	18.80
8658-032	32 d X 1	15	90	197	25.01
8658-040	40 d X 1-1/4	10	0	197	47.76
8658-050	50 d X 1-1/2	10	0	197	59.12
8658-063	63 d X 2	5	0	197	90.96
8658-090	90 d X 3	5	0	197	214.72
8658-110	110 d X 4	4	0	197	246.77

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8697-020	20 d X 1/2	20	240	197	10.87
8697-025	25 d X 3/4	10	60	197	13.85
8697-032	32 d X 1	15	90	197	15.84
8697-040	40 d X 1-1/4	10	0	197	31.40
8697-050	50 d X 1-1/2	10	0	197	35.55
8697-063	63 d X 2	5	0	197	48.21
8697-090	90 d X 3	5	0	197	89.72
8697-110	110 d X 4	4	0	197	124.08

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8698-020	20 d X 1/2	20	160	197	13.26
8698-025	25 d X 3/4	20	80	197	18.56
8698-032	32 d X 1	15	90	197	24.69
8698-040	40 d X 1-1/4	10	0	197	46.94
8698-050	50 d X 1-1/2	10	0	197	58.38
8698-063	63 d X 2	5	0	197	89.84
8698-090	90 d X 3	5	0	197	212.03
8698-110	110 d X 4	4	0	197	243.45

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8257-016	16 DN X 1/2	20	160	197	11.01
8257-020	20 DN X 3/4	10	40	197	14.02
8257-025	25 DN X 1	15	90	197	16.00
8257-030	30 DN X 1-1/4	10	0	197	31.78
8257-040	40 DN X 1-1/2	10	0	197	35.99
8257-050	50 DN X 2	5	0	197	48.81
8257-075	75 DN X 3	5	0	197	90.85
8257-100	100 DN X 4	4	0	197	126.54

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8258-016	16 DN X 1/2	20	160	197	13.45
8258-020	20 DN X 3/4	20	80	197	18.80
8258-025	25 DN X 1	15	90	197	25.01
8258-030	30 DN X 1-1/4	10	0	197	47.76
8258-040	40 DN X 1-1/2	10	0	197	59.12
8258-075	75 DN X 3	5	0	197	214.72

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

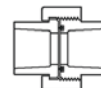
PVC Transition Union (continued)

JIS (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

8258-100	100 DN X 4	4	0	197	246.77
----------	------------	---	---	-----	--------

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal

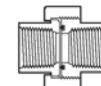


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8297-016	16 DN X 1/2	20	160	197	10.87
8297-020	20 DN X 3/4	20	80	197	13.85
8297-025	25 DN X 1	15	90	197	15.84
8297-030	30 DN X 1-1/4	10	0	197	31.40
8297-040	40 DN X 1-1/2	10	0	197	35.55
8297-050	50 DN X 2	5	0	197	48.21
8297-075	75 DN X 3	5	0	197	89.72
8297-100	100 DN X 4	4	0	197	124.08

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Fipt with FKM O-ring Seal

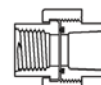


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8358-005	1/2	20	160	197	12.82
8358-007	3/4	20	80	197	17.91
8358-010	1	15	90	197	23.84
8358-012	1-1/4	10	0	197	45.48
8358-015	1-1/2	10	0	197	56.31
8358-020	2	5	0	197	86.64
8358-030	3	5	0	197	219.76
8358-040	4	4	0	197	258.26

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Soc with EPDM O-ring Seal

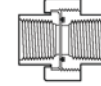


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8399-005	1/2	10	60	197	13.26
8399-007	3/4	20	80	197	18.56
8399-010	1	15	90	197	24.69
8399-012	1-1/4	10	0	197	47.17
8399-015	1-1/2	10	0	197	58.38
8399-020	2	5	0	197	89.84
8399-030	3	5	0	197	212.03
8399-040	4	4	0	197	243.45

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Fipt with EPDM O-ring Seal



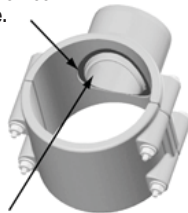
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8398-005	1/2	10	60	197	12.63
8398-007	3/4	10	40	197	17.68
8398-010	1	10	40	197	23.54
8398-012	1-1/4	5	20	197	44.92
8398-015	1-1/2	5	0	197	55.60
8398-020	2	5	0	197	89.33
8398-030	3	5	0	197	217.04
8398-040	4	4	0	197	253.84

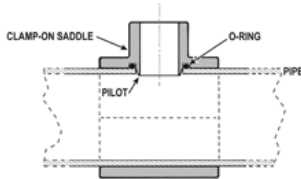
**Spears® Two-Piece Clamp-On Saddle Design Clamps onto Pipe
for Quick and Easy Installation**



O-ring seal provides positive, trouble-free sealing to pipe.

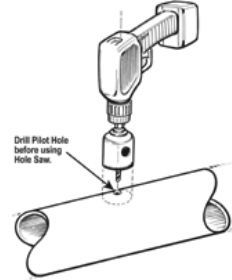


Special pilot engages with hole in pipe to prevent saddle dislocation.



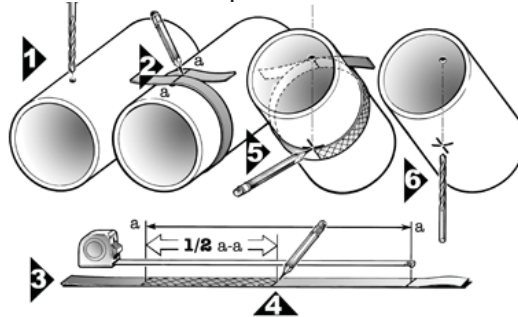
**Clamp-On Saddle
Installation Instructions**

1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers **MUST** be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.



Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque - ft/lb	8	8	8	10

For Double Outlet Saddle Installation — Determine second outlet hole position as shown.



Spears® Hot-Tap Saddles Designed for Adding Branch Connections to Piping Systems Under Live ("Hot") Pressure

Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 6" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F (23°C) is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles and 150 psi for 8" saddles. See packaged Installation Instructions for details.

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Single Outlet

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

866V-247	2X1/2	3/4	1	10	086	34.00
866V-248	2X3/4	7/8	1	10	086	34.00
866V-249	2X1	1-1/8	1	10	086	34.00
866V-250	2X1-1/4	1-1/2	1	10	086	34.00
866V-251	2X1-1/2	1-1/2	1	10	086	34.00
866V-291	2-1/2X1-1/2	1-3/4	1	10	086	47.08
866V-333 ¹	3X1/2	7/8	1	10	086	47.08
866V-334	3X3/4	7/8	1	10	086	47.08
866V-335	3X1	1-1/8	1	10	086	47.08
866V-336 ¹	3X1-1/4	2-1/4	1	10	086	47.08
866V-337 ¹	3X1-1/2	2-1/4	1	10	086	47.08
866V-338	3X2	2-1/4	1	10	086	47.08



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

866V-415 ¹	4X1/2	1-1/8	1	10	086	56.44
866V-416 ¹	4X3/4	1-1/8	1	10	086	56.44
866V-417	4X1	1-1/8	1	8	086	56.44
866V-418 ¹	4X1-1/4	1-3/4	1	8	086	56.44
866V-419	4X1-1/2	1-3/4	1	8	086	56.44
866V-420	4X2	2-1/4	1	8	086	56.44
866V-421 ¹	4X2-1/2	3	1	4	086	61.56
866V-422	4X3	3	1	4	086	66.99
866V-523 ¹	6X1/2	1-1/8	1	4	086	94.03
866V-524 ¹	6X3/4	1-1/8	1	4	086	94.03
866V-525	6X1	1-1/8	1	4	086	94.03
866V-526 ¹	6X1-1/4	2-1/4	1	4	086	94.03
866V-527 ¹	6X1-1/2	2-1/4	1	4	086	94.03
866V-528	6X2	2-1/4	1	4	086	94.03



Schedule 80 PVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Single Outlet

(continued)

with FKM O-ring Seal & Zinc-Plated Hardware

866V-529 ¹	6X2-1/2	3	1	4	086	118.31
866V-530	6X3	3	1	4	086	123.18
866V-532	6X4	4	1	4	086	129.73
866V-573 ¹	8X1/2	4	1	0	086	201.53
866V-574 ¹	8X3/4	4	1	0	086	201.53
866V-575 ¹	8X1	4	1	0	086	201.53
866V-576 ¹	8X1-1/4	4	1	0	086	201.53
866V-577 ¹	8X1-1/2	4	1	0	086	201.53
866V-578 ¹	8 X 2	4	1	0	086	201.53
866V-579 ¹	8X2-1/2	4	1	0	086	211.42
866V-580 ¹	8X3	4	1	0	086	222.07
866V-582	8X4	4	1	0	086	235.40
866V-585	8X6	6	1	0	086	261.28
866V-624	10X4	4	1	0	086	310.83
866V-626	10X6	6	1	0	086	357.43
866V-664	12X4	4	1	0	086	389.80
866V-666	12X6	6	1	0	086	452.06

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Single Outlet

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

866SV-247	2X1/2	3/4	1	10	086	57.94
866SV-248	2X3/4	7/8	1	10	086	57.94
866SV-249	2X1	1-1/8	1	10	086	57.94
866SV-250	2X1-1/4	1-1/2	1	10	086	57.94
866SV-251	2X1-1/2	1-1/2	1	10	086	57.94
866SV-291	2-1/2X1-1/2	1-3/4	1	10	086	77.66
866SV-333 ¹	3X1/2	7/8	1	10	086	77.66
866SV-334	3X3/4	7/8	1	10	086	77.66
866SV-335	3X1	1-1/8	1	10	086	77.66
866SV-336 ¹	3X1-1/4	2-1/4	1	10	086	77.66
866SV-337 ¹	3X1-1/2	2-1/4	1	10	086	77.66
866SV-338	3X2	2-1/4	1	10	086	77.66
866SV-415 ¹	4X1/2	1-1/8	1	10	086	99.93
866SV-416 ¹	4X3/4	1-1/8	1	10	086	99.93
866SV-417	4X1	1-1/8	1	8	086	99.93
866SV-418 ¹	4X1-1/4	1-3/4	1	8	086	99.93
866SV-419	4X1-1/2	1-3/4	1	8	086	99.93
866SV-420	4X2	2-1/4	1	8	086	99.93
866SV-421 ¹	4X2-1/2	3	1	4	086	103.89
866SV-422	4X3	3	1	4	086	109.25
866SV-523 ¹	6X1/2	1-1/8	1	4	086	148.08
866SV-524 ¹	6X3/4	1-1/8	1	4	086	148.08
866SV-525	6X1	1-1/8	1	4	086	148.08
866SV-526 ¹	6X1-1/4	2-1/4	1	4	086	148.08
866SV-527 ¹	6X1-1/2	2-1/4	1	4	086	148.08
866SV-528	6X2	2-1/4	1	4	086	148.08
866SV-529 ¹	6X2-1/2	3	1	4	086	153.83
866SV-530	6X3	3	1	4	086	159.01
866SV-532	6X4	4	1	4	086	164.43
866SV-573 ¹	8X1/2	4	1	0	086	270.41
866SV-574 ¹	8X3/4	4	1	0	086	270.41
866SV-575 ¹	8 X 1	4	1	0	086	270.41
866SV-576 ¹	8X1-1/4	4	1	0	086	270.41
866SV-577 ¹	8X1-1/2	4	1	0	086	270.41
866SV-578 ¹	8 X 2	4	1	0	086	270.41
866SV-579 ¹	8X2-1/2	4	1	0	086	297.42
866SV-580 ¹	8X3	4	1	0	086	312.28
866SV-582	8X4	4	1	0	086	331.04
866SV-585	8X6	6	1	0	086	367.42
866SV-624	10X4	4	1	0	086	437.35
866SV-626	10X6	6	1	0	086	502.81



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Single Outlet

(continued)

with FKM O-ring Seal & SS Hardware

866SV-664	12X4	4	1	0	086	548.03
866SV-666	12X6	6	1	0	086	635.77

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Single Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

866-247	2X1/2	3/4	1	10	086	32.40
866-248	2X3/4	7/8	1	10	086	32.40
866-249	2X1	1-1/8	1	10	086	32.40
866-250	2X1-1/4	1-1/2	1	10	086	32.40
866-251	2X1-1/2	1-1/2	1	10	086	32.40
866-291	2-1/2X1-1/2	1-3/4	1	10	086	43.26
866-333 ¹	3X1/2	7/8	1	10	086	43.26
866-334	3X3/4	7/8	1	10	086	43.26
866-335	3X1	1-1/8	1	10	086	43.26
866-336 ¹	3X1-1/4	2-1/4	1	10	086	43.26
866-337 ¹	3X1-1/2	2-1/4	1	10	086	43.26
866-338	3X2	2-1/4	1	10	086	43.26
866-415 ¹	4X1/2	1-1/8	1	10	086	52.58
866-416 ¹	4X3/4	1-1/8	1	10	086	52.58
866-417	4X1	1-1/8	1	0	086	52.58
866-418 ¹	4X1-1/4	1-3/4	1	8	086	52.58
866-419	4X1-1/2	1-3/4	1	8	086	52.58
866-420	4X2	2-1/4	1	8	086	52.58
866-421 ¹	4X2-1/2	3	1	4	086	57.44
866-422	4X3	3	1	4	086	62.86
866-523 ¹	6X1/2	1-1/8	1	4	086	87.64
866-524 ¹	6X3/4	1-1/8	1	4	086	87.64
866-525	6X1	1-1/8	1	4	086	87.64
866-526 ¹	6X1-1/4	2-1/4	1	4	086	87.64
866-527 ¹	6X1-1/2	2-1/4	1	4	086	87.64
866-528	6X2	2-1/4	1	4	086	87.64
866-529 ¹	6X2-1/2	3	1	4	086	95.66
866-530	6X3	3	1	4	086	105.19
866-532	6X4	4	1	4	086	109.63
866-573 ¹	8X1/2	4	1	0	086	168.58
866-574 ¹	8X3/4	4	1	0	086	168.58
866-575 ¹	8X1	4	1	0	086	168.58
866-576 ¹	8X1-1/4	4	1	0	086	168.58
866-577 ¹	8X1-1/2	4	1	0	086	168.58
866-578 ¹	8 X 2	4	1	0	086	168.58
866-579 ¹	8X2-1/2	4	1	0	086	185.44
866-580 ¹	8X3	4	1	0	086	194.73
866-582	8X4	4	1	0	086	206.24
866-585	8X6	6	1	0	086	229.13
866-621 ¹	10X2	4	1	0	086	273.17
866-624	10X4	4	1	0	086	273.17
866-626	10X6	6	1	0	086	312.57
866-664	12X4	4	1	0	086	341.62
866-666	12X6	6	1	0	086	395.12

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Single Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

866S-247	2X1/2	3/4	1	10	086	51.91
866S-248	2X3/4	7/8	1	10	086	51.91
866S-249	2X1	1-1/8	1	10	086	51.91
866S-250	2X1-1/4	1-1/2	1	10	086	51.91
866S-251	2X1-1/2	1-1/2	1	10	086	51.91
866S-291	2-1/2X1-1/2	1-3/4	1	10	086	69.78



Schedule 80 PVC Industrial Products & Accessories
Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Single Outlet
(continued)
with EPDM O-ring Seal & SS Hardware

866S-333 ¹	3X1/2	7/8	1	10	086	69.78
866S-334	3X3/4	7/8	1	10	086	69.78
866S-335	3X1	1-1/8	1	10	086	69.78
866S-336 ¹	3X1-1/4	2-1/4	1	10	086	69.78
866S-337 ¹	3X1-1/2	2-1/4	1	10	086	69.78
866S-338	3X2	2-1/4	1	10	086	69.78
866S-415 ¹	4X1/2	1-1/8	1	10	086	89.83
866S-416 ¹	4X3/4	1-1/8	1	10	086	89.83
866S-417	4X1	1-1/8	1	8	086	89.83
866S-418 ¹	4X1-1/4	1-3/4	1	8	086	89.83
866S-419	4X1-1/2	1-3/4	1	8	086	89.83
866S-420	4X2	2-1/4	1	8	086	89.83
866S-421 ¹	4X2-1/2	3	1	4	086	93.00
866S-422	4X3	3	1	4	086	98.49
866S-523 ¹	6X1/2	1-1/8	1	4	086	135.19
866S-524 ¹	6X3/4	1-1/8	1	4	086	135.19
866S-525	6X1	1-1/8	1	4	086	135.19
866S-526 ¹	6X1-1/4	2-1/4	1	4	086	135.19
866S-527 ¹	6X1-1/2	2-1/4	1	4	086	135.19
866S-528	6X2	2-1/4	1	4	086	135.19
866S-529 ¹	6X2-1/2	3	1	4	086	141.61
866S-530	6X3	3	1	4	086	146.44
866S-532	6X4	4	1	4	086	151.92
866S-573 ¹	8X1/2	4	1	0	086	254.06
866S-574 ¹	8X3/4	4	1	0	086	254.06
866S-575	8X1	4	1	0	086	254.06
866S-576 ¹	8X1-1/4	4	1	0	086	254.06
866S-577 ¹	8X1-1/2	4	1	0	086	254.06
866S-578 ¹	8 X 2	4	1	0	086	254.06
866S-579 ¹	8X2-1/2	4	1	0	086	279.53
866S-580 ¹	8X3	4	1	0	086	293.55
866S-582	8X4	4	1	0	086	309.79
866S-585	8X6	6	1	0	086	345.40
866S-624	10X4	4	1	0	086	411.13
866S-626	10X6	6	1	0	086	472.69
866S-664	12X4	4	1	0	086	515.36
866S-666	12X6	6	1	0	086	597.76

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Single Outlet
with FKM O-ring Seal & Zinc-Plated Hardware



2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867V-247SR	2X1/2	3/4	1	10	086	38.02
867V-248SR	2X3/4	7/8	1	10	086	38.02
867V-249SR	2X1	1-1/8	1	10	086	38.02
867V-250SR	2X1-1/4	1-1/2	1	10	086	38.02
867V-251SR	2X1-1/2	1-1/2	1	10	086	38.02
867V-291SR	2-1/2X1-1/2	1-3/4	1	10	086	52.98
867V-333SR ¹	3X1/2	7/8	1	10	086	52.98
867V-334SR	3X3/4	7/8	1	10	086	52.98
867V-335SR	3X1	1-1/8	1	10	086	52.98
867V-336SR ¹	3X1-1/4	2-1/4	1	10	086	52.98
867V-337SR ¹	3X1-1/2	2-1/4	1	10	086	52.98
867V-338SR	3X2	2-1/4	1	10	086	52.98
867V-415SR ¹	4X1/2	1-1/8	1	10	086	66.21
867V-416SR ¹	4X3/4	1-1/8	1	10	086	66.21
867V-417SR	4X1	1-1/8	1	8	086	66.21
867V-418SR ¹	4X1-1/4	1-3/4	1	8	086	66.21
867V-419SR	4X1-1/2	1-3/4	1	8	086	66.21
867V-420SR	4X2	2-1/4	1	8	086	66.21
867V-421SR ¹	4X2-1/2	3	1	4	086	71.31
867V-422SR	4X3	3	1	4	086	75.48
867V-523SR ¹	6X1/2	1-1/8	1	4	086	110.35

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x SR Thread Single Outlet
(continued)
with FKM O-ring Seal & Zinc-Plated Hardware

867V-524SR ¹	6X3/4	1-1/8	1	4	086	110.35
867V-525SR	6X1	1-1/8	1	4	086	110.35
867V-526SR ¹	6X1-1/4	2-1/4	1	4	086	110.35
867V-527SR ¹	6X1-1/2	2-1/4	1	4	086	110.35
867V-528SR	6X2	2-1/4	1	4	086	110.35
867V-529SR ¹	6X2-1/2	3	1	4	086	141.48
867V-530SR	6X3	3	1	4	086	147.03
867V-532SR	6X4	4	1	4	086	153.39
867V-573SR ¹	8X1/2	4	1	0	086	222.42
867V-574SR ¹	8X3/4	4	1	0	086	222.42
867V-575SR ¹	8X1	4	1	0	086	222.42
867V-576SR ¹	8X1-1/4	4	1	0	086	222.42
867V-577SR ¹	8X1-1/2	4	1	0	086	222.42
867V-578SR ¹	8X2	4	1	0	086	222.42
867V-579SR ¹	8X2-1/2	4	1	0	086	244.61
867V-580SR ¹	8X3	4	1	0	086	256.88
867V-582SR	8X4	4	1	0	086	272.31
867V-585SR	8X6	4	1	0	086	303.09
867V-624SR	10X4	4	1	0	086	324.06
867V-626SR	10X6	6	1	0	086	372.60
867V-664SR	12X4	4	1	0	086	406.22
867V-666SR	12X6	6	1	0	086	471.15

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Single Outlet



with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867SV-245SR ¹	2X1/4	1-1/8	1	10	086	70.39
867SV-247SR	2X1/2	3/4	1	10	086	64.64
867SV-248SR	2X3/4	7/8	1	10	086	64.64
867SV-249SR	2X1	1-1/8	1	10	086	64.64
867SV-250SR	2X1-1/4	1-1/2	1	10	086	64.64
867SV-251SR	2X1-1/2	1-1/2	1	10	086	64.64
867SV-291SR	2-1/2X1-1/2	1-3/4	1	10	086	86.42
867SV-331SR ¹	3X1/4	1-1/8	1	10	086	86.42
867SV-333SR ¹	3X1/2	7/8	1	10	086	86.42
867SV-334SR	3X3/4	7/8	1	10	086	86.42
867SV-335SR	3X1	1-1/8	1	10	086	86.42
867SV-336SR ¹	3X1-1/4	2-1/4	1	10	086	86.42
867SV-337SR ¹	3X1-1/2	2-1/4	1	10	086	86.42
867SV-338SR	3X2	2-1/4	1	10	086	86.42
867SV-413SR ¹	4X1/4	1-1/8	1	8	086	110.27
867SV-415SR ¹	4X1/2	1-1/8	1	10	086	109.12
867SV-416SR ¹	4X3/4	1-1/8	1	10	086	109.12
867SV-417SR	4X1	1-1/8	1	8	086	109.12
867SV-418SR ¹	4X1-1/4	1-3/4	1	8	086	109.12
867SV-419SR	4X1-1/2	1-3/4	1	8	086	109.12
867SV-420SR	4X2	2-1/4	1	8	086	109.12
867SV-421SR ¹	4X2-1/2	3	1	4	086	112.74
867SV-422SR	4X3	3	1	4	086	118.49
867SV-521SR ¹	6X1/4	1-1/8	1	8	086	163.76
867SV-523SR ¹	6X1/2	1-1/8	1	4	086	160.27
867SV-524SR ¹	6X3/4	1-1/8	1	4	086	160.27
867SV-525SR	6X1	1-1/8	1	4	086	160.27
867SV-526SR ¹	6X1-1/4	2-1/4	1	4	086	160.27
867SV-527SR ¹	6X1-1/2	2-1/4	1	4	086	160.27
867SV-528SR	6X2	2-1/4	1	4	086	160.27
867SV-529SR ¹	6X2-1/2	3	1	4	086	173.64
867SV-530SR	6X3	3	1	4	086	181.65
867SV-532SR	6X4	4	1	4	086	188.06
867SV-571SR ¹	8X1/4	4	1	0	086	297.93
867SV-573SR ¹	8X1/2	4	1	0	086	286.42
867SV-574SR ¹	8X3/4	4	1	0	086	286.42



Schedule 80 PVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x SR Thread Single Outlet (continued) with FKM O-ring Seal & SS Hardware

867SV-575SR ¹	8X1	4	1	0	086	286.42
867SV-576SR ¹	8X1-1/4	4	1	0	086	286.42
867SV-577SR ¹	8X1-1/2	4	1	0	086	286.42
867SV-578SR ¹	8X2	4	1	0	086	286.42
867SV-579SR ¹	8X2-1/2	4	1	0	086	315.05
867SV-580SR ¹	8X3	4	1	0	086	330.80
867SV-582SR	8X4	4	1	0	086	350.65
867SV-585SR	8X6	6	1	0	086	384.27
867SV-624SR	10X4	4	1	0	086	417.13
867SV-626SR	10X6	6	1	0	086	479.95
867SV-664SR	12X4	4	1	0	086	523.11
867SV-666SR	12X6	6	1	0	086	606.72

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Single Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867-247SR	2X1/2	3/4	1	10	086	33.81
867-248SR	2X3/4	7/8	1	10	086	33.81
867-249SR	2X1	1-1/8	1	10	086	33.81
867-250SR	2X1-1/4	1-1/2	1	10	086	33.81
867-251SR	2X1-1/2	1-1/2	1	10	086	33.81
867-291SR	2-1/2X1-1/2	1-3/4	1	10	086	46.20
867-333SR ¹	3X1/2	7/8	1	10	086	46.20
867-334SR	3X3/4	7/8	1	10	086	46.20
867-335SR	3X1	1-1/8	1	10	086	46.20
867-336SR ¹	3X1-1/4	2-1/4	1	10	086	46.20
867-337SR ¹	3X1-1/2	2-1/4	1	10	086	46.20
867-338SR	3X2	2-1/4	1	10	086	46.20
867-415SR ¹	4X1/2	1-1/8	1	10	086	58.21
867-416SR ¹	4X3/4	1-1/8	1	10	086	58.21
867-417SR	4X1	1-1/8	1	8	086	58.21
867-418SR ¹	4X1-1/4	1-3/4	1	8	086	58.21
867-419SR ¹	4X1-1/2	1-3/4	1	8	086	58.21
867-420SR	4X2	2-1/4	1	8	086	58.21
867-421SR ¹	4X2-1/2	3	1	4	086	59.58
867-422SR	4X3	3	1	4	086	68.28
867-523SR ¹	6X1/2	1-1/8	1	4	086	96.99
867-524SR ¹	6X3/4	1-1/8	1	4	086	96.99
867-525SR	6X1	1-1/8	1	4	086	96.99
867-526SR ¹	6X1-1/4	2-1/4	1	4	086	96.99
867-527SR ¹	6X1-1/2	2-1/4	1	4	086	96.99
867-528SR	6X2	2-1/4	1	4	086	96.99
867-529SR ¹	6X2-1/2	3	1	4	086	120.48
867-530SR	6X3	3	1	4	086	129.71
867-532SR	6X4	4	1	4	086	135.82
867-573SR	8X1/2	4	1	0	086	205.29
867-574SR ¹	8X3/4	4	1	0	086	205.29
867-575SR	8X1	4	1	0	086	205.29
867-576SR ¹	8X1-1/4	4	1	0	086	205.29
867-577SR ¹	8X1-1/2	4	1	0	086	205.29
867-578SR ¹	8X2	4	1	0	086	205.29
867-579SR ¹	8X2-1/2	4	1	0	086	225.85
867-580SR ¹	8X3	4	1	0	086	237.04
867-582SR	8X4	4	1	0	086	251.33
867-585SR	8X6	6	1	0	086	289.45
867-624SR	10X4	4	1	0	086	298.97
867-626SR	10X6	6	1	0	086	343.85
867-664SR	12X4	4	1	0	086	374.64
867-666SR	12X6	6	1	0	086	434.85

¹Outlet-sized with Bushing



PVC Gray Clamp-On Saddle x SR Thread Single Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867S-245SR ¹	2X1/4	1-1/8	1	10	086	64.64
867S-247SR	2X1/2	3/4	1	10	086	57.77
867S-248SR	2X3/4	7/8	1	10	086	57.77
867S-249SR	2X1	1-1/8	1	10	086	57.77
867S-250SR	2X1-1/4	1-1/2	1	10	086	57.77
867S-251SR	2X1-1/2	1-1/2	1	10	086	57.77
867S-291SR	2-1/2X1-1/2	1-3/4	1	10	086	77.67
867S-331SR ¹	3X1/4	1-1/8	1	10	086	85.92
867S-333SR ¹	3X1/2	7/8	1	10	086	77.67
867S-334SR	3X3/4	7/8	1	10	086	77.67
867S-335SR	3X1	1-1/8	1	10	086	77.67
867S-336SR ¹	3X1-1/4	2-1/4	1	10	086	77.67
867S-337SR ¹	3X1-1/2	2-1/4	1	10	086	77.67
867S-338SR	3X2	2-1/4	1	10	086	77.67
867S-413SR	4X1/4		1	8	086	101.09
867S-415SR ¹	4X1/2	1-1/8	1	10	086	97.79
867S-416SR ¹	4X3/4	1-1/8	1	10	086	97.79
867S-417SR	4X1	1-1/8	1	8	086	97.79
867S-418SR ¹	4X1-1/4	1-3/4	1	8	086	97.79
867S-419SR ¹	4X1-1/2	1-3/4	1	8	086	97.79
867S-420SR	4X2	2-1/4	1	8	086	97.79
867S-421SR ¹	4X2-1/2	3	1	4	086	102.35
867S-422SR	4X3	3	1	4	086	110.32
867S-521SR ¹	6X1/4	1-1/8	1	8	086	155.12
867S-523SR ¹	6X1/2	1-1/8	1	4	086	141.37
867S-524SR ¹	6X3/4	1-1/8	1	4	086	141.37
867S-525SR	6X1	1-1/8	1	4	086	141.37
867S-526SR ¹	6X1-1/4	2-1/4	1	4	086	141.37
867S-527SR ¹	6X1-1/2	2-1/4	1	4	086	141.37
867S-528SR	6X2	2-1/4	1	4	086	141.37
867S-529SR ¹	6X2-1/2	3	1	4	086	161.38
867S-530SR	6X3	3	1	4	086	166.62
867S-532SR	6X4	4	1	4	086	173.55
867S-571SR ¹	8X1/4	4	1	0	086	306.28
867S-573SR ¹	8X1/2	4	1	0	086	262.14
867S-574SR ¹	8X3/4	4	1	0	086	262.14
867S-575SR ¹	8X1	4	1	0	086	262.14
867S-576SR ¹	8X1-1/4	4	1	0	086	262.14
867S-577SR ¹	8X1-1/2	4	1	0	086	262.14
867S-578SR ¹	8X2	4	1	0	086	262.14
867S-579SR ¹	8X2-1/2	4	1	0	086	292.43
867S-580SR ¹	8X3	4	1	0	086	309.04
867S-582SR	8X4	4	1	0	086	326.49
867S-585SR	8X6	6	1	0	086	342.75
867S-624SR	10X4	4	1	0	086	402.46
867S-626SR	10X6	6	1	0	086	423.16
867S-664SR	12X4	4	1	0	086	461.35
867S-666SR	12X6	6	1	0	086	535.14

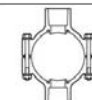
¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Double Outlet

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868V-247	2X1/2	3/4	1	10	086	42.13
868V-248	2X3/4	7/8	1	10	086	42.13
868V-249	2X1	1-1/8	1	10	086	42.13
868V-250	2X1-1/4	1-1/2	1	10	086	42.13
868V-251	2X1-1/2	1-1/2	1	10	086	42.13
868V-291	2-1/2X1-1/2	1-3/4	1	10	086	53.97
868V-333 ¹	3X1/2	7/8	1	10	086	53.97
868V-334	3X3/4	7/8	1	10	086	53.97



Schedule 80 PVC Industrial Products & Accessories
Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Double Outlet
(continued)
with FKM O-ring Seal & Zinc-Plated Hardware

868V-335	3X1	1-1/8	1	10	086	53.97
868V-336 ¹	3X1-1/4	2-1/4	1	10	086	53.97
868V-337 ¹	3X1-1/2	2-1/4	1	10	086	53.97
868V-338	3X2	2-1/4	1	10	086	53.97
868V-415 ¹	4X1/2	1-1/8	1	10	086	72.05
868V-416 ¹	4X3/4	1-1/8	1	10	086	72.05
868V-417	4X1	1-1/8	1	8	086	72.05
868V-418 ¹	4X1-1/4	1-3/4	1	8	086	72.05
868V-419	4X1-1/2	1-3/4	1	8	086	72.05
868V-420	4X2	2-1/4	1	8	086	72.05
868V-421 ¹	4X2-1/2	3	1	4	086	78.32
868V-422	4X3	3	1	4	086	84.43
868V-523 ¹	6X1/2	1-1/8	1	4	086	118.29
868V-524 ¹	6X3/4	1-1/8	1	4	086	118.29
868V-525	6X1	1-1/8	1	4	086	118.29
868V-526 ¹	6X1-1/4	2-1/4	1	4	086	118.29
868V-527 ¹	6X1-1/2	2-1/4	1	4	086	118.29
868V-528	6X2	2-1/4	1	4	086	118.29
868V-529 ¹	6X2-1/2	3	1	4	086	122.82
868V-530	6X3	3	1	4	086	129.54
868V-532	6X4	4	1	4	086	138.45
868V-573 ¹	8X1/2	4	1	0	086	248.75
868V-574 ¹	8X3/4	4	1	0	086	248.75
868V-575 ¹	8X1	4	1	0	086	248.75
868V-576 ¹	8X1-1/4	4	1	0	086	248.75
868V-577 ¹	8X1-1/2	4	1	0	086	248.75
868V-578 ¹	8X2	4	1	0	086	248.75
868V-579 ¹	8X2-1/2	4	1	0	086	260.94
868V-580 ¹	8X3	4	1	0	086	274.19
868V-582	8X4	4	1	0	086	290.55
868V-585	8X6	6	1	0	086	322.52
868V-624	10X4	4	1	0	086	383.85
868V-626	10X6	6	1	0	086	405.08
868V-664	12X4	4	1	0	086	481.15
868V-666	12X6	6	1	0	086	558.02

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Red Double Outlet

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868SV-247	2X1/2	3/4	1	10	086	67.76
868SV-248	2X3/4	7/8	1	10	086	67.76
868SV-249	2X1	1-1/8	1	10	086	67.76
868SV-250	2X1-1/4	1-1/2	1	10	086	67.76
868SV-251	2X1-1/2	1-1/2	1	10	086	67.76
868SV-291	2-1/2X1-1/2	1-3/4	1	10	086	90.04
868SV-333 ¹	3X1/2	7/8	1	10	086	90.04
868SV-334	3X3/4	7/8	1	10	086	90.04
868SV-335	3X1	1-1/8	1	10	086	90.04
868SV-336 ¹	3X1-1/4	2-1/4	1	10	086	90.04
868SV-337 ¹	3X1-1/2	2-1/4	1	10	086	90.04
868SV-338	3X2	2-1/4	1	10	086	90.04
868SV-415 ¹	4X1/2	1-1/8	1	10	086	115.29
868SV-416 ¹	4X3/4	1-1/8	1	10	086	115.29
868SV-417	4X1	1-1/8	1	8	086	115.29
868SV-418 ¹	4X1-1/4	1-3/4	1	8	086	115.29
868SV-419	4X1-1/2	1-3/4	1	8	086	115.29
868SV-420	4X2	2-1/4	1	16	086	115.29
868SV-421 ¹	4X2-1/2	3	1	4	086	123.80
868SV-422	4X3	3	1	4	086	128.94
868SV-523 ¹	6X1/2	1-1/8	1	4	086	178.60
868SV-524 ¹	6X3/4	1-1/8	1	4	086	178.60
868SV-525	6X1	1-1/8	1	4	086	178.60



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Double Outlet
(continued)
with FKM O-ring Seal & SS Hardware

868SV-526 ¹	6X1-1/4	2-1/4	1	4	086	178.60
868SV-527 ¹	6X1-1/2	2-1/4	1	4	086	178.60
868SV-528	6X2	2-1/4	1	4	086	178.60
868SV-529 ¹	6X2-1/2	3	1	4	086	189.31
868SV-530	6X3	3	1	4	086	194.56
868SV-532	6X4	4	1	4	086	200.22
868SV-573 ¹	8X1/2	4	1	0	086	333.88
868SV-574 ¹	8X3/4	4	1	0	086	333.88
868SV-575 ¹	8X1	4	1	0	086	333.88
868SV-576 ¹	8X1-1/4	4	1	0	086	333.88
868SV-577 ¹	8X1-1/2	4	1	0	086	333.88
868SV-578 ¹	8X2	4	1	0	086	333.88
868SV-579 ¹	8X2-1/2	4	1	0	086	367.26
868SV-580 ¹	8X3	4	1	0	086	385.59
868SV-582	8X4	4	1	0	086	387.46
868SV-585	8X6	6	1	0	086	453.61
868SV-624	10X4	4	1	0	086	539.79
868SV-626	10X6	6	1	0	086	620.81
868SV-664	12X4	4	1	0	086	676.63
868SV-666	12X6	6	1	0	086	784.92

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Double Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868-247	2X1/2	3/4	1	10	086	38.56
868-248	2X3/4	7/8	1	10	086	38.56
868-249	2X1	1-1/8	1	10	086	38.56
868-250	2X1-1/4	1-1/2	1	10	086	38.56
868-251	2X1-1/2	1-1/2	1	10	086	38.56
868-291	2-1/2X1-1/2	1-3/4	1	10	086	52.99
868-333 ¹	3X1/2	7/8	1	10	086	52.99
868-334	3X3/4	7/8	1	10	086	52.99
868-335	3X1	1-1/8	1	10	086	52.99
868-336 ¹	3X1-1/4	2-1/4	1	10	086	52.99
868-337 ¹	3X1-1/2	2-1/4	1	10	086	52.99
868-338	3X2	2-1/4	1	10	086	52.99
868-415 ¹	4X1/2	1-1/8	1	10	086	66.85
868-416 ¹	4X3/4	1-1/8	1	10	086	66.85
868-417	4X1	1-1/8	1	8	086	66.85
868-418 ¹	4X1-1/4	1-3/4	1	8	086	66.85
868-419	4X1-1/2	1-3/4	1	8	086	66.85
868-420	4X2	2-1/4	1	8	086	66.85
868-421 ¹	4X2-1/2	3	1	4	086	71.79
868-422	4X3	3	1	4	086	75.97
868-523 ¹	6X1/2	1-1/8	1	4	086	111.67
868-524 ¹	6X3/4	1-1/8	1	4	086	111.67
868-525	6X1	1-1/8	1	4	086	111.67
868-526 ¹	6X1-1/4	2-1/4	1	4	086	111.67
868-527 ¹	6X1-1/2	2-1/4	1	4	086	111.67
868-528	6X2	2-1/4	1	4	086	111.67
868-529 ¹	6X2-1/2	3	1	4	086	118.02
868-530	6X3	3	1	4	086	124.73
868-532	6X4	4	1	4	086	129.72
868-573 ¹	8X1/2	4	1	0	086	208.83
868-574 ¹	8X3/4	4	1	0	086	208.83
868-575 ¹	8X1	4	1	0	086	208.83
868-576 ¹	8X1-1/4	4	1	0	086	208.83
868-577 ¹	8X1-1/2	4	1	0	086	208.83
868-578 ¹	8X2	4	1	0	086	208.83
868-579 ¹	8X2-1/2	4	1	0	086	228.96
868-580 ¹	8X3	4	1	0	086	240.31
868-582	8X4	4	1	0	086	254.57





Schedule 80 PVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x Soc Double Outlet

(continued)

with EPDM O-ring Seal & Zinc-Plated Hardware

868-585	8X6	6	1	0	086	282.79
868-624	10X4	4	1	0	086	336.46
868-626	10X6	6	1	0	086	387.04
868-664	12X4	4	1	0	086	421.77
868-666	12X6	6	1	0	086	489.22

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Double Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



868S-247	2X1/2	3/4	1	10	086	58.78
868S-248	2X3/4	7/8	1	10	086	58.78
868S-249	2X1	1-1/8	1	10	086	58.78
868S-250	2X1-1/4	1-1/2	1	10	086	58.78
868S-251	2X1-1/2	1-1/2	1	10	086	58.78
868S-291	2-1/2X1-1/2	1-3/4	1	10	086	78.99
868S-333 ¹	3X1/2	7/8	1	10	086	78.99
868S-334	3X3/4	7/8	1	10	086	78.99
868S-335	3X1	1-1/8	1	10	086	78.99
868S-336 ¹	3X1-1/4	2-1/4	1	10	086	78.99
868S-337 ¹	3X1-1/2	2-1/4	1	10	086	78.99
868S-338	3X2	2-1/4	1	10	086	78.99
868S-415 ¹	4X1/2	1-1/8	1	10	086	101.72
868S-416 ¹	4X3/4	1-1/8	1	10	086	101.72
868S-417	4X1	1-1/8	1	8	086	101.72
868S-418 ¹	4X1-1/4	1-3/4	1	8	086	101.72
868S-419	4X1-1/2	1-3/4	1	8	086	101.72
868S-420	4X2	2-1/4	1	8	086	101.72
868S-421 ¹	4X2-1/2	3	1	4	086	110.38
868S-422	4X3	3	1	4	086	113.34
868S-523 ¹	6X1/2	1-1/8	1	4	086	169.52
868S-524 ¹	6X3/4	1-1/8	1	4	086	169.52
868S-525	6X1	1-1/8	1	4	086	169.52
868S-526 ¹	6X1-1/4	2-1/4	1	4	086	169.52
868S-527 ¹	6X1-1/2	2-1/4	1	4	086	169.52
868S-528	6X2	2-1/4	1	4	086	169.52
868S-529 ¹	6X2-1/2	3	1	4	086	175.26
868S-530	6X3	3	1	4	086	182.38
868S-532	6X4	4	1	4	086	189.64
868S-573 ¹	8X1/2	4	1	0	086	313.58
868S-574 ¹	8X3/4	4	1	0	086	313.58
868S-575 ¹	8X1	4	1	0	086	313.58
868S-576 ¹	8X1-1/4	4	1	0	086	313.58
868S-577 ¹	8X1-1/2	4	1	0	086	313.58
868S-578 ¹	8X2	4	1	0	086	313.58
868S-579 ¹	8X2-1/2	4	1	0	086	345.07
868S-580 ¹	8X3	4	1	0	086	362.43
868S-582	8X4	4	1	0	086	382.40
868S-585	8X6	6	1	0	086	456.13
868S-624	10X4	4	1	0	086	507.46
868S-626	10X6	6	1	0	086	583.57
868S-664	12X4	4	1	0	086	636.13
868S-666	12X6	6	1	0	086	737.78

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



869V-247SR	2X1/2	3/4	1	10	086	46.88
869V-248SR	2X3/4	7/8	1	10	086	46.88
869V-249SR	2X1	1-1/8	1	10	086	46.88
869V-250SR	2X1-1/4	1-1/2	1	10	086	46.88

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x SR Thread Double Outlet

(continued)

with FKM O-ring Seal & Zinc-Plated Hardware

869V-251SR	2X1-1/2	1-1/2	1	10	086	46.88
869V-291SR	2-1/2X1-1/2	1-3/4	1	10	086	64.45
869V-333SR ¹	3X1/2	7/8	1	10	086	64.45
869V-334SR	3X3/4	7/8	1	10	086	64.45
869V-335SR	3X1	1-1/8	1	10	086	64.45
869V-336SR ¹	3X1-1/4	2-1/4	1	10	086	64.45
869V-337SR ¹	3X1-1/2	2-1/4	1	10	086	64.45
869V-338SR	3X2	2-1/4	1	10	086	64.45
869V-415SR ¹	4X1/2	1-1/8	1	10	086	80.04
869V-416SR ¹	4X3/4	1-1/8	1	10	086	80.04
869V-417SR	4X1	1-1/8	1	8	086	80.04
869V-418SR ¹	4X1-1/4	1-3/4	1	8	086	80.04
869V-419SR	4X1-1/2	1-3/4	1	8	086	80.04
869V-420SR	4X2	2-1/4	1	8	086	80.04
869V-421SR ¹	4X2-1/2	3	1	4	086	86.04
869V-422SR	4X3	3	1	4	086	90.91
869V-523SR ¹	6X1/2	1-1/8	1	4	086	135.56
869V-524SR ¹	6X3/4	1-1/8	1	4	086	135.56
869V-525SR	6X1	1-1/8	1	4	086	135.56
869V-526SR ¹	6X1-1/4	2-1/4	1	4	086	135.56
869V-527SR ¹	6X1-1/2	2-1/4	1	4	086	135.56
869V-528SR	6X2	2-1/4	1	4	086	135.56
869V-529SR ¹	6X2-1/2	3	1	4	086	163.75
869V-530SR	6X3	3	1	4	086	173.05
869V-532SR	6X4	4	1	4	086	181.78
869V-573SR ¹	8X1/2	4	1	0	086	274.53
869V-574SR ¹	8X3/4	4	1	0	086	274.53
869V-575SR ¹	8X1	4	1	0	086	274.53
869V-576SR ¹	8X1-1/4	4	1	0	086	274.53
869V-577SR ¹	8X1-1/2	4	1	0	086	274.53
869V-578SR ¹	8X2	4	1	0	086	274.53
869V-579SR ¹	8X2-1/2	4	1	0	086	302.06
869V-580SR ¹	8X3	4	1	0	086	317.20
869V-582SR	8X4	4	1	0	086	336.29
869V-585SR	8X6	6	1	0	086	391.45
869V-624SR	10X4	4	1	0	086	400.12
869V-626SR	10X6	6	1	0	086	460.13
869V-664SR	12X4	4	1	0	086	501.58
869V-666SR	12X6	6	1	0	086	583.64

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



869SV-247SR	2X1/2	3/4	1	10	086	75.37
869SV-248SR	2X3/4	7/8	1	10	086	75.37
869SV-249SR	2X1	1-1/8	1	10	086	75.37
869SV-250SR	2X1-1/4	1-1/2	1	10	086	75.37
869SV-251SR	2X1-1/2	1-1/2	1	10	086	75.37
869SV-291SR	2-1/2X1-1/2	1-3/4	1	10	086	99.99
869SV-333SR ¹	3X1/2	7/8	1	10	086	99.99
869SV-335SR	3X1	1-1/8	1	10	086	99.99
869SV-334SR	3X3/4	7/8	1	10	086	99.99
869SV-336SR ¹	3X1-1/4	2-1/4	1	10	086	99.99
869SV-337SR ¹	3X1-1/2	2-1/4	1	10	086	99.99
869SV-338SR	3X2	2-1/4	1	10	086	99.99
869SV-415SR ¹	4X1/2	1-1/8	1	10	086	125.72
869SV-416SR ¹	4X3/4	1-1/8	1	10	086	125.72
869SV-417SR	4X1	1-1/8	1	8	086	125.72
869SV-418SR ¹	4X1-1/4	1-3/4	1	8	086	125.72
869SV-419SR	4X1-1/2	1-3/4	1	8	086	125.72
869SV-420SR	4X2	2-1/4	1	8	086	125.72
869SV-421SR ¹	4X2-1/2	3	1	4	086	132.40

Schedule 80 PVC Industrial Products & Accessories
Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x SR Thread Double Outlet
(continued)
with FKM O-ring Seal & SS Hardware

869SV-422SR	4X3	3	1	4	086	139.16
869SV-523SR ¹	6X1/2	1-1/8	1	4	086	209.45
869SV-524SR ¹	6X3/4	1-1/8	1	4	086	209.45
869SV-525SR	6X1	1-1/8	1	4	086	209.45
869SV-526SR ¹	6X1-1/4	2-1/4	1	4	086	209.45
869SV-527SR ¹	6X1-1/2	2-1/4	1	4	086	209.45
869SV-528SR	6X2	2-1/4	1	4	086	209.45
869SV-529SR ¹	6X2-1/2	3	1	4	086	224.25
869SV-530SR	6X3	3	1	4	086	238.53
869SV-532SR	6X4	4	1	4	086	244.73
869SV-573SR ¹	8X1/2	4	1	0	086	353.66
869SV-574SR ¹	8X3/4	4	1	0	086	353.66
869SV-575SR ¹	8X1	4	1	0	086	353.66
869SV-576SR ¹	8X1-1/4	4	1	0	086	353.66
869SV-577SR ¹	8X1-1/2	4	1	0	086	353.66
869SV-578SR ¹	8X2	4	1	0	086	353.66
869SV-579SR ¹	8X2-1/2	4	1	0	086	388.93
869SV-580SR ¹	8X3	4	1	0	086	408.37
869SV-582SR	8X4	4	1	0	086	432.97
869SV-585SR	8X6	6	1	0	086	472.79
869SV-624SR	10X4	4	1	0	086	515.19
869SV-626SR	10X6	4	1	0	086	592.51
869SV-664SR	12X4	4	1	0	086	645.74
869SV-666SR	12X6	6	1	0	086	749.14

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet
with EPDM O-ring Seal & Zinc-Plated Hardware



2" - 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869-247SR	2X1/2	3/4	1	10	086	42.00
869-248SR	2X3/4	7/8	1	10	086	42.00
869-249SR	2X1	1-1/8	1	10	086	42.00
869-250SR	2X1-1/4	1-1/2	1	10	086	42.00
869-251SR	2X1-1/2	1-1/2	1	10	086	42.00
869-291SR	2-1/2X1-1/2	1-3/4	1	10	086	56.56
869-333SR ¹	3X1/2	7/8	1	10	086	56.56
869-334SR	3X3/4	7/8	1	10	086	56.56
869-335SR	3X1	1-1/8	1	10	086	56.56
869-336SR ¹	3X1-1/4	1-1/8	1	10	086	56.56
869-337SR ¹	3X1-1/2	2-1/4	1	10	086	56.56
869-338SR	3X2	2-1/4	1	10	086	56.56
869-415SR ¹	4X1/2	1-1/8	1	10	086	70.72
869-416SR ¹	4X3/4	1-1/8	1	10	086	70.72
869-417SR	4X1	1-1/8	1	8	086	70.72
869-418SR ¹	4X1-1/4	1-3/4	1	8	086	70.72
869-419SR	4X1-1/2	1-3/4	1	8	086	70.72
869-420SR	4X2	2-1/4	1	8	086	70.72
869-421SR ¹	4X2-1/2	3	1	4	086	77.34
869-422SR	4X3	3	1	4	086	82.09
869-523SR ¹	6X1/2	1-1/8	1	4	086	117.85
869-524SR ¹	6X3/4	1-1/8	1	4	086	117.85
869-525SR	6X1	1-1/8	1	4	086	117.85
869-526SR ¹	6X1-1/4	2-1/4	1	4	086	117.85
869-527SR ¹	6X1-1/2	2-1/4	1	4	086	117.85
869-528SR	6X2	2-1/4	1	4	086	117.85
869-529SR ¹	6X2-1/2	3	1	4	086	146.16
869-530SR	6X3	3	1	4	086	154.78
869-532SR	6X4	4	1	4	086	172.47
869-573SR ¹	8X1/2	4	1	0	086	253.38
869-574SR ¹	8X3/4	4	1	0	086	253.38
869-575SR ¹	8X1	4	1	0	086	253.38
869-576SR ¹	8X1-1/4	4	1	0	086	253.38
869-577SR ¹	8X1-1/2	4	1	0	086	253.38

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

PVC Gray Clamp-On Saddle x SR Thread Double Outlet
(continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

869-578SR ¹	8X2	4	1	0	086	253.38
869-579SR ¹	8X2-1/2	4	1	0	086	278.84
869-580SR ¹	8X3	4	1	0	086	292.43
869-582SR	8X4	4	1	0	086	310.14
869-585SR	8X6	6	1	0	086	350.38
869-624SR	10X4	4	1	0	086	368.96
869-626SR	10X6	6	1	0	086	424.37
869-664SR	12X4	4	1	0	086	462.73
869-666SR	12X6	6	1	0	086	536.71

¹Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet
with EPDM O-ring Seal & SS Hardware



2" - 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869S-247SR	2X1/2	3/4	1	10	086	67.59
869S-248SR	2X3/4	7/8	1	10	086	67.59
869S-249SR	2X1	1-1/8	1	10	086	67.59
869S-250SR	2X1-1/4	1-1/2	1	10	086	67.59
869S-251SR	2X1-1/2	1-1/2	1	10	086	67.59
869S-291SR	2-1/2X1-1/2	1-3/4	1	10	086	90.11
869S-333SR ¹	3X1/2	7/8	1	10	086	90.11
869S-334SR	3X3/4	7/8	1	10	086	90.11
869S-335SR	3X1	1-1/8	1	10	086	90.11
869S-336SR ¹	3X1-1/4	2-1/4	1	10	086	90.11
869S-337SR ¹	3X1-1/2	2-1/4	1	10	086	90.11
869S-338SR	3X2	2-1/4	1	10	086	90.11
869S-415SR ¹	4X1/2	1-1/8	1	10	086	112.88
869S-416SR ¹	4X3/4	1-1/8	1	10	086	112.88
869S-417SR	4X1	1-1/8	1	8	086	112.88
869S-418SR ¹	4X1-1/4	1-3/4	1	8	086	112.88
869S-419SR	4X1-1/2	1-3/4	1	8	086	112.88
869S-420SR	4X2	2-1/4	1	8	086	112.88
869S-421SR ¹	4X2-1/2	3	1	4	086	120.59
869S-422SR	4X3	3	1	4	086	125.99
869S-523SR ¹	6X1/2	1-1/8	1	4	086	188.06
869S-524SR ¹	6X3/4	1-1/8	1	4	086	188.06
869S-525SR	6X1	1-1/8	1	4	086	188.06
869S-526SR ¹	6X1-1/4	2-1/4	1	4	086	188.06
869S-527SR ¹	6X1-1/2	2-1/4	1	4	086	188.06
869S-528SR	6X2	2-1/4	1	4	086	188.06
869S-529SR ¹	6X2-1/2	3	1	4	086	197.35
869S-530SR	6X3	3	1	4	086	205.45
869S-532SR	6X4	4	1	4	086	211.97
869S-573SR ¹	8X1/2	4	1	0	086	323.65
869S-574SR ¹	8X3/4	4	1	0	086	323.65
869S-575SR ¹	8X1	4	1	0	086	323.65
869S-576SR ¹	8X1-1/4	4	1	0	086	323.65
869S-577SR ¹	8X1-1/2	4	1	0	086	323.65
869S-578SR ¹	8X2	4	1	0	086	323.65
869S-579SR ¹	8X2-1/2	4	1	0	086	339.73
869S-580SR ¹	8X3	4	1	0	086	360.21
869S-582SR	8X4	4	1	0	086	381.88
869S-585SR	8X6	6	1	0	086	419.20
869S-624SR	10X4	4	1	0	086	368.96
869S-626SR	10X6	6	1	0	086	522.60
869S-664SR	12X4	4	1	0	086	569.72
869S-666SR	12X6	6	1	0	086	660.80

¹Outlet-sized with Bushing



Schedule 80 PVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Gray Hot-Tap Saddle

EPDM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT2-248	2X3/4 (1)	1	5	049	51.19
HT2-251	2X1-1/2 (2)	1	5	049	105.76
HT2-288	2-1/2X3/4 (1)	1	5	049	54.71
HT2-291	2-1/2X1-1/2 (2)	1	5	049	109.28
HT2-334	3X3/4 (1)	1	5	049	62.65
HT2-337	3X1-1/2 (2)	1	5	049	120.45
HT2-416	4X3/4 (1)	1	5	049	72.36
HT2-419	4X1-1/2 (2)	1	0	049	127.36
HT2-524	6X3/4 (1)	1	5	049	81.34
HT2-527	6X1-1/2 (2)	1	0	049	135.60
HT2-574	8X3/4 (1)	1	0	049	90.01
HT2-577	8X1-1/2 (2)	1	0	049	144.58

PVC Gray Hot-Tap Saddle

EPDM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT2S-248	2X3/4 (1)	1	5	049	79.71
HT2S-251	2X1-1/2 (2)	1	5	049	164.57
HT2S-288	2-1/2X3/4 (1)	1	5	049	85.15
HT2S-291	2-1/2X1-1/2 (2)	1	5	049	170.01
HT2S-334	3X3/4 (1)	1	5	049	97.53
HT2S-337	3X1-1/2 (2)	1	5	049	187.53
HT2S-416	4X3/4 (1)	1	5	049	112.66
HT2S-419	4X1-1/2 (2)	1	0	049	198.25
HT2S-524	6X3/4 (1)	1	5	049	126.49
HT2S-527	6X1-1/2 (2)	1	0	049	210.89
HT2S-574	8X3/4 (1)	1	0	049	139.42
HT2S-577	8X1-1/2 (2)	1	0	049	224.14

PVC Gray Hot-Tap Saddle

FKM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT3-248	2X3/4 (1)	1	5	049	55.60
HT3-251	2X1-1/2 (2)	1	5	049	114.73
HT3-288	2-1/2X3/4 (1)	1	5	049	59.42
HT3-291	2-1/2X1-1/2 (2)	1	5	049	118.55
HT3-334	3X3/4 (1)	1	5	049	67.94
HT3-337	3X1-1/2 (2)	1	5	049	130.89
HT3-416	4X3/4 (1)	1	5	049	78.54
HT3-419	4X1-1/2 (2)	1	0	049	136.54
HT3-524	6X3/4 (1)	1	5	049	88.25
HT3-527	6X1-1/2 (2)	1	0	049	146.78
HT3-574	8X3/4 (1)	1	0	049	98.09
HT3-577	8X1-1/2 (2)	1	0	049	173.83

PVC Gray Hot-Tap Saddle

FKM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT3S-248	2X3/4 (1)	1	5	049	86.47
HT3S-251	2X1-1/2 (2)	1	5	049	178.56
HT3S-288	2-1/2X3/4 (1)	1	5	049	92.65
HT3S-291	2-1/2X1-1/2 (2)	1	5	049	184.57
HT3S-334	3X3/4 (1)	1	5	049	105.76
HT3S-337	3X1-1/2 (2)	1	5	049	203.69
HT3S-416	4X3/4 (1)	1	5	049	122.07
HT3S-419	4X1-1/2 (2)	1	0	049	215.17
HT3S-524	6X3/4 (1)	1	5	049	137.37
HT3S-527	6X1-1/2 (2)	1	0	049	228.57
HT3S-574	8X3/4 (1)	1	0	049	151.93

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Gray Hot-Tap Saddle (continued)

FKM Saddle x Soc (Spigot) SS316 Bolts

HT3S-577	8X1-1/2 (2)	1	0	049	242.26
----------	-------------	---	---	-----	--------



PVC Gray Hot-Tap Saddle

EPDM with Stainless Steel Cutter & Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HTS2S-248	2X3/4 (1)	1	5	049	381.86
HTS2S-251	2X1-1/2 (2)	1	5	049	575.51
HTS2S-288	2-1/2X3/4 (1)	1	5	049	408.59
HTS2S-291	2-1/2X1-1/2 (2)	1	5	049	577.61
HTS2S-334	3X3/4 (1)	1	5	049	386.73
HTS2S-337	3X1-1/2 (2)	1	5	049	586.62
HTS2S-416	4X3/4 (1)	1	5	049	418.89
HTS2S-419	4X1-1/2 (2)	1	0	049	603.47
HTS2S-524	6X3/4 (1)	1	5	049	462.78
HTS2S-527	6X1-1/2 (2)	1	0	049	663.61
HTS2S-574	8X3/4 (1)	1	0	049	660.20
HTS2S-577	8X1-1/2 (2)	1	0	049	784.00

PVC Gray Hot-Tap Saddle

FKM with Stainless Steel Cutter & Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HTS3S-248	2X3/4 (1)	1	5	049	387.91
HTS3S-251	2X1-1/2 (2)	1	5	049	586.21
HTS3S-288	2-1/2X3/4 (1)	1	5	049	415.09
HTS3S-291	2-1/2X1-1/2 (2)	1	5	049	588.25
HTS3S-334	3X3/4 (1)	1	5	049	391.44
HTS3S-337	3X1-1/2 (2)	1	5	049	600.25
HTS3S-416	4X3/4 (1)	1	5	049	427.23
HTS3S-419	4X1-1/2 (2)	1	0	049	620.16
HTS3S-524	6X3/4 (1)	1	5	049	471.08
HTS3S-527	6X1-1/2 (2)	1	0	049	679.57
HTS3S-574	8X3/4 (1)	1	0	049	666.89
HTS3S-577	8X1-1/2(20)	1	0	049	798.79



Mechanical Clamp-On Transition Saddles

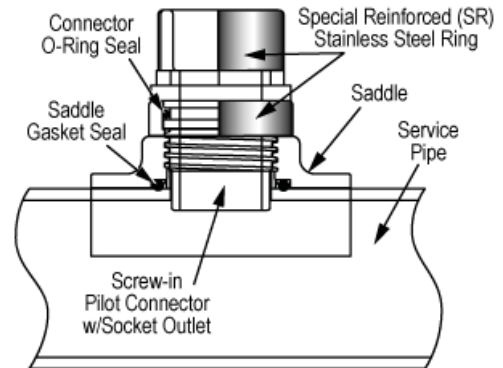
Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.



- Socket Outlet
- 315 psi Pressure Rating @ 73° F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength



Note: Mechanical Clamp Not Shown

Mechanical Clamp-on Transition Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. x Socket

For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions

865-419	4X1-1/2	2	0	086	733.37
865-420	4X2	1	0	086	743.42
865-527	6X1-1/2	1	0	086	804.53
865-528	6X2	1	0	086	838.42

Mechanical Clamp-on Transition Saddles (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. x Socket

865-577	8X1-1/2	1	0	086	941.68
865-578	8X2	1	0	086	978.32

Glue-on Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

3963-528	6X2	1	5	400	60.22
3963-530	6X3	1	5	400	60.76
3963-532	6X4	1	5	400	61.28
3963-578	8X2	1	4	400	85.07
3963-580	8X3	1	8	400	86.11
3963-582	8X4	1	5	400	87.03
3963-585	8X6	1	5	400	89.06
3963-621	10X2	1	5	400	78.77
3963-623	10X3	1	5	400	79.88
3963-624	10X4	1	8	400	80.22
3963-626	10X6	1	5	400	93.28
3963-628	10X8	1	5	400	149.49
3963-661	12X2	1	10	400	93.06
3963-663	12X3	1	8	400	93.61
3963-664	12X4	1	5	400	94.40
3963-666	12X6	1	6	400	109.48
3963-668	12X8	1	2	400	172.28
3963-670	12X10	1	4	400	210.86
3963-691	14X2	1	5	400	114.61

Saddle (continued)

IPS O.D. x Socket Schedule 80

3963-693	14X3	1	8	400	115.68
3963-694	14X4	1	5	400	116.24
3963-696	14X6	1	2	400	132.32
3963-698	14X8	1	4	400	202.85
3963-700	14X10	1	3	400	259.77
3963-702	14X12	1	4	400	286.83
3963-751	16X2	1	8	400	120.69
3963-753	16X3	1	8	400	121.74
3963-754	16X4	1	5	400	122.43
3963-756	16X6	1	10	400	139.54
3963-758	16X8	1	3	400	208.08
3963-760	16X10	1	0	400	264.96
3963-762	16X12	1	0	400	294.28
3963-764	16X14	1	0	400	306.66
3963-781	18X2	1	8	400	177.31
3963-783	18X3	1	4	400	178.38
3963-784	18X4	1	0	400	179.19
3963-786	18X6	1	5	400	189.65
3963-788	18X8	1	5	400	278.65
3963-790	18X10	1	0	400	308.91
3963-792	18X12	1	0	400	440.55
3963-794	18X14	1	0	400	479.48



Schedule 80 PVC Industrial Products & Accessories Glue-on Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Saddle (continued)

IPS O.D. x Socket Schedule 80

3963-796	18X16	1	0	400	627.41
3963-811	20X2	1	0	400	179.33
3963-813	20X3	1	4	400	179.75
3963-814	20X4	1	4	400	181.91
3963-816	20X6	1	0	400	190.82
3963-818	20X8	1	0	400	275.64
3963-820	20X10	1	5	400	305.68
3963-822	20X12	1	0	400	436.02
3963-824	20X14	1	0	400	475.54
3963-826	20X16	1	0	400	623.04
3963-828	20X18	1	0	400	707.43
3963-901	24X2	1	5	400	182.47
3963-903	24X3	1	5	400	183.44
3963-904	24X4	1	5	400	184.28
3963-906	24X6	1	5	400	192.29
3963-908	24X8	1	5	409	259.52
3963-910	24X10	1	5	400	307.00
3963-912	24X12	1	0	409	407.26
3963-914	24X14	1	0	400	473.88
3963-916	24X16	1	0	400	648.61
3963-918	24X18	1	0	400	731.41
3963-920	24X20	1	0	400	823.20

Stub Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

3965-528	6X2	1	10	400	64.76
3965-530	6X3	1	3	400	65.32
3965-532	6X4	1	10	400	65.91
3965-578	8X2	1	5	409	85.99
3965-580	8X3	1	4	400	92.59
3965-582	8X4	1	6	400	93.58
3965-585	8X6	1	4	400	95.77
3965-621	10X2	1	6	400	84.71
3965-623	10X3	1	6	409	80.75
3965-624	10X4	1	4	400	86.26
3965-626	10X6	1	4	400	100.29
3965-628	10X8	1	4	400	160.74
3965-661	12X2	1	2	400	100.06
3965-663	12X3	1	2	400	101.13
3965-664	12X4	1	2	400	101.51
3965-666	12X6	1	2	400	117.73
3965-668	12X8	1	2	400	185.25
3965-670	12X10	1	2	400	271.75
3965-691	14X2	1	4	400	123.25
3965-693	14X3	1	0	400	124.40
3965-694	14X4	1	5	400	124.98
3965-696	14X6	1	2	400	142.27
3965-700	14X10	1	0	400	279.33
3965-702	14X12	1	0	400	308.41
3965-751	16X2	1	5	400	129.77
3965-753	16X3	1	4	400	130.89
3965-754	16X4	1	3	400	131.63
3965-756	16X6	1	2	400	150.03
3965-758	16X8	1	3	400	223.75
3965-760	16X10	1	3	400	284.92
3965-762	16X12	1	0	400	316.43
3965-764	16X14	1	0	400	329.76
3965-781	18X2	1	2	400	190.64
3965-783	18X3	1	0	400	191.80
3965-784	18X4	1	0	400	192.67
3965-786	18X6	1	2	400	203.93
3965-788	18X8	1	0	400	299.62
3965-790	18X10	1	0	400	332.16

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Stub Saddle (continued)

IPS O.D. x Socket Schedule 80

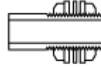
3965-792	18X12	1	0	400	473.71
3965-794	18X14	1	0	400	515.58
3965-796	18X16	1	0	400	674.63
3965-811	20X2	1	0	400	192.82
3965-813	20X3	1	2	400	193.27
3965-814	20X4	1	0	400	195.59
3965-816	20X6	1	0	400	205.17
3965-818	20X8	1	0	400	296.39
3965-820	20X10	1	0	400	328.69
3965-822	20X12	1	0	400	468.84
3965-824	20X14	1	0	400	511.33
3965-826	20X16	1	0	400	669.96
3965-828	20X18	1	0	400	760.68
3965-901	24X2	1	5	400	196.20
3965-903	24X3	1	5	400	197.24
3965-904	24X4	1	5	400	198.15
3965-906	24X6	1	3	400	206.78
3965-908	24X8	1	0	400	296.86
3965-910	24X10	1	0	400	330.12
3965-912	24X12	1	0	409	437.93
3965-914	24X14	1	0	400	509.55
3965-916	24X16	1	0	400	697.43
3965-918	24X18	1	0	400	786.46
3965-920	24X20	1	0	400	885.16

Schedule 80 PVC Industrial Products & Accessories
Tank Adapters



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Spigot Tank Adapter with EPDM Gasket
Spig



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8173E-005	1/2	25	0	100	35.39
8173E-007	3/4	25	0	100	39.93
8173E-010	1	25	0	100	48.14
8173E-015	1-1/2	20	0	100	62.33
8173E-020	2	15	0	100	91.72

Install with threaded end, gasket and one nut inside tank. Use thread sealant on internal nut.

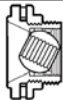
PVC Self Aligning Tank Adapter with Neoprene Gasket
Fipt



75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172SA-010	1	5	0	100	147.85
8172SA-020	2	4	0	100	229.91
8172SA-030	3	2	0	100	347.87

PVC Self Aligning Tank Adapter with EPDM Gasket
Fipt



75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172ESA-010	1	5	0	100	155.59
8172ESA-020	2	4	0	100	236.11
8172ESA-030	3	2	0	100	366.29

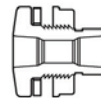
PVC Self Aligning Tank Adapter with FKM Gasket
Fipt



75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172VSA-010	1	5	0	100	403.15
8172VSA-020	2	4	0	100	572.35
8172VSA-030	3	2	0	100	899.32

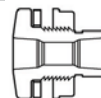
PVC New Style Standard Tank Adapters with Neoprene Gaskets
Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170-002	1/4	25	150	100	34.34
8170-003	3/8	25	150	100	34.34
8170-005	1/2	25	0	100	34.34
8170-007	3/4	25	0	100	39.15
8170-010	1	25	0	100	43.49
8170-012	1-1/4	20	0	100	52.40
8170-015	1-1/2	20	0	100	57.49
8170-020	2	15	0	100	85.22
8170-025	2-1/2	4	0	100	131.69
8170-030	3	4	0	100	156.77
8170-040	4	2	0	100	308.81
8170-060	6	1	0	100	599.42
8170-080	8	1	0	100	1330.24

PVC New Style Standard Tank Adapters with EPDM Gaskets
Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

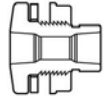
8170E-002	1/4	25	150	100	35.39
8170E-003	3/8	25	150	100	35.39
8170E-005	1/2	25	0	100	35.39
8170E-007	3/4	25	0	100	39.93
8170E-010	1	25	0	100	48.14
8170E-012	1-1/4	20	0	100	57.22
8170E-015	1-1/2	20	0	100	62.33

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC New Style Standard Tank Adapters with EPDM Gaskets (continued)
Soc

8170E-020	2	15	0	100	91.72
8170E-025	2-1/2	4	0	100	152.86
8170E-030	3	4	0	100	162.62
8170E-040	4	2	0	100	316.61
8170E-060	6	1	0	100	620.94
8170E-080	8	1	0	100	1379.57

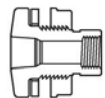
PVC New Style Standard Tank Adapters with FKM Gaskets
Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170V-002	1/4	25	150	100	58.35
8170V-003	3/8	25	150	100	58.35
8170V-005	1/2	25	0	100	58.35
8170V-007	3/4	25	0	100	63.97
8170V-010	1	25	0	100	76.60
8170V-012	1-1/4	20	0	100	80.77
8170V-015	1-1/2	20	0	100	88.96
8170V-020	2	15	0	100	145.96
8170V-025	2-1/2	4	0	100	220.01
8170V-030	3	4	0	100	261.92
8170V-040	4	2	0	100	655.21
8170V-060	6	1	0	100	1178.46
8170V-080	8	1	0	100	2193.73

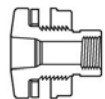
PVC New Style Standard Tank Adapters with Neoprene Gasket
Soc x Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002	1/4	25	150	100	34.34
8171-003	3/8	25	200	100	34.34
8171-005	1/2	25	0	100	34.34
8171-007	3/4	25	0	100	39.15
8171-010	1	25	0	100	43.49
8171-012	1-1/4	20	0	100	52.40
8171-015	1-1/2	20	0	100	57.49
8171-020	2	15	0	100	85.22
8171-025	2-1/2	4	0	100	131.69
8171-030	3	4	0	100	156.77
8171-040	4	2	0	100	308.81
8171-060	6	1	0	100	599.42

PVC New Style Standard Tank Adapters with EPDM Gaskets
Soc x Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002	1/4	25	150	100	35.39
8171E-003	3/8	25	200	100	35.39
8171E-005	1/2	25	0	100	35.39
8171E-007	3/4	25	0	100	39.93
8171E-010	1	25	0	100	48.14
8171E-012	1-1/4	20	0	100	57.22
8171E-015	1-1/2	20	0	100	62.33
8171E-020	2	15	0	100	91.72
8171E-025	2-1/2	4	0	100	152.86
8171E-030	3	4	0	100	162.62
8171E-040	4	2	0	100	316.61
8171E-060	6	1	0	100	620.94



Schedule 80 PVC Industrial Products & Accessories

Tank Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC New Style Standard Tank Adapters with FKM Gaskets

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002	1/4	25	150	100	58.35
8171V-003	3/8	25	200	100	58.35
8171V-005	1/2	25	0	100	58.35
8171V-007	3/4	25	0	100	63.97
8171V-010	1	25	0	100	76.60
8171V-012	1-1/4	20	0	100	80.77
8171V-015	1-1/2	20	0	100	88.96
8171V-020	2	15	0	100	145.96
8171V-025	2-1/2	4	0	100	220.01
8171V-030	3	4	0	100	261.92
8171V-040	4	2	0	100	655.21
8171V-060	6	1	0	100	1178.46



PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002SR	1/4	25	150	100	35.58
8171-003SR	3/8	25	200	100	35.58
8171-005SR	1/2	25	0	100	35.58
8171-007SR	3/4	25	0	100	41.22
8171-010SR	1	25	0	100	46.42
8171-012SR	1-1/4	20	0	100	57.06
8171-015SR	1-1/2	20	0	100	65.49
8171-020SR	2	15	0	100	93.86
8171-025SR	2-1/2	4	0	100	151.13
8171-030SR	3	4	0	100	179.89
8171-040SR	4	2	0	100	332.76
8171-060SR	6	1	0	100	622.77



PVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002SR	1/4	25	150	100	36.83
8171E-003SR	3/8	25	200	100	36.83
8171E-005SR	1/2	25	0	100	36.83
8171E-007SR	3/4	25	0	100	42.00
8171E-010SR	1	25	0	100	51.06
8171E-012SR	1-1/4	20	0	100	61.86
8171E-015SR	1-1/2	20	0	100	70.31
8171E-020SR	2	15	0	100	100.36
8171E-025SR	2-1/2	4	0	100	156.03
8171E-030SR	3	4	0	100	185.76
8171E-040SR	4	2	0	100	340.58
8171E-060SR	6	1	0	100	644.19



PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002SR	1/4	25	150	100	59.79
8171V-003SR	3/8	25	200	100	59.79
8171V-005SR	1/2	25	0	100	59.79
8171V-007SR	3/4	25	0	100	65.61
8171V-010SR	1	25	0	100	80.87
8171V-012SR	1-1/4	20	0	100	90.56
8171V-015SR	1-1/2	20	0	100	102.08
8171V-020SR	2	15	0	100	156.33
8171V-025SR	2-1/2	4	0	100	238.00
8171V-030SR	3	4	0	100	283.32



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets (continued)

Soc x SR Fipt - Stainless Steel Collar

8171V-040SR	4	2	0	100	680.71
8171V-060SR	6	2	0	100	1206.42

PVC New Style Standard Tank Adapters with Neoprene Gaskets

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002	1/4	25	150	100	46.12
8172-003	3/8	25	200	100	46.12
8172-005	1/2	25	0	100	46.12
8172-007	3/4	25	0	100	50.58
8172-010	1	25	0	100	55.32
8172-012	1-1/4	20	0	100	73.75
8172-015	1-1/2	20	0	100	80.39
8172-020	2	15	0	100	105.86
8172-025	2-1/2	4	0	100	154.95
8172-030	3	4	0	100	184.43
8172-040	4	2	0	100	345.61
8172-060	6	1	0	100	691.64



PVC New Style Standard Tank Adapters with EPDM Gaskets

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002	1/4	25	150	100	47.48
8172E-003	3/8	25	200	100	47.48
8172E-005	1/2	25	0	100	47.48
8172E-007	3/4	25	0	100	51.57
8172E-010	1	25	0	100	61.26
8172E-012	1-1/4	20	0	100	80.53
8172E-015	1-1/2	20	0	100	87.09
8172E-020	2	15	0	100	113.93
8172E-025	2-1/2	4	0	100	160.72
8172E-030	3	4	0	100	191.36
8172E-040	4	2	0	100	354.42
8172E-060	6	1	0	100	716.49



PVC New Style Standard Tank Adapters with FKM Gaskets

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002	1/4	25	150	100	71.35
8172V-003	3/8	25	200	100	71.35
8172V-005	1/2	25	0	100	71.35
8172V-007	3/4	25	0	100	76.04
8172V-010	1	25	0	100	86.85
8172V-012	1-1/4	20	0	100	98.56
8172V-015	1-1/2	20	0	100	112.49
8172V-020	2	15	0	100	166.68
8172V-025	2-1/2	4	0	100	238.07
8172V-030	3	4	0	100	283.49
8172V-040	4	2	0	100	690.93
8172V-060	6	1	0	100	1321.96



PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002SR	1/4	25	150	100	47.57
8172-003SR	3/8	25	200	100	47.57
8172-005SR	1/2	25	0	100	47.57
8172-007SR	3/4	25	0	100	52.66



Schedule 80 PVC Industrial Products & Accessories
Tank Adapters



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

8172-010SR	1	25	0	100	58.24
8172-012SR	1-1/4	20	0	100	78.43
8172-015SR	1-1/2	20	0	100	88.39
8172-020SR	2	15	0	100	114.53
8172-025SR	2-1/2	4	0	100	174.37
8172-030SR	3	4	0	100	207.59
8172-040SR	4	2	0	100	369.57
8172-060SR	6	1	0	100	714.88

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002SR	1/4	25	150	100	48.94
8172E-003SR	3/8	25	200	100	48.94
8172E-005SR	1/2	25	0	100	48.94
8172E-007SR	3/4	25	0	100	53.65
8172E-010SR	1	25	0	100	64.19
8172E-012SR	1-1/4	20	0	100	85.21
8172E-015SR	1-1/2	20	0	100	95.06
8172E-020SR	2	15	0	100	122.60
8172E-025SR	2-1/2	4	0	100	180.17
8172E-030SR	3	4	0	100	214.46
8172E-040SR	4	2	0	100	378.38
8172E-060SR	6	1	0	100	739.66

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002SR	1/4	25	150	100	72.79
8172V-003SR	3/8	25	200	100	72.79
8172V-005SR	1/2	25	0	100	72.79
8172V-007SR	3/4	25	0	100	78.15
8172V-010SR	1	25	0	100	89.78
8172V-012SR	1-1/4	20	0	100	103.21
8172V-015SR	1-1/2	20	0	100	120.48
8172V-020SR	2	15	0	100	175.36
8172V-025SR	2-1/2	4	0	100	257.49
8172V-030SR	3	4	0	100	306.62
8172V-040SR	4	2	0	100	714.88
8172V-060SR	6	2	0	100	1349.89

Tank Adapter with Neoprene Gasket (Old Style)

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871-005	1/2	25	0	100	34.34
871-007	3/4	25	0	100	39.15
871-010	1	25	0	100	43.49
871-012	1-1/4	20	0	100	52.40
871-015	1-1/2	20	0	100	57.49
871-020	2	15	0	100	85.22
871-030	3	4	0	100	156.77
871-040	4	2	0	100	308.81

Tank Adapter with Neoprene Gasket (Old Style)

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872-005	1/2	25	0	100	46.12
872-007	3/4	25	0	100	50.58

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tank Adapter with Neoprene Gasket (Old Style)

(continued)

Fipt

872-010	1	25	0	100	55.32
872-012	1-1/4	20	0	100	73.75
872-015	1-1/2	20	0	100	80.39
872-020	2	15	0	100	105.86
872-030	3	4	0	100	184.43
872-040	4	2	0	100	345.61

Tank Adapter with EPDM Gasket (Old Style)

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871E-005	1/2	25	0	100	35.39
871E-007	3/4	25	0	100	39.93
871E-010	1	25	0	100	48.14
871E-012	1-1/4	20	0	100	57.22
871E-015	1-1/2	20	0	100	62.33
871E-020	2	15	0	100	91.72
871E-030	3	4	0	100	162.62
871E-040	4	2	0	100	316.61

Tank Adapter with EPDM Gasket (Old Style)

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872E-005	1/2	25	0	100	47.48
872E-007	3/4	25	0	100	51.57
872E-010	1	25	0	100	61.26
872E-012	1-1/4	20	0	100	80.53
872E-015	1-1/2	20	0	100	87.09
872E-020	2	15	0	100	113.93
872E-030	3	4	0	100	191.36
872E-040	4	2	0	100	354.42

Neoprene Tank Adapter Gasket Only (New Style)

3N-002	1/4	100	0	901	2.71
3N-003	3/8	50	0	901	2.71
3N-005	1/2	10	0	901	2.71
3N-007	3/4	10	0	901	2.91
3N-010	1	10	0	901	3.09
3N-012	1-1/4	10	0	901	4.27
3N-015	1-1/2	10	0	901	5.01
3N-020	2	10	0	901	6.56
3N-025	2-1/2	10	0	901	6.84
3N-030	3	10	0	901	7.14
3N-040	4	10	0	901	19.75
2N-060	6	10	0	901	24.67
3N-080	8	10	0	901	113.14

EPDM Tank Adapter Gasket Only (New Style)

3E-002	1/4	10	0	901	3.15
3E-003	3/8	10	0	901	3.15
3E-005	1/2	10	0	901	3.15
3E-007	3/4	10	0	901	3.25
3E-010	1	10	0	901	5.64
3E-012	1-1/4	10	0	901	8.26
3E-015	1-1/2	10	0	901	8.48
3E-020	2	10	0	901	9.71
3E-025	2-1/2	10	0	901	13.76
3E-030	3	10	0	901	14.79



Schedule 80 PVC Industrial Products & Accessories Tank Adapters & Expansion Joints

Tank Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM Tank Adapter Gasket Only (New Style) (continued)					
3E-040	4	10	0	901	22.28
2E-060	6	10	0	901	40.22
3E-080	8	10	0	901	145.99



FKM Tank Adapter Gasket Only (New Style)

3V-002	1/4	10	0	901	11.53
3V-003	3/8	10	0	901	13.59
3V-005	1/2	10	0	901	20.28
3V-007	3/4	10	0	901	25.12
3V-010	1	10	0	901	34.34
3V-012	1-1/4	10	0	901	54.61
3V-015	1-1/2	10	0	901	58.99
3V-020	2	10	0	901	94.48
3V-025	2-1/2	10	0	901	104.38
3V-030	3	10	0	901	108.76
3V-040	4	10	0	901	246.09
2V-060	6	10	0	901	616.03
3V-080	8	10	0	901	1033.18

Neoprene Tank Adapter Gasket Only (Old Style)

2N-005	1/2	10	0	901	2.71
2N-007	3/4	10	0	901	2.91
2N-010	1	10	0	901	3.09
2N-015	1-1/4 OR 1-1/2	10	0	901	5.01
2N-020	2	10	0	901	6.56
2N-030	3	10	0	901	7.14
2N-040	4	10	0	901	19.75



EPDM Tank Adapter Gasket Only (Old Style)

2E-005	1/2	10	0	901	3.15
2E-007	3/4	10	0	901	3.25
2E-010	1	10	0	901	5.64
2E-015	1-1/4 OR 1-1/2	10	0	901	8.48
2E-020	2	10	0	901	9.71
2E-030	3	10	0	901	14.79
2E-040	4	10	0	901	22.28

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Wrench Sets (New Style)

Body Wrench & Nut Wrench



TAW-002	1/4	1	25	299	21.89
TAW-003	3/8	1	25	299	21.89
TAW-005	1/2	1	25	299	21.89
TAW-007	3/4	1	25	299	22.32
TAW-010	1	1	25	299	23.21
TAW-012	1-1/4	1	20	299	26.18
TAW-015	1-1/2	1	20	299	28.40
TAW-020	2	1	10	299	32.35
TAW-025	2-1/2	1	10	299	35.79
TAW-030	3	1	10	299	39.44
TAW-040	4	1	10	299	42.26



Individual Body Wrench (New Style)

TAW1-002	1/4	500	0	299	12.28
TAW1-003	3/8	400	0	299	12.28
TAW1-005	1/2	250	0	299	12.28
TAW1-007	3/4	220	0	299	12.52
TAW1-010	1	200	0	299	13.03
TAW1-012	1-1/4	300	0	299	14.76
TAW1-015	1-1/2	150	0	299	15.89
TAW1-020	2	100	0	299	17.25
TAW1-025	2-1/2	80	0	299	18.03
TAW1-030	3	74	0	299	22.61
TAW1-040	4	35	0	299	23.26



Individual Nut Wrench (New Style)

TAW2-002	1/4	300	0	299	12.28
TAW2-003	3/8	250	0	299	12.28
TAW2-005	1/2	200	0	299	12.28
TAW2-007	3/4	160	0	299	12.52
TAW2-010	1	110	0	299	13.03
TAW2-012	1-1/4	200	0	299	14.76
TAW2-015	1-1/2	120	0	299	15.89
TAW2-020	2	100	0	299	17.25
TAW2-025	2-1/2	50	0	299	18.03
TAW2-030	3	40	0	299	22.61
TAW2-040	4	35	0	299	23.26

Expansion Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Fabricated Expansion Joints

6" Travel with EPDM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

826-005X6	1/2	10	0	085	313.03
826-007X6	3/4	6	0	085	336.52
826-010X6	1	5	0	085	340.31
826-012X6	1-1/4	4	0	085	395.55
826-015X6	1-1/2	4	0	085	419.43
826-020X6	2	2	0	085	469.18
826-025X6	2-1/2	1	0	085	535.15

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Fabricated Expansion Joints (continued)

6" Travel with EPDM O-rings

826-030X6	3	1	0	085	555.51
826-040X6	4	1	0	085	596.17
826-060X6	6	1	0	085	982.20
826-080X6	8	1	0	085	1352.21
826-100X6	10	1	0	085	1587.88
826-120X6	12	1	0	085	2813.54
826-140X6	14	1	0	085	3213.82

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X6.

Schedule 80 PVC Industrial Products & Accessories
Expansion Joints & Pipe Flanges



Expansion Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Fabricated Expansion Joints
12" Travel with EPDM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
 2-1/2" - 12" 150 psi @ 73°F (23°C)
 14" 100 psi @ 73°F (23°C)

826-005X12	1/2	10	0	085	352.11
826-007X12	3/4	6	0	085	372.39
826-010X12	1	5	0	085	446.24
826-012X12	1-1/4	4	0	085	568.92
826-015X12	1-1/2	4	0	085	451.77
826-020X12	2	2	0	085	532.92
826-025X12	2-1/2	1	0	085	895.29
826-030X12	3	1	0	085	688.48
826-040X12	4	1	0	085	773.44
826-060X12	6	1	0	085	1126.68
826-080X12	8	1	0	085	1510.54
826-100X12	10	1	0	085	1846.74
826-120X12	12	1	0	085	2957.95
826-140X12	14	1	0	085	3283.27

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X12

PVC Elastomer Expansion Joint
with Neoprene Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ02-007	3/4	10	0	085	197.85
EJ02-010	1	10	0	085	224.34
EJ02-012	1-1/4	15	0	085	239.02
EJ02-015	1-1/2	10	0	085	294.26
EJ02-020	2	8	0	085	360.58
EJ02-025	2-1/2	4	0	085	510.09
EJ02-030	3	2	0	085	701.17

PVC Elastomer Expansion Joint
with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ22-007	3/4	10	0	085	201.88
EJ22-010	1	10	0	085	228.89
EJ22-012	1-1/4	15	0	085	246.41
EJ22-015	1-1/2	10	0	085	299.36
EJ22-020	2	8	0	085	367.94
EJ22-025	2-1/2	4	0	085	520.48
EJ22-030	3	2	0	085	715.45

PVC Elastomer Expansion Joint
with Neoprene Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ01-007SR	3/4	10	0	085	200.62
EJ01-010SR	1	10	0	085	228.47
EJ01-012SR	1-1/4	15	0	085	248.49
EJ01-015SR	1-1/2	10	0	085	317.23
EJ01-020SR	2	8	0	085	381.13
EJ01-025SR	2-1/2	4	0	085	555.41
EJ01-030SR	3	2	0	085	746.94

PVC Elastomer Expansion Joint
with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ21-007SR	3/4	10	0	085	204.69
EJ21-010SR	1	10	0	085	233.14
EJ21-012SR	1-1/4	15	0	085	253.59
EJ21-015SR	1-1/2	10	0	085	323.68
EJ21-020SR	2	8	0	085	388.92
EJ21-025SR	2-1/2	4	0	085	563.59
EJ21-030SR	3	2	0	085	762.18

Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style
Flange x PIP Soc



125 psi Maximum Internal Pressure Rating @ 73°F (23°C)

354-060F	6X6.140	1	4	320	133.67
354-080F	8X8.160	1	2	320	202.42
354-100F	10X10.200	1	2	320	284.61
354-120F	12X12.240	1	2	320	412.21
354-150F	14X15.300	1	0	320	1098.76
354-151F	16X15.300	1	0	320	1253.46
354-181F	18X18.701	1	0	320	1904.21
354-182F	18X18.360	1	0	320	1904.21
354-201F	20X22.047	1	0	320	2900.51
354-241F	24X24.803	1	0	320	4247.72

For more information, refer to 80, 100 & 125 psi PIP Fabrication Fittings.

PIP = Plastic Irrigation Pipe (dimensions are NOT the same as IPS dimensions)

Sizes 6" - 16" are furnished with plastic ring.
 Sizes 18" - 24" are furnished with steel ring.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange One Piece Soc



1/2" - 16" 150 psi Maximum Internal Pressure Rating @73°F (23°C)

18" - 24" 50 psi Maximum Internal Pressure Rating @73°F (23°C)

851-005	1/2	25	0	080	18.11
851-007	3/4	25	0	080	19.35
851-010	1	15	0	080	21.55
851-012	1-1/4	15	0	080	22.20
851-015	1-1/2	20	0	080	22.68
851-020	2	10	0	080	30.19
851-025	2-1/2	10	0	080	46.60
851-030	3	10	0	080	51.46
851-040	4	5	0	080	65.16
851-050	5	5	0	080	102.45
851-060	6	5	0	080	102.45
851-080	8	2	0	080	183.33
851-100F	10	1	2	083	498.18
851-120F	12	1	0	083	604.96
851-140F	14	1	0	083	1112.65
851-160F	16	1	0	083	1526.99
851-180F	18	1	0	083	3230.20
851-200F	20	1	0	083	3955.61



Schedule 80 PVC Industrial Products & Accessories

Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange One Piece (continued)

Soc

851-240F	24	1	0	083	5253.52
----------	----	---	---	-----	---------

Flange One Piece

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005	1/2	25	0	080	21.67
852-007	3/4	25	0	080	25.39
852-010	1	15	0	080	27.80
852-012	1-1/4	15	0	080	38.33
852-015	1-1/2	20	0	080	41.83
852-020	2	10	0	080	42.78
852-025	2-1/2	10	0	080	98.36
852-030	3	10	0	080	101.24
852-040	4	5	0	080	190.22
852-060F	6	1	5	083	228.52
852-080F	8	1	2	083	573.52

Special Reinforced Flange One Piece Threaded

SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005SR	1/2	25	0	086	11.91
852-007SR	3/4	25	0	086	13.99
852-010SR	1	15	0	086	15.29
852-012SR	1-1/4	15	0	086	21.07
852-015SR	1-1/2	15	0	086	23.06
852-020SR	2	10	0	086	23.62
852-025SR	2-1/2	10	0	086	54.09
852-030SR	3	10	0	086	55.69
852-040SR	4	5	0	086	104.69

Blind Flange

1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

853-005	1/2	25	0	080	25.38
853-007	3/4	25	0	080	30.23
853-010	1	15	0	080	41.29
853-012	1-1/4	20	0	080	50.68
853-015	1-1/2	15	0	080	50.68
853-020	2	10	0	080	75.73
853-025	2-1/2	10	0	080	123.38
853-030	3	10	0	080	148.89
853-040	4	8	0	080	185.48
853-050F	5	1	5	083	464.95
853-060	6	5	0	080	225.40
853-080	8	5	0	080	282.13
853-100	10	3	0	081	471.77
853-120	12	2	0	081	734.75
853-140F	14	1	0	083	1397.79
853-160F	16	1	0	083	1657.51
853-180F	18	1	0	083	1864.09
853-200F	20	1	0	083	3013.01
853-240F	24	1	0	083	4016.97

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with PVC Ring

Soc

1/2" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005	1/2	25	0	080	18.08
854-007	3/4	25	0	080	19.34
854-010	1	15	0	080	21.54
854-012	1-1/4	15	0	080	22.18
854-015	1-1/2	20	0	080	22.63
854-020	2	10	0	080	30.14
854-025	2-1/2	10	0	080	46.55
854P-030	3	10	0	080	51.44
854P-040	4	5	0	080	65.07
854P-050	5	5	0	080	102.36
854P-060	6	5	0	080	102.36
854P-080	8	2	0	080	166.68
854P-100	10	2	0	081	215.79
854P-120	12	2	0	081	232.66
854P-140	14	1	0	081	898.21
854P-160	16	1	0	081	1201.40
854P-180	18	1	0	081	1937.69
854-180FP	18	1	0	083	3065.76
854-200FP	20	1	0	083	3749.88
854-240FP	24	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring

Soc

3" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

854-030	3	10	0	080	51.44
854-040	4	5	0	080	65.07
854-050	5	5	0	080	102.36
854-060	6	5	0	080	102.36
854-080	8	2	0	080	166.68
854-100	10	2	0	081	215.79
854-120	12	2	0	081	232.66
854-140	14	1	0	081	898.21
854-160	16	1	0	081	1201.40
854-180	18	1	0	081	1937.69

18" flange has 4-section ring

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring

Soc

1/2" - 16" molded with fab ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)

18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005CL300	1/2	1	25	083	148.64
854-007CL300	3/4	1	25	083	172.71
854-010CL300	1	1	15	083	271.37
854-012CL300	1-1/4	1	15	083	277.09
854-015CL300	1-1/2	1	20	083	287.83
854-020CL300	2	10	0	083	303.05
854-025CL300	2-1/2	1	10	083	332.76
854-030CL300	3	1	10	083	365.45
854-040CL300	4	1	3	083	619.67
854-060CL300	6	1	4	083	1180.24
854-080CL300	8	1	3	083	1343.43
854-100CL300	10	1	2	083	1581.60
854-120CL300	12	1	0	083	2026.35
854-140CL300	14	1	0	083	2234.24
854-160CL300	16	1	0	083	2326.72
854-180CL300	18	1	0	083	3253.11

Schedule 80 PVC Industrial Products & Accessories

Pipe Flanges



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style Class 300 Bolt Pattern

Fabricated with PVC Ring (continued)

Soc

854-200CL300	20	1	0	083	4224.02
854-240CL300	24	1	0	083	5354.88

Flange Van Stone Style with PVC Ring

Spig

1/2" - 12" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)
20" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

856-005	1/2	25	0	080	18.18
856-007	3/4	25	0	080	19.48
856-010	1	15	0	080	21.72
856-012	1-1/4	15	0	080	22.40
856-015	1-1/2	15	0	080	22.85
856-020	2	10	0	080	30.37
856-025	2-1/2	10	0	080	46.94
856P-030	3	10	0	080	51.85
856P-040	4	5	0	080	65.61
856P-060	6	4	0	080	103.20
856P-080	8	2	0	080	184.61
856P-100	10	2	0	081	215.79
856P-120	12	2	0	081	232.66
856-200FP	20	1	0	083	3749.88
856-240FP	24	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring

Spig

3" - 12" molded, 14" - 18" molded/fabricated - 150 psi = maximum internal pressure rating @ 73°F (23°C)

856-030	3	10	0	080	51.85
856-040	4	5	0	080	65.61
856-060	6	4	0	080	103.20
856-080	8	2	0	080	184.61
856-100	10	2	0	081	215.79
856-120	12	2	0	081	232.66
856-140FP**	14	1	0	083	1926.95
856-160FP**	16	1	0	083	2337.92
856-180FP**	18	1	0	083	3065.76

** Fabricated from molded socket flanges with pipe spigot.
18" flange uses 4-piece ring

Flange Van Stone Style with Steel Ring

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

854-180FS	18	1	0	083	1809.89
854-200FS	20	1	0	083	2193.19
854-240FS	24	1	0	083	2951.69

Flange Van Stone Style with Steel Ring

Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

856-140FS	14	1	0	083	975.22
856-160FS	16	1	0	083	1192.01
856-180FS	18	1	0	083	1350.67
856-200FS	20	1	0	083	1626.87
856-240FS	24	1	0	083	2209.11

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style PVC with Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

S854-020	2	10	0	080	37.68
S854-030	3	10	0	080	64.32
S854-040	4	5	0	080	81.36

Flange Van Stone Style PVC with Glass Filled PVC Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

S854-060	6	5	0	080	127.97
S854-080	8	2	0	080	208.35
S854-100	10	2	0	081	269.73
S854-120	12	2	0	081	290.80

Flange Van Stone Style with PVC Ring

ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-020	2	10	0	080	30.14
----------	---	----	---	-----	-------

* Hubs fit 2", 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Glass Filled PVC Ring

ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-060	6	5	0	080	102.36
M854-080	8	2	0	080	166.68

* Hubs fit 2", 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring

ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-020	2	10	0	080	30.37
----------	---	----	---	-----	-------

* Spigots fit 2", 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Glass Filled PVC Ring

ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-060	6	4	0	080	103.20
M856-080	8	2	0	080	167.94

* Spigots fit 2", 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-005	1/2	25	0	080	21.63
855-007	3/4	25	0	080	25.38
855-010	1	15	0	080	27.76
855-012	1-1/4	15	0	080	38.26



Schedule 80 PVC Industrial Products & Accessories

Pipe Flanges & Van Stone Style Flange Replacement Split Rings

Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with PVC Ring (continued)

Fipt

855-015	1-1/2	20	0	080	41.79
855-020	2	10	0	080	42.76
855-025	2-1/2	10	0	080	98.29

Flange Van Stone Style with Glass Filled PVC

Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-030	3	10	0	080	101.11
---------	---	----	---	-----	--------



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with Glass Filled PVC Ring (continued)

Fipt

855-040	4	5	0	080	183.83
855-060	6	1	4	080	289.09
855-060F	6	1	4	083	256.97
855-080	8	2	0	080	358.24
855-080F	8	1	2	083	318.82
855-100F	10	1	2	083	359.19

Van Stone Style Flange Replacement Split Rings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Application & Use of Van Stone Style Flange Replacement Split Rings

Designed for easy Van Stone style flange ring replacement in the event of system modification, repair, or improper assembly without having to remove existing flange hub. Split rings are made as a direct replacement of existing one-piece rings used on Spears® brand only of Van Stone style flanges with ANSI Class 150 bolt pattern plastic rings. Remove old ring to be replaced then simply place the split ring sections around hub and install flange bolts (not included) through special designed section overlap to hold in position. Install appropriate user supplied bolts, washers and gasket (see Flange Gasket and Bolt Hardware Kits in this catalog); torque to specifications according to normal flange assembly. Split rings are a set of either 2-pieces or 4-pieces (illustrated) sections depending on size, in regular PVC, Glass Filled PVC, or CPVC for flange type and sizes listed.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Glass Filled PVC Flange Replacement Split Rings (continued)

For Spears® flanges with Glass Filled PVC Rings

854-140-1S	14	2	0	081	488.20
854-160-1S	16	1	0	081	606.48
854-180-1S	18	1	0	081	658.69

Fits 854-xxx Socket, 855-xxx Threaded, and 856-xxx Spigot hub configurations

PVC Flange Replacement Split Rings

For Spears® flanges with regular PVC Rings



854P-005-1S	1/2	10	0	080	54.98
854P-007-1S	3/4	10	0	080	58.37
854P-010-1S	1	15	0	080	65.27
854P-012-1S	1-1/4	15	0	080	66.55
854P-015-1S	1-1/2	10	0	080	68.18
854P-020-1S	2	10	0	080	90.49
854P-025-1S	2-1/2	10	0	080	104.68
854P-030-1S	3	10	0	080	116.06
854P-040-1S	4	10	0	080	124.42
854P-050-1S	5	10	0	080	168.49
854P-060-1S	6	5	0	080	199.38
854P-080-1S	8	4	0	080	227.80
854P-100-1S	10	4	0	081	287.57
854P-120-1S	12	2	0	081	356.43
854P-140-1S	14	2	0	081	488.20
854P-160-1S	16	1	0	081	606.48
854P-180-1S	18	1	0	081	658.69
854P-200-1S	20	1	0	083	3496.06
854P-240-1S	24	1	0	083	4283.55

Fits 854-xxx Socket, 855-xxx Threaded, and 856-xxx Spigot hub configurations

Glass Filled PVC Flange Replacement Split Rings

For Spears® flanges with Glass Filled PVC Rings



854-030-1S	3	10	0	080	116.06
854-040-1S	4	10	0	080	124.42
854-050-1S	5	5	0	080	168.49
854-060-1S	6	5	0	080	199.38
854-080-1S	8	4	0	080	227.80
854-100-1S	10	4	0	081	287.57
854-120-1S	12	2	0	081	356.43



Flange Insulating Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Insulating Joints - Class 150 Bolt Pattern

PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)

For Dielectric Insulation Between Dissimilar Metal Flanges

300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

IJ-030-010P	3X1	1	0	016	460.69
IJ-040-010P	4X1	1	0	016	514.74
IJ-060-010P	6X1	1	0	016	611.82
IJ-080-010P	8X1	1	0	016	710.06
IJ-100-010P	10X1	1	0	016	1443.20
IJ-120-010P	12X1	1	0	016	1563.13
IJ-140-010P	14X1	1	0	016	2025.46
IJ-160-010P	16X1	1	0	016	2573.78
IJ-180-010P	18X1	1	0	016	3445.23
IJ-200-010P	20X1	1	0	016	4447.74
IJ-240-010P	24X1	1	0	016	6177.09



Flange Insulating Joints - Class 300 Bolt Pattern

PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)

For Dielectric Insulation Between Dissimilar Metal Flanges

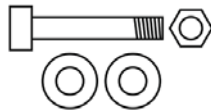
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

IJ300-030-010P	3X1	1	0	016	678.67
IJ300-040-010P	4X1	1	0	016	754.83
IJ300-060-010P	6X1	1	0	016	1156.18
IJ300-080-010P	8X1	1	0	016	1442.38
IJ300-100-010P	10X1	1	0	016	2392.84
IJ300-120-010P	12X1	1	0	016	3144.45
IJ300-140-010P	14X1	1	0	016	3961.23
IJ300-160-010P	16X1	1	0	016	4223.97
IJ300-180-010P	18X1	1	0	016	5278.95
IJ300-200-010P	20X1	1	0	016	6116.11
IJ300-240-010P	24X1	1	0	016	7509.49



Flange Bolt Kits

Bolt Kit Selection Guide



Order Gaskets & Bolt Kits Separately

- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

Flange Size	Bolts ¹ Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120

¹ - Each Bolt includes Nut & two (2) Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Zinc Plated Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers



HK-005	1/2	1	10	017	10.03
HK-010	3/4 & 1	1	10	017	12.54
HK-015	1-1/4 & 1-1/2	1	10	017	18.85
HK-020	2	1	10	017	25.23
HK-025	2-1/2	1	10	017	30.25
HK-030	3	1	10	017	34.81
HK-040	4	1	5	017	72.12
HK-060	5 & 6	1	5	017	80.21
HK-080	8	1	0	017	94.00
HK-120	10 & 12	1	0	017	127.18

Type 316 Stainless Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers



HK1-005	1/2	1	10	017	30.11
---------	-----	---	----	-----	-------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Type 316 Stainless Steel Flange Bolt Hardware Kits

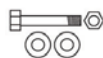
(continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK1-010	3/4 & 1	1	10	017	43.37
HK1-015	1-1/4 & 1-1/2	1	10	017	47.78
HK1-020	2	1	10	017	57.46
HK1-025	2-1/2	1	10	017	61.59
HK1-030	3	1	10	017	81.26
HK1-040	4	1	5	017	162.96
HK1-060	5 & 6	1	5	017	212.54
HK1-080	8	1	0	017	266.69
HK1-120	10 & 12	1	0	017	542.58

Type 304 Stainless Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers



HK2-005	1/2	1	10	017	26.34
HK2-010	3/4 & 1	1	10	017	37.57
HK2-015	1-1/4 & 1-1/2	1	10	017	44.26



Schedule 80 PVC Industrial Products & Accessories Flange Bolt Kits & Full-Faced Flange Gaskets

Flange Bolt Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK2-020	2	1	10	017	52.06
HK2-025	2-1/2	1	10	017	55.20
HK2-030	3	1	10	017	68.55
HK2-040	4	1	5	017	137.09
HK2-060	5 & 6	1	5	017	144.51

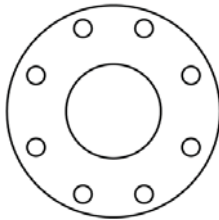
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK2-080	8	1	0	017	190.02
HK2-120	10 & 12	1	0	017	336.78

Full-Faced Flange Gaskets Gasket Selection Guide



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	1/2	1	25	017	3.22
GK1-007	3/4	1	25	017	3.69
GK1-010	1	1	25	017	3.80
GK1-012	1-1/4	1	25	017	3.89
GK1-015	1-1/2	1	25	017	4.18
GK1-020	2	1	25	017	4.67
GK1-025	2-1/2	1	25	017	5.14
GK1-030	3	1	25	017	7.91
GK1-040	4	1	25	017	8.84
GK1-050	5	1	25	017	10.48
GK1-060	6	1	25	017	10.77
GK1-080	8	1	25	017	14.20
GK1-100	10	1	25	017	18.02
GK1-120	12	1	25	017	24.31
GK1-140	14	1	25	017	47.02
GK1-160	16	1	25	017	226.21
GK1-180	18	1	25	017	257.63
GK1-240	24	1	25	017	311.31

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	1/2	1	25	017	4.27
GK2-007	3/4	1	25	017	4.55
GK2-010	1	1	25	017	4.75
GK2-012	1-1/4	1	25	017	4.99
GK2-015	1-1/2	1	25	017	5.36
GK2-020	2	1	25	017	6.54
GK2-025	2-1/2	1	25	017	7.85
GK2-030	3	1	25	017	11.54
GK2-040	4	1	25	017	13.14
GK2-050	5	1	25	017	16.43
GK2-060	6	1	25	017	17.24

EPDM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-080	8	1	25	017	22.97
GK2-100	10	1	25	017	29.93
GK2-120	12	1	25	017	41.18
GK2-140	14	1	25	017	100.45
GK2-160	16	1	25	017	178.22
GK2-180	18	1	25	017	208.16
GK2-200	20	1	25	017	241.60
GK2-240	24	1	25	017	364.73

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	1/2	1	25	017	15.25
GK3-007	3/4	1	25	017	18.11
GK3-010	1	1	25	017	20.01
GK3-012	1-1/4	1	5	017	22.59
GK3-015	1-1/2	1	25	017	28.49
GK3-020	2	1	25	017	39.83
GK3-025	2-1/2	1	25	017	53.27
GK3-030	3	1	25	017	119.04
GK3-040	4	1	25	017	137.42
GK3-050	5	1	25	017	160.20
GK3-060	6	1	25	017	181.75
GK3-160	16	1	25	017	810.63
GK3-180	18	1	25	017	912.00
GK3-080	8	1	25	017	258.94
GK3-100	10	1	25	017	344.42
GK3-120	12	1	25	017	485.28
GK3-140	14	1	25	017	711.26
GK3-240	24	1	25	017	1160.91

Schedule 80 PVC Industrial Products & Accessories
Schedule 80 Repair Fittings & Compression Couplings



Schedule 80 Repair Fittings

Pipe Extenders

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. Spigot x Pipe I.D. Spigot

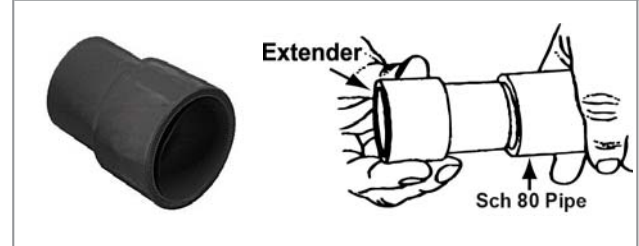
Fabricated, Non-Pressure Rated

S0801-20F	2	1	10	394	77.56
S0801-25F	2-1/2	1	8	394	89.75
S0801-30F	3	1	8	394	101.57
S0801-40F	4	1	12	394	110.11
S0801-60F	6	1	10	394	147.05
S0801-80F	8	1	2	394	158.75
S0801-100F	10	1	0	394	206.61
S0801-120F	12	1	0	394	290.18
S0801-140F	14	1	0	394	823.37
S0801-160F	16	1	0	394	963.62
S0801-180F	18	1	0	394	1264.79

Pipe Extenders (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Pipe O.D. Spigot x Pipe I.D. Spigot



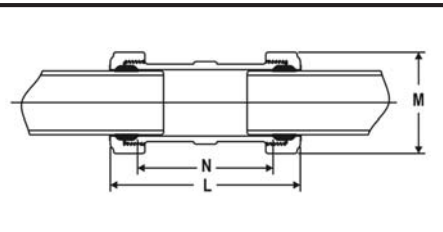
Compression Couplings



- Designed for Quick Connections, System Modifications or Repairs
- Completely Redesigned for Improved Versatility
- Easy-Thread Compression Nut
- New Spigot Conversion Capability
- Full Service 200 PSI Pressure Rating
- NSF® Certified for Potable Water Use

Basic Dimensions

Part Number	Size (in.)	L	M	N
S110-05G	1/2	5-3/16	1-3/16	3-3/8
S110-07G	3/4	5-7/16	2-1/16	3-9/16
S110-10G	1	5-11/16	2-7/16	3-3/4
S110-12G	1-1/4	6-1/4	2-15/16	4-1/8
S110-15G	1-1/2	6-1/2	3-5/16	4-5/8
S110-20G	2	7-1/8	3-3/4	5-1/16
S110-25G	2-1/2	8-11/16	4-11/16	5-7/8
S110-30G	3	9-1/2	5-1/2	6-3/16
S110-40G	4	11-5/16	6-3/4	7-3/8
S110-60G	6	11-5/8	9-5/16	7-9/16



N = Maximum allowable space between pipe ends.

NOTE: Decreasing distance between pipe ends improves stability and is recommended.

PVC Gray

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

EPDM Gasket

S110E-05G	1/2	28	0	024	4.60
S110E-07G	3/4	24	0	024	6.17
S110E-10G	1	15	0	024	7.96
S110E-12G	1-1/4	10	0	024	12.27
S110E-15G	1-1/2	16	0	024	12.67
S110E-20G	2	12	0	024	16.44
S110E-25G	2-1/2	6	0	024	30.96
S110E-30G	3	4	0	024	40.48
S110E-40G	4	4	0	024	66.60
S110E-60G	6	1	0	024	151.46

Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-005	1/2	1	50	299	11.93
CCW-007	3/4	1	50	299	12.14
CCW-010	1	1	50	299	12.65

Compression Coupling Nut Wrenches (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-012	1-1/4	1	50	299	14.32
CCW-015	1-1/2	1	50	299	15.44
CCW-020*	2	1	50	299	17.25
CCW-030**	3	1	25	299	21.22
CCW-060	6	8	0	299	31.92

* CCW-20 - Wrench also fits 2-1/2" Coupling Body

**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Set

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	Set	1	50	299	99.68

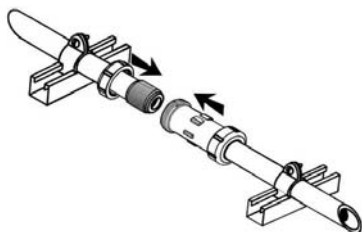
Complete Set of Wrenches, Sizes 1/2 - 3



Schedule 80 PVC Industrial Products & Accessories Compression Couplings

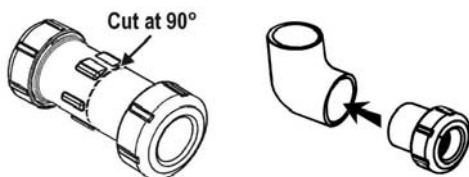
Easy Installation

Spears® Compression Couplings easily install by simply sliding nut over pipe, slip on gasket, then insert into body and tighten nuts.



Convert Fittings to Compression Outlet

Socket-type fittings 3/4" through 3" can be easily converted to compression outlet sizes 1/2" through 2-1/2" by simply cutting the Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.



Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2
2-1/2	3

Important Installation Note

WARNING: The compression joints provide a positive seal but do not restrain pipe from thrusts and movement under pressure. Use of compression joint requires blocking connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

Schedule 80 PVC Industrial Products & Accessories PVC Cut-in Kit



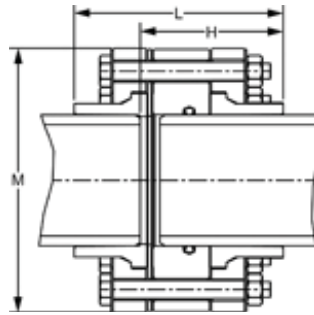
When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-in Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".



Pressure Rated to 150 psi @ 73°F (22°C)
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Size (in.)	H	L	M
2	2-3/8	4-7/8	6
2-1/2	3-3/4	5-1/2	7
3	4	5-7/8	7-1/2
4	4-7/8	7-1/8	9
6	5-7/8	9	11
8	6-3/4	10-7/8	13-1/2
10	8-3/8	13-1/2	16
12	10	16-3/4	19



Flange Cut-in Kit

Size	EPDM Gasket	FKM Gasket	Std Pk	Mstr Pk	Disc Code
2	FCKE-020 420.53	FCKV-020 443.58	1	0	017
2-1/2	FCKE-025 471.37	FCKV-025 500.84	1	0	017
3	FCKE-030 529.09	FCKV-030 559.55	1	0	017
4	FCKE-040 877.26	FCKV-040 921.29	1	0	017
6	FCKE-060 1450.42	FCKV-060 1728.95	1	0	017
8	FCKE-080 1758.00	FCKV-080 2119.16	1	0	017
10	FCKE-100 3057.58	FCKV-100 3277.35	1	0	017
12	FCKE-120 3784.98	FCKV-120 3898.81	1	0	017



Schedule 80 PVC Industrial Products & Accessories Gauge Guards



Connections use Spears® Patented Special Reinforced (SR)
Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water
on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002 103.83	G0004-005 103.83	1	18	624
0-30 in-Hg	G30V4-002 175.28	G30V4-005 175.28	1	18	624
0-15 psi	G0154-002 165.69	G0154-005 165.69	1	18	624
0-30 psi	G0304-002 165.69	G0304-005 165.69	1	18	624
0-60 psi	G0604-002 165.69	G0604-005 165.69	1	18	624
0-100 psi	G1004-002 165.69	G1004-005 165.69	1	18	624
0-160 psi	G1604-002 165.69	G1604-005 165.69	1	18	624
0-200 psi	G2004-002 165.69	G2004-005 165.69	1	18	624
0-300 psi	G3004-002 165.69	G3004-005 165.69	1	18	624

FKM Diaphragm

No Gauge	G0003-002 103.83	G0003-005 103.83	1	18	624
0-30 in-Hg	G30V3-002 175.28	G30V3-005 175.28	1	18	624
0-15 psi	G0153-002 165.69	G0153-005 165.69	1	18	624
0-30 psi	G0303-002 165.69	G0303-005 165.69	1	18	624
0-60 psi	G0603-002 165.69	G0603-005 165.69	1	18	624
0-100 psi	G1003-002 165.69	G1003-005 165.69	1	18	624
0-160 psi	G1603-002 165.69	G1603-005 165.69	1	18	624
0-200 psi	G2003-002 165.69	G2003-005 165.69	1	18	624
0-300 psi	G3003-002 165.69	G3003-005 165.69	1	18	624

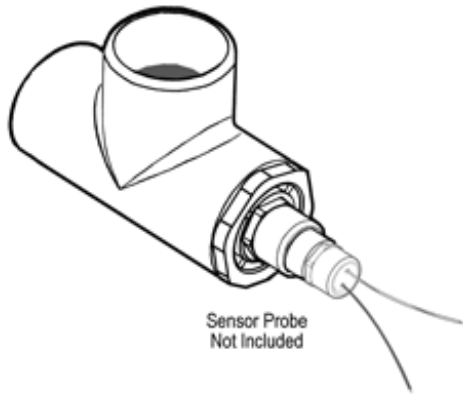
EPDM Diaphragm

No Gauge	G0002-002 99.63	G0002-005 99.63	1	18	624
0-30 in-Hg	G30V2-002 168.24	G30V2-005 168.24	1	18	624
0-15 psi	G0152-002 159.12	G0152-005 159.12	1	18	624
0-30 psi	G0302-002 159.12	G0302-005 159.12	1	18	624
0-60 psi	G0602-002 159.12	G0602-005 159.12	1	18	624
0-100 psi	G1002-002 159.12	G1002-005 159.12	1	18	624
0-160 psi	G1602-002 159.12	G1602-005 159.12	1	18	624
0-200 psi	G2002-002 159.12	G2002-005 159.12	1	18	624

PVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-300 psi	G3002-002 159.12	G3002-005 159.12	1	18	624

Schedule 80 PVC Industrial Products & Accessories
Gauge & Instrument Fittings Schedule 80 Specialty Fittings for Sensor Probes



Use with a wide variety of commercial sensor probes including pressure, temperature, pH, ORP (REDOX), Conductivity, Dissolved Oxygen and other specialty electrodes that are used in industrial, municipal water, wastewater treatment, solid landfills, chemical manufacturing, electroplating, boilers and cooling towers, pulp and paper, DI water skids, pool & spa and other OEM applications. Features Spears® patented Special Reinforced (SR) female plastic thread connection that eliminates splitting from inadvertent over tightening.

- Centers Probe in Fluid Stream
- Suitable for Horizontal or Vertical Installations
- Available in 1/2" Through 8" Tee Configuration with 1/2", 3/4" or 1" NPT Connection

PVC Instrument Probe Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Special Reinforced					
803-005SR	1/2	25	0	086	7.12
803-095SR	3/4X1/2X3/4	15	0	086	13.19
803-007SR	3/4	15	0	086	11.27
803-113SR	1X1/4X1	15	0	086	30.93
803-122SR	1X1/2X1	15	0	086	12.11
803-126SR	1X3/4X1	15	0	086	16.95
803-010SR	1	15	0	086	13.21
803-142SR	1-1/4X1/2X1-1/4	10	0	086	20.92
803-149SR	1-1/4X3/4X1-1/4	10	0	086	21.16
803-159SR	1-1/4X1X1-1/4	10	0	086	21.82
803-177SR	1-1/2X1/2X1-1/2	10	0	086	23.93
803-188SR	1-1/2X3/4X1-1/2	10	0	086	24.41
803-197SR	1-1/2X1X1-1/2	10	0	086	25.41
803-221SR	2X1/2X2	10	0	086	34.03
803-227SR	2X3/4X2	15	0	086	35.61
803-233SR	2X1X2	4	0	086	36.59
803-333SR	3X1/2X3	5	0	086	50.87
803-334SR	3X3/4X3	5	0	086	52.53
803-335SR	3X1X3	5	0	086	53.97
803-415SR	4X1/2X4	4	0	086	79.11
803-416SR	4X3/4X4	4	0	086	82.42
803-417SR	4X1X4	4	0	086	85.11
803-523SR	6X1/2X6	2	0	086	162.76
803-524SR	6X3/4X6	2	0	086	167.78
803-525SR	6X1X6	2	0	086	170.51
803-573SR	8X1/2X8	1	0	086	335.07
803-574SR	8X3/4X8	1	0	086	340.11
803-575SR	8X1X8	1	0	086	344.76



Schedule 80 PVC Industrial Products & Accessories True Union 2000 Industrial Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi
6" - 8" 150 psi
All Flanged



SR Threaded Style

Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service



6" Lever Handle Style

Note: Standard 6" Valve uses lockout type Lever-Style Handle for proper leverage. Non-locking T-Handle is more compact, but will increase difficulty of operation.
True Union 2000 Industrial Ball Valves have Built-in Handle Lockouts (except 6" T-Handle Option)
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Custom Elastomer Seals

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Threaded & Socket Ends

1/2	1829-005 49.69	1839-005 55.27	1	18	600
3/4	1829-007 58.80	1839-007 65.41	1	18	600
1	1829-010 70.02	1839-010 77.99	1	12	600
1-1/4	1829-012 96.86	1839-012 123.64	1	8	600
1-1/2	1829-015 116.67	1839-015 129.52	1	8	600
2	1829-020 153.96	1839-020 169.54	1	4	600

Socket Ends

2-1/2	1822-025 295.95	1832-025 401.01	1	0	601
3	1822-030 390.18	1832-030 433.54	1	0	601
4	1822-040 659.24	1832-040 732.49	1	0	601
6	1822-060 1424.09	1832-060 1580.38	1	0	612
8	1822-080 1894.05	1832-080 2101.91	1	0	612

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	1821-025 295.95	1831-025 401.01	1	0	601
3	1821-030 390.18	1831-030 433.54	1	0	601
4	1821-040 659.24	1831-040 732.49	1	0	601
6	1821-060 1424.09	1831-060 1580.38	1	0	612

SR Threaded Ends

1/2	1821-005SR 50.75	1831-005SR 56.36	1	18	600
3/4	1821-007SR 61.36	1831-007SR 68.00	1	18	600
1	1821-010SR 72.59	1831-010SR 80.56	1	12	600
1-1/4	1821-012SR 104.58	1831-012SR 131.37	1	8	600
1-1/2	1821-015SR 124.98	1831-015SR 137.82	1	8	600
2	1821-020SR 162.95	1831-020SR 178.36	1	4	600
2-1/2	1821-025SR 320.13	1831-025SR 425.16	1	0	601
3	1821-030SR 414.37	1831-030SR 457.72	1	0	601
4	1821-040SR 687.47	1831-040SR 760.73	1	0	601
6	1821-060SR 1464.37	1831-060SR 1620.63	1	0	612

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Spigot Ends

1/2	1827-005 49.69	1837-005 55.27	1	18	600
3/4	1827-007 58.80	1837-007 65.41	1	18	600
1	1827-010 70.02	1837-010 77.99	1	12	600
1-1/4	1827-012 96.86	1837-012 123.64	1	8	600
1-1/2	1827-015 116.67	1837-015 129.52	1	8	600
2	1827-020 153.96	1837-020 169.54	1	4	600
2-1/2	1827-025 295.95	1837-025 401.01	1	0	601
3	1827-030 390.18	1837-030 433.54	1	0	601
4	1827-040 659.24	1837-040 732.49	1	0	601
6	1827-060 1424.09	1837-060 1580.38	1	0	612

Flanged Ends

1/2	1823-005 71.08	1833-005 75.81	1	8	600
3/4	1823-007 90.04	1833-007 97.95	1	8	600
1	1823-010 108.98	1833-010 117.21	1	8	600
1-1/4	1823-012 127.97	1833-012 142.17	1	8	600
1-1/2	1823-015 161.16	1833-015 175.36	1	4	600
2	1823-020 256.61	1833-020 272.17	1	0	600
2-1/2	1823-025 473.91	1833-025 481.75	1	0	601
3	1823-030 523.81	1833-030 650.35	1	0	601
4	1823-040 1053.20	1833-040 1220.83	1	0	601
6	1823-060 2242.47	1833-060 2600.11	1	0	612
8	1823-080 2982.48	1833-080 3458.14	1	0	612

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

PVC 6" Industrial T-Handle Valve Option (Non-Locking)

NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket Ends

6	18226-060 1424.09	18326-060 1580.38	1	0	612
----------	-----------------------------	-----------------------------	---	---	-----



True Union 2000 Industrial Ball Valves

PVC 6" Industrial T-Handle Valve Option (Non-Locking)

NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
6	18216-060 1424.09	18316-060 1580.38	1	0	612
SR Threaded Ends					
6	18216-060SR 1464.37	18316-060SR 1620.63	1	0	612
Flanged Ends					
6	18236-060 2242.47	18336-060 2600.11	1	0	612

True Union 2000 Industrial Vented/Bleach Ball Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 4" 235 psi
 6" 150 psi
 Flanged 150 psi

Same True Union 2000 Industrial Ball Valve with Special Ball Vent Design for Sodium Hypochlorite (Bleach) and other Chemical Applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Custom Elastomer Seals. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829V-005 58.45	1839V-005 65.06	1	18	600
3/4	1829V-007 69.17	1839V-007 76.94	1	18	600
1	1829V-010 82.39	1839V-010 91.75	1	12	600
1-1/4	1829V-012 113.97	1839V-012 145.45	1	8	600
1-1/2	1829V-015 137.25	1839V-015 152.38	1	8	600
2	1829V-020 181.12	1839V-020 199.46	1	4	600

Socket Ends

2-1/2	1822V-025 348.17	1832V-025 471.76	1	0	601
3	1822V-030 390.18	1832V-030 510.03	1	0	601
4	1822V-040 659.24	1832V-040 861.75	1	0	601
6	1822V-060 1675.42	1832V-060 1975.46	1	0	612

SR Threaded Ends

1/2	1821V-005SR 59.72	1831V-005SR 66.32	1	18	600
3/4	1821V-007SR 72.18	1831V-007SR 79.99	1	18	600
1	1821V-010SR 85.41	1831V-010SR 94.79	1	12	600
1-1/4	1821V-012SR 123.04	1831V-012SR 154.54	1	8	600
1-1/2	1821V-015SR 147.04	1831V-015SR 162.16	1	8	600
2	1821V-020SR 191.71	1831V-020SR 209.82	1	4	600

PVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2-1/2	1821V-025SR 376.62	1831V-025SR 500.19	1	0	601
3	1821V-030SR 487.51	1831V-030SR 538.48	1	0	601
4	1821V-040SR 808.78	1831V-040SR 894.98	1	0	601

Flanged Ends

1/2	1823V-005 83.76	1833V-005 89.47	1	8	600
3/4	1823V-007 105.95	1833V-007 115.22	1	8	600
1	1823V-010 128.21	1833V-010 137.87	1	8	600
1-1/4	1823V-012 150.56	1833V-012 206.28	1	8	600
1-1/2	1823V-015 189.60	1833V-015 206.28	1	4	600
2	1823V-020 301.89	1833V-020 320.20	1	0	600
2-1/2	1823V-025 557.54	1833V-025 566.75	1	0	601
3	1823V-030 616.24	1833V-030 765.09	1	0	601
4	1823V-040 1239.06	1833V-040 1436.28	1	0	601
6	1823V-060 2638.22	1833V-060 3058.95	1	0	612



Schedule 80 PVC Industrial Products & Accessories True Union 2000 Industrial 3-Way Ball Valves

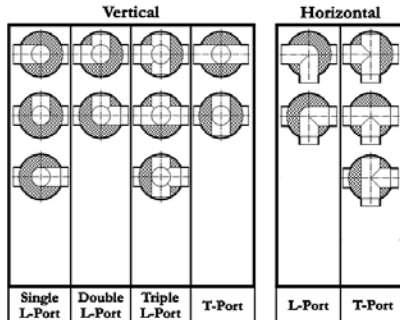
Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply
Vertical 3-Way or Horizontal Diverter Design
(No Branch Shut-off)

All Standard Carton Quantities are one
All Valves assembled with Silicone-Free,
Water Soluble Lubricant

See Ball Valve Accessories & Repair Kits Section
for Additional Options and Features

Ball Port Options



Ball port options viewed from top of valve



Horizontal Diverter Valve



Vertical 3-Way Valve

PVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint	Ball Port	Socket Part # Price Each	SR Thread Part # Price Each	Spigot Part # Price Each	Flanged Part # Price Each	Socket Part # Price Each	SR Thread Part # Price Each	Spigot Part # Price Each	Flanged Part # Price Each	
1/2	L-Port	5022L1-005 102.54	5021L1-005SR 105.85	5027L1-005 102.54	5023L1-005 209.43	5032L1-005 111.22	5031L1-005SR 116.24	5037L1-005 111.22	5033L1-005 218.79	615
	T-Port	5022T1-005 102.54	5021T1-005SR 105.85	5027T1-005 102.54	5023T1-005 209.43	5032T1-005 111.22	5031T1-005SR 116.24	5037T1-005 111.22	5033T1-005 218.79	615
3/4	L-Port	5022L1-007 122.29	5021L1-007SR 126.36	5027L1-007 122.29	5023L1-007 219.13	5032L1-007 131.63	5031L1-007SR 135.73	5037L1-007 131.63	5033L1-007 231.24	615
	T-Port	5022T1-007 122.29	5021T1-007SR 126.36	5027T1-007 122.29	5023T1-007 219.13	5032T1-007 131.63	5031T1-007SR 135.73	5037T1-007 131.63	5033T1-007 231.24	615
1	L-Port	5022L1-010 148.27	5021L1-010SR 152.26	5027L1-010 148.27	5023L1-010 312.32	5032L1-010 163.35	5031L1-010SR 167.40	5037L1-010 163.35	5033L1-010 341.42	615
	T-Port	5022T1-010 148.27	5021T1-010SR 152.26	5027T1-010 148.27	5023T1-010 312.32	5032T1-010 163.35	5031T1-010SR 167.40	5037T1-010 163.35	5033T1-010 341.42	615
1-1/4	L-Port	5022L1-012 171.86	5021L1-012SR 179.63	5027L1-012 171.86	5023L1-012 590.69	5032L1-012 193.32	5031L1-012SR 201.44	5037L1-012 193.32	5033L1-012 625.67	615
	T-Port	5022T1-012 171.86	5021T1-012SR 179.63	5027T1-012 171.86	5023T1-012 590.69	5032T1-012 193.32	5031T1-012SR 201.44	5037T1-012 193.32	5033T1-012 625.67	615
1-1/2	L-Port	5022L1-015 200.95	5021L1-015SR 213.94	5027L1-015 200.95	5023L1-015 608.53	5032L1-015 220.00	5031L1-015SR 232.98	5037L1-015 220.00	5033L1-015 636.42	615
	T-Port	5022T1-015 200.95	5021T1-015SR 213.94	5027T1-015 200.95	5023T1-015 608.53	5032T1-015 220.00	5031T1-015SR 232.98	5037T1-015 220.00	5033T1-015 636.42	615
2	L-Port	5022L1-020 246.51	5021L1-020SR 259.48	5027L1-020 246.51	5023L1-020 790.23	5032L1-020 287.39	5031L1-020SR 301.48	5037L1-020 287.39	5033L1-020 829.91	615
	T-Port	5022T1-020 246.51	5021T1-020SR 259.48	5027T1-020 246.51	5023T1-020 790.23	5032T1-020 287.39	5031T1-020SR 301.48	5037T1-020 287.39	5033T1-020 829.91	615
2-1/2	L-Port	5022L1-025 831.12	5021L1-025SR 867.49	5027L1-025 831.12	5023L1-025 1387.52	5032L1-025 883.79	5031L1-025SR 920.15	5037L1-025 883.79	5033L1-025 1626.02	615
	T-Port	5022T1-025 831.12	5021T1-025SR 867.49	5027T1-025 831.12	5023T1-025 1387.52	5032T1-025 883.79	5031T1-025SR 920.15	5037T1-025 883.79	5033T1-025 1626.02	615
3	L-Port	5022L1-030 848.09	5021L1-030SR 886.21	5027L1-030 848.09	5023L1-030 1405.72	5032L1-030 897.64	5031L1-030SR 934.00	5037L1-030 897.64	5033L1-030 1633.48	615
	T-Port	5022T1-030 848.09	5021T1-030SR 886.21	5027T1-030 848.09	5023T1-030 1405.72	5032T1-030 897.64	5031T1-030SR 934.00	5037T1-030 897.64	5033T1-030 1633.48	615
4	L-Port	5022L1-040 1535.97	5021L1-040SR 1577.56	5027L1-040 1535.97	5023L1-040 2042.29	5032L1-040 1553.29	5031L1-040SR 1594.87	5037L1-040 1553.29	5033L1-040 2232.33	615
	T-Port	5022T1-040 1535.97	5021T1-040SR 1577.56	5027T1-040 1535.97	5023T1-040 2042.29	5032T1-040 1553.29	5031T1-040SR 1594.87	5037T1-040 1553.29	5033T1-040 2232.33	615

Schedule 80 PVC Industrial Products & Accessories
True Union 2000 Industrial 3-Way Ball Valves



PVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005 102.03	4721L1-005SR 103.65	4727L1-005 102.03	4723L1-005 210.83	4732L1-005 110.51	4731L1-005SR 112.15	4737L1-005 110.51	4733L1-005 218.43	615
	Double L-Port	4722L2-005 203.20	4721L2-005SR 204.83	4727L2-005 203.20	4723L2-005 311.99	4732L2-005 211.68	4731L2-005SR 213.33	4737L2-005 211.68	4733L2-005 319.60	615
	Triple L-Port	4722L3-005 203.20	4721L3-005SR 204.83	4727L3-005 203.20	4723L3-005 311.99	4732L3-005 211.68	4731L3-005SR 213.33	4737L3-005 211.68	4733L3-005 319.60	615
	T-Port	4722T1-005 102.03	4721T1-005SR 103.65	4727T1-005 102.03	4723T1-005 210.83	4732T1-005 110.51	4731T1-005SR 112.15	4737T1-005 110.51	4733T1-005 218.43	615
3/4	L-Port	4722L1-007 119.68	4721L1-007SR 123.78	4727L1-007 119.68	4723L1-007 221.38	4732L1-007 130.43	4731L1-007SR 134.49	4737L1-007 130.43	4733L1-007 230.74	615
	Double L-Port	4722L2-007 220.86	4721L2-007SR 224.92	4727L2-007 220.86	4723L2-007 322.56	4732L2-007 231.60	4731L2-007SR 235.66	4737L2-007 231.60	4733L2-007 331.89	615
	Triple L-Port	4722L3-007 220.86	4721L3-007SR 224.92	4727L3-007 220.86	4723L3-007 322.56	4732L3-007 231.60	4731L3-007SR 235.66	4737L3-007 231.60	4733L3-007 331.89	615
	T-Port	4722T1-007 119.68	4721T1-007SR 123.78	4727T1-007 119.68	4723T1-007 221.38	4732T1-007 130.43	4731T1-007SR 134.49	4737T1-007 130.43	4733T1-007 230.74	615
1	L-Port	4722L1-010 145.49	4721L1-010SR 149.58	4727L1-010 145.49	4723L1-010 315.78	4732L1-010 161.98	4731L1-010SR 166.03	4737L1-010 161.98	4733L1-010 341.77	615
	Double L-Port	4722L2-010 246.69	4721L2-010SR 250.76	4727L2-010 246.69	4723L2-010 416.96	4732L2-010 263.12	4731L2-010SR 267.20	4737L2-010 263.12	4733L2-010 442.94	615
	Triple L-Port	4722L3-010 246.69	4721L3-010SR 250.76	4727L3-010 246.69	4723L3-010 416.96	4732L3-010 263.12	4731L3-010SR 267.20	4737L3-010 263.12	4733L3-010 442.94	615
	T-Port	4722T1-010 145.49	4721T1-010SR 149.58	4727T1-010 145.49	4723T1-010 315.78	4732T1-010 161.98	4731T1-010SR 166.03	4737T1-010 161.98	4733T1-010 341.77	615
1-1/4	L-Port	4722L1-012 175.99	4721L1-012SR 184.15	4727L1-012 175.99	4723L1-012 595.20	4732L1-012 207.36	4731L1-012SR 215.49	4737L1-012 207.36	4733L1-012 629.48	615
	Double L-Port	4722L2-012 277.17	4721L2-012SR 285.31	4727L2-012 277.17	4723L2-012 696.36	4732L2-012 308.53	4731L2-012SR 316.65	4737L2-012 308.53	4733L2-012 730.66	615
	Triple L-Port	4722L3-012 277.17	4721L3-012SR 285.31	4727L3-012 277.17	4723L3-012 696.36	4732L3-012 308.53	4731L3-012SR 316.65	4737L3-012 308.53	4733L3-012 730.66	615
	T-Port	4722T1-012 175.99	4721T1-012SR 184.15	4727T1-012 175.99	4723T1-012 595.20	4732T1-012 207.36	4731T1-012SR 215.49	4737T1-012 207.36	4733T1-012 629.48	615
1-1/2	L-Port	4722L1-015 203.52	4721L1-015SR 216.54	4727L1-015 203.52	4723L1-015 617.38	4732L1-015 223.11	4731L1-015SR 236.11	4737L1-015 223.11	4733L1-015 636.42	615
	Double L-Port	4722L2-015 304.71	4721L2-015SR 317.68	4727L2-015 304.71	4723L2-015 718.53	4732L2-015 324.26	4731L2-015SR 337.26	4737L2-015 324.26	4733L2-015 737.58	615
	Triple L-Port	4722L3-015 304.71	4721L3-015SR 317.68	4727L3-015 304.71	4723L3-015 718.53	4732L3-015 324.26	4731L3-015SR 337.26	4737L3-015 324.26	4733L3-015 737.58	615
	T-Port	4722T1-015 203.52	4721T1-015SR 216.54	4727T1-015 203.52	4723T1-015 617.38	4732T1-015 223.11	4731T1-015SR 236.11	4737T1-015 223.11	4733T1-015 636.42	615
2	L-Port	4722L1-020 249.61	4721L1-020SR 263.73	4727L1-020 249.61	4723L1-020 795.60	4732L1-020 289.81	4731L1-020SR 303.92	4737L1-020 289.81	4733L1-020 830.80	615
	Double L-Port	4722L2-020 350.76	4721L2-020SR 364.91	4727L2-020 350.76	4723L2-020 896.78	4732L2-020 390.98	4731L2-020SR 405.07	4737L2-020 390.98	4733L2-020 931.93	615
	Triple L-Port	4722L3-020 350.76	4721L3-020SR 364.91	4727L3-020 350.76	4723L3-020 896.78	4732L3-020 390.98	4731L3-020SR 405.07	4737L3-020 390.98	4733L3-020 931.93	615
	T-Port	4722T1-020 249.61	4721T1-020SR 263.73	4727T1-020 249.61	4723T1-020 795.60	4732T1-020 289.81	4731T1-020SR 303.92	4737T1-020 289.81	4733T1-020 830.80	615
2-1/2	L-Port	4722L1-025 877.91	4721L1-025SR 914.28	4727L1-025 877.91	4723L1-025 1393.58	4732L1-025 887.78	4731L1-025SR 924.17	4737L1-025 887.78	4733L1-025 1624.14	615
	Double L-Port	4722L2-025 979.05	4721L2-025SR 1015.43	4727L2-025 979.05	4723L2-025 1494.75	4732L2-025 988.94	4731L2-025SR 1025.31	4737L2-025 988.94	4733L2-025 1725.31	615
	Triple L-Port	4722L3-025 979.05	4721L3-025SR 1015.43	4727L3-025 979.05	4723L3-025 1494.75	4732L3-025 988.94	4731L3-025SR 1025.31	4737L3-025 988.94	4733L3-025 1725.31	615
	T-Port	4722T1-025 877.91	4721T1-025SR 914.28	4727T1-025 877.91	4723T1-025 1393.58	4732T1-025 887.78	4731T1-025SR 924.17	4737T1-025 887.78	4733T1-025 1624.14	615
3	L-Port	4722L1-030 895.91	4721L1-030SR 932.28	4727L1-030 895.91	4723L1-030 1412.80	4732L1-030 903.87	4731L1-030SR 940.25	4737L1-030 903.87	4733L1-030 1634.89	615
	Double L-Port	4722L2-030 997.07	4721L2-030SR 1033.46	4727L2-030 997.07	4723L2-030 1513.98	4732L2-030 1005.05	4731L2-030SR 1041.41	4737L2-030 1005.05	4733L2-030 1736.04	615
	Triple L-Port	4722L3-030 997.07	4721L3-030SR 1033.46	4727L3-030 997.07	4723L3-030 1513.98	4732L3-030 1005.05	4731L3-030SR 1041.41	4737L3-030 1005.05	4733L3-030 1736.04	615
	T-Port	4722T1-030 895.91	4721T1-030SR 932.28	4727T1-030 895.91	4723T1-030 1412.80	4732T1-030 903.87	4731T1-030SR 940.25	4737T1-030 903.87	4733T1-030 1634.89	615
4	L-Port	4722L1-040 1548.61	4721L1-040SR 1590.18	4727L1-040 1548.61	4723L1-040 2053.91	4732L1-040 1563.68	4731L1-040SR 1605.25	4737L1-040 1563.68	4733L1-040 2151.25	615
	Double L-Port	4722L2-040 1649.80	4721L2-040SR 1691.34	4727L2-040 1649.80	4723L2-040 2155.07	4732L2-040 1664.85	4731L2-040SR 1706.43	4737L2-040 1664.85	4733L2-040 2252.42	615
	Triple L-Port	4722L3-040 1649.80	4721L3-040SR 1691.34	4727L3-040 1649.80	4723L3-040 2155.07	4732L3-040 1664.85	4731L3-040SR 1706.43	4737L3-040 1664.85	4733L3-040 2252.42	615
	T-Port	4722T1-040 1548.61	4721T1-040SR 1590.18	4727T1-040 1548.61	4723T1-040 2053.91	4732T1-040 1563.68	4731T1-040SR 1605.25	4737T1-040 1563.68	4733T1-040 2151.25	615



Schedule 80 PVC Industrial Products & Accessories Tee-Style "Zero Dead-Leg" Ball Valves



Valves are produced to order in Ball Valve sizes 1/2" – 2". Tee Valves can be custom produced in any standard Tee and Valve size combination.

Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm) = 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

Additional Notes

The Tee Valve is assembled with socket end connector. Tee Valves are a non-stock configuration. All orders are non-cancelable, non-returnable.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Mainline Socket Tee x Valve Socket

1/2	182901-005 163.19	183901-005 175.80	1	12	263
3/4	182901-007 178.35	183901-007 192.79	1	8	263
1	182901-010 181.71	183901-010 203.39	1	8	263
2	182901-020 301.16	183901-020 351.61	1	0	263
3/4X1/2	182901-101 165.91	183901-101 178.48	1	12	263
1X1/2	182901-130 171.36	183901-130 183.99	1	8	263
1X3/4	182901-131 181.71	183901-131 203.39	1	8	263
1-1/4X1/2	182901-166 180.55	183901-166 193.15	1	8	263
1-1/4X3/4	182901-167 185.06	183901-167 199.53	1	8	263
1-1/4X1	182901-168 197.72	183901-168 219.42	1	8	263
1-1/2X1/2	182901-209 180.55	183901-209 193.17	1	8	263
1-1/2X3/4	182901-210 185.06	183901-210 199.53	1	8	263
1-1/2X1	182901-211 197.72	183901-211 219.42	1	8	263
2X1/2	182901-247 233.48	183901-247 246.17	1	8	263
2X3/4	182901-248 240.39	183901-248 254.80	1	8	263
2X1	182901-249 250.64	183901-249 272.35	1	8	263
2X1-1/2	182901-251 309.25	183901-251 336.34	1	8	263
3X1/2	182901-333 238.23	183901-333 250.85	1	0	263
3X1	182901-335 255.26	183901-335 276.96	1	4	263
3X1-1/2	182901-337 292.86	183901-337 319.97	1	0	263
3X2	182901-338 318.44	183901-338 368.92	1	0	263
4X1	182901-417 295.06	183901-417 316.75	1	0	263
4X1-1/2	182901-419 332.68	183901-419 359.77	1	0	263
4X2	182901-420 392.35	183901-420 442.83	1	0	263
6X2	182901-528 461.26	183901-528 511.75	1	0	263
8X2	182901-578 703.81	183901-578 754.31	1	0	263

PVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Mainline Socket Tee x Valve Socket

20	182901M-020 163.19	183901M-020 175.80	1	8	263
-----------	------------------------------	------------------------------	---	---	-----

PVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Mainline Socket Tee x Valve Socket

25	182901M-025 178.35	183901M-025 192.79	1	8	263
32	182901M-032 181.71	183901M-032 203.39	1	8	263
40	182901M-040 252.48	183901M-040 270.74	1	8	263
50	182901M-050 264.35	183901M-050 342.67	1	8	263
63	182901M-063 301.16	183901M-063 351.61	1	8	263

Schedule 80 PVC Industrial Products & Accessories
True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" = 235 psi
 2-1/2" - 4" = 150 psi
 Flanged = 150 psi

Maximum Service Temperature
 PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free, Water Soluble Lubricant
 See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	3629-005 39.77	3639-005 44.23	1	18	608
3/4	3629-007 47.03	3639-007 52.32	1	18	608
1	3629-010 56.02	3639-010 62.40	1	12	608
1-1/4	3629-012 77.48	3639-012 98.91	1	8	608
1-1/2	3629-015 93.35	3639-015 103.62	1	8	608
2	3629-020 123.18	3639-020 135.62	1	4	608

Socket Ends

2-1/2	3622-025 235.95	3632-025 320.80	1	0	609
3	3622-030 312.14	3632-030 346.81	1	0	609
4	3622-040 527.23	3632-040 586.01	1	0	609

Threaded Ends

2-1/2	3621-025 235.95	3631-025 320.80	1	0	609
3	3621-030 312.14	3631-030 346.81	1	0	609
4	3621-040 527.23	3631-040 586.01	1	0	609

SR Threaded Ends

1/2	3621-005SR 40.63	3631-005SR 45.08	1	18	608
3/4	3621-007SR 49.06	3631-007SR 54.39	1	18	608
1	3621-010SR 58.06	3631-010SR 64.44	1	18	608
1-1/4	3621-012SR 83.67	3631-012SR 105.08	1	12	608
1-1/2	3621-015SR 99.98	3631-015SR 110.24	1	8	608
2	3621-020SR 130.35	3631-020SR 142.81	1	8	608
2-1/2	3621-025SR 256.11	3631-025SR 340.14	1	0	609
3	3621-030SR 331.52	3631-030SR 366.17	1	0	609
4	3621-040SR 550.00	3631-040SR 608.60	1	0	609

Spigot Ends

1/2	3627-005 39.77	3637-005 44.23	1	18	608
3/4	3627-007 47.03	3637-007 52.32	1	18	608
1	3627-010 56.02	3637-010 62.40	1	12	608
1-1/4	3627-012 77.48	3637-012 98.91	1	12	608
1-1/2	3627-015 93.35	3637-015 103.62	1	8	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
2	3627-020 123.18	3637-020 135.62	1	8	608
2-1/2	3627-025 236.74	3637-025 320.80	1	0	609
3	3627-030 312.14	3637-030 346.81	1	0	609
4	3627-040 527.23	3637-040 586.01	1	0	609

Flanged Ends

1/2	3623-005 56.87	3633-005 60.65	1	8	608
3/4	3623-007 72.05	3633-007 78.36	1	8	608
1	3623-010 87.18	3633-010 93.75	1	8	608
1-1/4	3623-012 102.35	3633-012 113.76	1	4	608
1-1/2	3623-015 128.93	3633-015 140.29	1	4	608
2	3623-020 205.28	3633-020 217.74	1	0	608
2-1/2	3623-025 379.14	3633-025 385.41	1	0	609
3	3623-030 392.87	3633-030 520.28	1	0	609
4	3623-040 842.57	3633-040 976.66	1	0	609



Schedule 80 PVC Industrial Products & Accessories

True Union 2000 Industrial Retrofit Ball Valves - Replaces Other Brand Valves



Industrial Valve

Complete universal replacement valve for domestic and import PVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

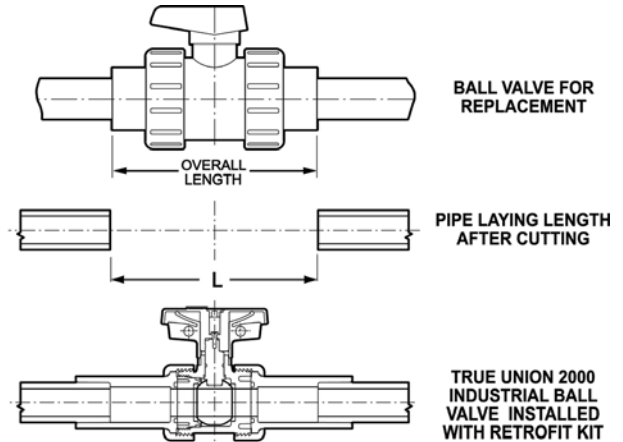
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" = 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005 49.69	1832R-005 55.27	1	18	600
3/4	1822R-007 58.80	1832R-007 65.41	1	18	600
1	1822R-010 70.02	1832R-010 77.99	1	12	600
1-1/4	1822R-012 96.86	1832R-012 123.64	1	8	600
1-1/2	1822R-015 116.67	1832R-015 129.52	1	8	600
2	1822R-020 153.96	1832R-020 169.54	1	4	600
2-1/2	1822R-025 295.95	1832R-025 401.01	1	0	601
3	1822R-030 390.18	1832R-030 433.54	1	0	601
4	1822R-040 659.24	1832R-040 732.49	1	0	601

Schedule 80 PVC Industrial Products & Accessories
True Union 2000 Industrial Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Industrial Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

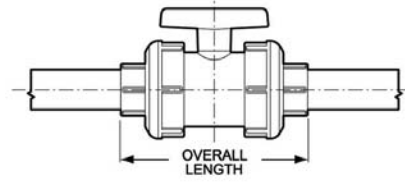
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
 1/2" - 4" 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

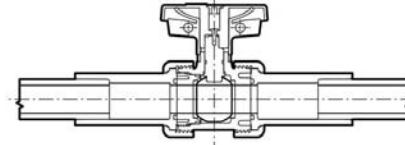
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 INDUSTRIAL BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005 49.69	1832RS-005 55.27	1	18	600
3/4	1822RS-007 58.80	1832RS-007 65.41	1	18	600
1	1822RS-010 70.02	1832RS-010 77.99	1	12	600
1-1/4	1822RS-012 96.86	1832RS-012 123.64	1	8	600
1-1/2	1822RS-015 116.67	1832RS-015 129.52	1	8	600
2	1822RS-020 153.96	1832RS-020 169.54	1	4	600
2-1/2	1822RS-025 295.95	1832RS-025 401.01	1	0	601
3	1822RS-030 390.18	1832RS-030 433.54	1	0	601
4	1822RS-040 659.24	1832RS-040 732.49	1	0	601



Schedule 80 PVC Industrial Products & Accessories
True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves & True Union 2000 Standard Retrofit Ball Valves -
Replaces Spears® "Regular Style" Valves

True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves



Standard Valve

Complete universal replacement valve for domestic and import PVC valves. See separate catalog listing for retrofit replacement of older Spears® valves.

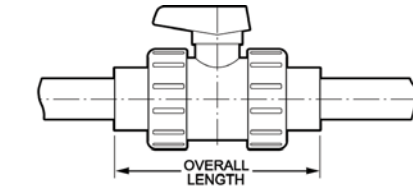
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.

Suitable for Vacuum Service.

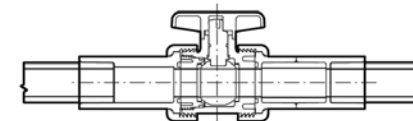
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 STANDARD BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005 39.77	3632R-005 44.23	1	18	608
3/4	3622R-007 47.03	3632R-007 52.32	1	12	608
1	3622R-010 56.02	3632R-010 62.40	1	8	608
1-1/4	3622R-012 77.48	3632R-012 98.91	1	8	608
1-1/2	3622R-015 93.35	3632R-015 103.62	1	8	608

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	3622R-020 123.18	3632R-020 135.62	1	4	608
2-1/2	3622R-025 235.95	3632R-025 320.80	1	0	609
3	3622R-030 312.14	3632R-030 346.81	1	0	609
4	3622R-040 527.23	3632R-040 586.01	1	0	609

True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Standard Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

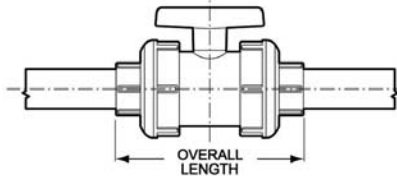
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

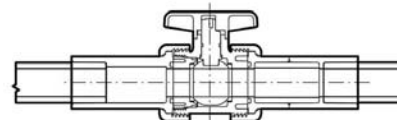
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 STANDARD BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005 39.77	3632RS-005 44.23	1	18	608
3/4	3622RS-007 47.03	3632RS-007 52.32	1	18	608
1	3622RS-010 56.02	3632RS-010 62.40	1	12	608
1-1/4	3622RS-012 77.48	3632RS-012 98.91	1	8	608
1-1/2	3622RS-015 93.35	3632RS-015 103.62	1	8	608

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	3622RS-020 123.18	3632RS-020 135.62	1	4	608
2-1/2	3622RS-025 235.95	3632RS-025 320.80	1	0	609
3	3622RS-030 312.14	3632RS-030 346.81	1	0	609
4	3622RS-040 527.23	3632RS-040 586.01	1	0	609

Schedule 80 PVC Industrial Products & Accessories
True Union Ball Valves (Regular Style) & Single Entry Ball Valves



True Union Ball Valves (Regular Style)



Socket/Threaded Style



Flanged Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 6" 150 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service
 All Valves assembled with Silicone-Free, Water Soluble Lubricant.

**6" Venturied Valves are 4" Ball Valves
 equipped with 4x6 End Connectors.**

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1/2	2329-005 57.23	2339-005 63.68	1	18	230
3/4	2329-007 67.69	2339-007 75.34	1	12	230
1	2329-010 80.64	2339-010 89.82	1	8	230
1-1/4	2329-012 111.55	2339-012 142.38	1	8	230
1-1/2	2329-015 134.40	2339-015 149.16	1	8	230
2	2329-020 177.31	2339-020 195.25	1	4	230

Socket Ends

2-1/2	2322-025 323.80	2332-025 438.75	1	0	230
3	2322-030 426.91	2332-030 474.35	1	0	230
4	2322-040 721.29	2332-040 801.42	1	0	230

Socket Venturied Ends

6 VENTURIED	2322-060 962.36	2332-060 1048.55	1	0	231
--------------------	--------------------	---------------------	---	---	-----

Threaded Ends

2-1/2	2321-025 323.80	2331-025 438.75	1	0	230
3	2321-030 426.91	2331-030 474.35	1	0	230

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Threaded Ends

4	2321-040 721.29	2331-040 801.42	1	0	230
----------	--------------------	--------------------	---	---	-----

Flanged Ends

1/2	2323-005 81.87	2333-005 87.34	6	0	230
3/4	2323-007 103.72	2333-007 112.80	5	0	230
1	2323-010 125.55	2333-010 134.96	5	0	230
1-1/4	2323-012 147.37	2333-012 163.75	2	0	230
1-1/2	2323-015 185.60	2333-015 201.94	3	0	230
2	2323-020 295.56	2333-020 313.45	2	0	230
2-1/2	2323-025 518.53	2333-025 527.07	1	0	230
3	2323-030 573.11	2333-030 711.55	1	0	230
4	2323-040 1152.32	2333-040 1335.74	1	0	230

Flanged Venturied Ends

6 VENTURIED	2323-060 1680.55	2333-060 1723.61	1	0	231
--------------------	---------------------	---------------------	---	---	-----

Single Entry Ball Valves

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 3" - 4" 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant. See Ball Valve Accessories & Repair Kits
 Section for Additional Options and Features



PVC Gray – Socket/Threaded Style

PVC Gray

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Threaded Ends

1/2	2411-005G 20.88	2421-005G 23.15	2431-005G 25.75	10	120	240
3/4	2411-007G 26.31	2421-007G 29.26	2431-007G 32.49	10	80	240

PVC Gray (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Threaded Ends

1	2411-010G 30.95	2421-010G 34.35	2431-010G 38.18	10	0	240
1-1/4	2411-012G 42.98	2421-012G 47.78	2431-012G 53.02	6	0	240



Schedule 80 PVC Industrial Products & Accessories Single Entry Ball Valves & Compact 2000 Ball Valves

Single Entry Ball Valves

PVC Gray (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1-1/2	2411-015G 54.11	2421-015G 63.38	2431-015G 70.48	5	0	240
2	2411-020G 62.65	2421-020G 69.62	2431-020G 77.32	5	0	240
3	2411-030G 218.37	2421-030G 270.83	2431-030G 312.31	1	0	240
4	2411-040G 461.53	2421-040G 508.53	2431-040G 552.76	1	0	240

Socket Ends

1/2	2412-005G 20.88	2422-005G 23.15	2432-005G 25.75	10	120	240
3/4	2412-007G 26.31	2422-007G 29.26	2432-007G 32.49	10	80	240

PVC Gray (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends						
1	2412-010G 30.95	2422-010G 34.35	2432-010G 38.18	10	0	240
1-1/4	2412-012G 42.98	2422-012G 47.78	2432-012G 53.02	5	0	240
1-1/2	2412-015G 54.17	2422-015G 63.38	2432-015G 70.48	5	0	240
2	2412-020G 62.65	2422-020G 69.62	2432-020G 77.32	5	0	240
3	2412-030G 218.37	2422-030G 270.83	2432-030G 312.31	1	0	240
4	2412-040G 461.53	2422-040G 508.53	2432-040G 552.76	1	0	240

Compact 2000 Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricants.
Rated for Vacuum Service
Compact 2000 Ball Valves are a Maintenance-Free, Sealed Unit (non-repairable).
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features.

PVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	6622-005 21.17	6632-005 23.83	10	120	210
3/4	6622-007 28.88	6632-007 29.57	10	80	210
1	6622-010 31.53	6632-010 35.36	10	0	210
1-1/4	6622-012 47.43	6632-012 54.81	6	0	210
1-1/2	6622-015 56.49	6632-015 62.83	5	0	210
2	6622-020 75.42	6632-020 84.74	8	0	210

Threaded Ends

1/2	6621-005 21.17	6631-005 23.83	10	120	210
3/4	6621-007 28.88	6631-007 29.57	10	80	210
1	6621-010 31.53	6631-010 35.36	10	0	210
1-1/4	6621-012 51.92	6631-012 54.81	6	0	210
1-1/2	6621-015 56.49	6631-015 62.83	5	0	210
2	6621-020 75.42	6631-020 84.74	8	0	210

Flanged Ends

1/2	6623-005 44.58	6633-005 46.84	10	120	210
3/4	6623-007 50.35	6633-007 52.11	10	120	210
1	6623-010 65.61	6633-010 69.13	10	120	210
1-1/4	6623-012 81.93	6633-012 87.89	10	120	210
1-1/2	6623-015 99.12	6633-015 107.74	10	120	210

PVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
2	6623-020 132.27	6633-020 138.07	10	120	210

Schedule 80 PVC Industrial Products & Accessories Compact Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 3" - 6" 150 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricants.
 See Ball Valve Accessories & Repair Kits Section for Additional
 Options & Features

Note: Standard 6" Valve uses Lever-Style Handle for proper
 leverage.
 T-Handle option is more compact but will increase difficulty of
 operation.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005 22.27	2132-005 25.08	10	80	210
3/4	2122-007 30.40	2132-007 31.13	10	0	210
1	2122-010 33.17	2132-010 37.24	10	0	210
1-1/4	2122-012 59.48	2132-012 66.13	6	0	210
1-1/2	2122-015 73.65	2132-015 76.96	5	0	210
2	2122-020 79.38	2132-020 89.20	6	0	210
3	2122-030 258.01	2132-030 289.86	1	4	211
4	2122-040 396.95	2132-040 571.38	1	0	211
6 (Lever Handle)	2122-060 515.51	2132-060 742.05	1	0	211
6 (Tee Handle)	21226-060 515.51	21326-060 742.05	1	0	211

Threaded Ends

1/2	2121-005 22.27	2131-005 25.08	10	80	210
3/4	2121-007 30.40	2131-007 31.13	10	0	210
1	2121-010 33.17	2131-010 37.24	10	0	210
1-1/4	2121-012 59.48	2131-012 66.13	6	0	210
1-1/2	2121-015 73.65	2131-015 76.96	5	0	210
2	2121-020 79.38	2131-020 89.20	6	0	210
3	2121-030 258.01	2131-030 289.86	1	4	211
4	2121-040 396.95	2131-040 571.38	1	0	211

Flanged Ends

1/2	2123-005 49.24	2133-005 52.45	1	8	210
3/4	2123-007 59.58	2133-007 61.95	1	8	210
1	2123-010 65.73	2133-010 69.78	1	8	210
1-1/4	2123-012 93.05	2133-012 99.69	1	8	210
1-1/2	2123-015 107.66	2133-015 112.73	1	4	210
2	2123-020 124.97	2133-020 134.69	1	0	210
3	2123-030 335.73	2133-030 367.59	1	0	211
4	2123-040 495.22	2133-040 669.64	1	0	211
6 (Lever Handle)	2123-060 953.51	2133-060 1049.57	1	0	211

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
6 (Tee Handle)	21236-060 953.51	21336-060 1049.57	1	0	211



Schedule 80 PVC Industrial Products & Accessories Utility Ball Valves & Lab Ball Valves

Utility Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC Gray					
1/2	2621-005G 9.37	2622-005G 9.37	50	0	215
3/4	2621-007G 11.12	2622-007G 11.12	25	0	215
1	2621-010G 15.12	2622-010G 15.12	25	0	215
1-1/4	2621-012G 20.03	2622-012G 20.03	20	0	215
1-1/2	2621-015G 30.57	2622-015G 30.57	20	0	215

PVC w/EPDM O-ring Seal (continued)

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC Gray					
2	2621-020G 38.64	2622-020G 38.64	8	0	215
2-1/2	2621-025G 66.14	2622-025G 66.14	6	0	214
3	2621-030G 118.62	2622-030G 118.62	1	4	214
4	2621-040G 217.41	2622-040G 217.41	1	0	214

Lab Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Valve & Adapters includes:

- 1 - Threaded 1/4" Valve
- 2 - O-ring Sealed 1/4" MPT x Mipt Adapters
- 2 - EPDM or FKM O-rings (AS568-013 size)
- 1 - End Connector Wrench
- 2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
- 2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters



Socket/Threaded Valve Only

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Valve & Adapters

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Valve & Adapters Threaded Ends

1/4X3/8T	1529-002 25.75	1539-002 26.92	1	25	218
1/4X1/4T	1529-002A 25.75	1539-002A 26.92	1	25	218

Valve only Threaded Ends

1/4	1521-002 20.58	1531-002 22.91	50	200	218
3/8	1521-003 28.93	1531-003 32.07	50	200	218

Valve only Socket Ends

1/4	1522-002 20.58	1532-002 23.28	50	200	218
3/8	1522-003 28.93	1532-003 32.07	50	200	218

Schedule 80 PVC Industrial Products & Accessories True Union 2000 Industrial Ball Check Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 4" 235 psi
 6" - 8" 150 psi
 All Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves assembled with Silicone-Free,
 Water Soluble Lubricant
 Contact Spears® for Pricing & Availability
 on Custom Elastomer Seals
 See Ball Valve Accessories & Repair Kits Section
 for Additional Options and Features

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005 56.36	4539-005 63.52	1	18	604
3/4	4529-007 67.20	4539-007 70.93	1	18	604
1	4529-010 79.93	4539-010 89.09	1	18	604
1-1/4	4529-012 116.72	4539-012 131.00	1	12	604
1-1/2	4529-015 134.05	4539-015 148.78	1	8	604
2	4529-020 183.02	4539-020 203.51	1	8	604

Socket Ends

2-1/2	4522-025 443.72	4532-025 472.58	1	0	605
3	4522-030 564.68	4532-030 632.98	1	0	605
4	4522-040 832.33	4532-040 876.92	1	0	605
6	4522-060 1636.75	4532-060 1813.96	1	0	558
8	4522-080 2181.25	4532-080 2417.89	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	4521-025 443.72	4531-025 472.58	1	0	605
3	4521-030 568.31	4531-030 637.46	1	0	605
4	4521-040 832.33	4531-040 876.92	1	0	605
6	4521-060 1636.75	4531-060 1813.96	1	0	558

SR Threaded Ends

1/2	4521-005SR 57.51	4531-005SR 64.64	1	18	604
3/4	4521-007SR 69.94	4531-007SR 73.66	1	18	604
1	4521-010SR 82.63	4531-010SR 91.82	1	18	604
1-1/4	4521-012SR 122.14	4531-012SR 136.39	1	12	604
1-1/2	4521-015SR 142.79	4531-015SR 157.51	1	8	604
2	4521-020SR 192.47	4531-020SR 212.97	1	8	604
2-1/2	4521-025SR 467.89	4531-025SR 496.78	1	0	605
3	4521-030SR 580.14	4531-030SR 496.78	1	0	605
4	4521-040SR 860.55	4531-040SR 905.16	1	0	605
6	4521-060SR 1683.47	4531-060SR 1862.27	1	0	558

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	4527-005 56.36	4537-005 63.52	1	18	604
3/4	4527-007 67.20	4537-007 70.93	1	18	604
1	4527-010 79.93	4537-010 89.09	1	12	604
1-1/4	4527-012 116.72	4537-012 131.00	1	12	604
1-1/2	4527-015 134.05	4537-015 148.78	1	8	604
2	4527-020 183.02	4537-020 203.51	1	8	604
2-1/2	4527-025 443.72	4537-025 472.58	1	0	605
3	4527-030 502.43	4537-030 634.38	1	0	605
4	4527-040 832.33	4537-040 876.92	1	0	605
6	4527-060 1636.75	4537-060 1813.96	1	0	558

Flanged Ends

1/2	4523-005 79.46	4533-005 99.73	1	8	604
3/4	4523-007 96.11	4533-007 119.60	5	0	604
1	4523-010 113.91	4533-010 139.17	5	0	604
1-1/4	4523-012 140.88	4533-012 182.12	2	0	604
1-1/2	4523-015 194.40	4533-015 211.28	3	0	604
2	4523-020 274.37	4533-020 280.87	2	0	604
2-1/2	4523-025 568.38	4533-025 661.89	1	0	605
3	4523-030 795.06	4533-030 924.53	1	0	605
4	4523-040 1076.19	4533-040 1249.16	1	0	605
6	4523-060 2577.57	4533-060 2989.97	1	0	558
8	4523-080 3347.48	4533-080 3891.12	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.



Schedule 80 PVC Industrial Products & Accessories True Union Ball Check Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 6" 150 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves assembled with Silicone-Free,
 Water Soluble Lubricant

6" Venturied Valves are 4" Ball Check Valves equipped with
 4x6 End Connectors.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	-----------	------------	--------------

Socket & Threaded Ends

1/2	2229-005 61.67	2239-005 69.49	1	18	220
3/4	2229-007 73.53	2239-007 77.62	1	12	220
1	2229-010 87.44	2239-010 97.48	1	8	220
1-1/4	2229-012 127.71	2239-012 143.32	1	8	220
1-1/2	2229-015 146.67	2239-015 162.78	1	8	220
2	2229-020 200.24	2239-020 222.66	1	4	220

Socket Ends

2-1/2	2222-025 485.46	2232-025 517.04	1	0	220
3	2222-030 586.46	2232-030 681.48	1	0	220
4	2222-040 910.65	2232-040 959.46	1	0	220

Socket Venturied Ends

6 VENTURIED	2222-060 1230.28	2232-060 1393.56	1	0	221
--------------------	----------------------------	----------------------------	---	---	-----

Threaded Ends

2-1/2	2221-025 485.46	2231-025 517.04	1	0	220
3	2221-030 586.46	2231-030 681.48	1	0	220
4	2221-040 910.65	2231-040 959.46	1	0	220

Flanged Ends

1/2	2223-005 86.95	2233-005 109.14	6	0	220
3/4	2223-007 105.15	2233-007 130.85	5	0	220
1	2223-010 124.63	2233-010 152.27	5	0	220
1-1/4	2223-012 154.15	2233-012 199.26	2	0	220
1-1/2	2223-015 212.68	2233-015 231.19	3	0	220
2	2223-020 300.19	2233-020 307.32	2	0	220
2-1/2	2223-025 621.87	2233-025 724.20	1	0	220
3	2223-030 869.88	2233-030 1011.54	1	0	220
4	2223-040 1177.48	2233-040 1366.73	1	0	220

Flanged Venturied Ends

6 VENTURIED	2223-060 1473.61	2233-060 1644.16	1	0	221
--------------------	----------------------------	----------------------------	---	---	-----

Schedule 80 PVC Industrial Products & Accessories Foot Valve Screens & Y-Check Valves



Foot Valve Screens

Convert Check Valve to Foot Valve using adapter - Fits all Socket Ball Check Valves or any IPS fitting socket or thread

Standard Foot Valve Screen



PVC/CPVC Spigot

Compact Foot Valve Screens



PVC Gray Spigot
or Threaded

PE Black
Threaded Only

Foot Valve Screens - PVC

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Spigot					
FVS-005	1/2	10	60	299	45.51
FVS-007	3/4	10	60	299	54.04
FVS-010	1	10	40	299	65.73
FVS-012	1-1/4	5	30	299	95.67
FVS-015	1-1/2	5	0	299	100.78
FVS-020	2	5	0	299	113.74
FVS-025	2-1/2	5	0	299	156.45
FVS-030	3	5	0	299	160.93
FVS-040	4	5	0	299	190.41
FVS-060	6	5	0	299	257.85

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Spigot					
CFVS7-005	1/2	1	0	299	2.80
CFVS7-007	3/4	1	0	299	3.19
CFVS7-010	1	1	0	299	3.78
CFVS7-012	1-1/4	1	0	299	4.81
CFVS7-015	1-1/2	1	0	299	8.06
CFVS7-020	2	1	0	299	9.17

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005	1/2	1	0	299	2.80
CFVS1-007	3/4	1	0	299	3.19
CFVS1-010	1	1	0	299	3.78
CFVS1-012	1-1/4	1	0	299	4.81
CFVS1-015	1-1/2	1	0	299	8.06
CFVS1-020	2	1	0	299	9.17

HDPE Black Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005P	1/2	1	0	299	3.35
CFVS1-007P	3/4	1	0	299	4.03
CFVS1-010P	1	1	0	299	4.62
CFVS1-012P	1-1/4	1	0	299	5.31
CFVS1-015P	1-1/2	1	0	299	9.04
CFVS1-020P	2	1	0	299	10.14

Y-Check Valves



PVC Clear — Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 150 psi
 3" - 4" 90 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply



True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005 88.61	1632-005 98.27	1	18	627
3/4	1622-007 95.05	1632-007 106.34	1	18	627
1	1622-010 104.72	1632-010 115.98	1	12	627
1-1/4	1622-012 164.32	1632-012 182.05	1	8	627
1-1/2	1622-015 178.81	1632-015 198.15	1	8	627

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	1622-020 222.32	1632-020 246.49	1	4	627
3	1622-030 439.80	1632-030 488.12	1	0	627
4	1622-040 766.83	1632-040 852.22	1	0	627

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005SR 91.83	1631-005SR 101.51	1	18	627



Schedule 80 PVC Industrial Products & Accessories Y-Check Valves

PVC - SR Threaded Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	1621-007SR 99.87	1631-007SR 111.16	1	12	627
1	1621-010SR 111.16	1631-010SR 122.43	1	8	627
1-1/4	1621-012SR 173.98	1631-012SR 191.71	1	8	627
1-1/2	1621-015SR 193.32	1631-015SR 212.65	1	4	627
2	1621-020SR 238.42	1631-020SR 262.59	1	0	627
3	1621-030SR 483.31	1631-030SR 531.62	1	0	627
4	1621-040SR 811.94	1631-040SR 897.31	1	0	627

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005 115.98	1633-005 128.89	1	8	627
3/4	1623-007 127.26	1633-007 141.77	1	4	627
1	1623-010 148.98	1633-010 170.76	1	8	627
1-1/4	1623-012 236.81	1633-012 262.59	1	4	627
1-1/2	1623-015 251.33	1633-015 278.69	1	4	627
2	1623-020 336.69	1633-020 373.73	1	0	627
3	1623-030 658.88	1633-030 731.38	1	0	627
4	1623-040 1051.96	1633-040 1167.96	1	0	627

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005CL 88.61	1632-005CL 98.27	1	18	628
3/4	1622-007CL 95.05	1632-007CL 106.34	1	18	628
1	1622-010CL 104.72	1632-010CL 115.98	1	12	628
1-1/4	1622-012CL 164.32	1632-012CL 182.05	1	8	628
1-1/2	1622-015CL 178.81	1632-015CL 198.15	1	8	628
2	1622-020CL 222.32	1632-020CL 246.49	1	4	628
3	1622-030CL 439.80	1632-030CL 488.12	1	0	628
4	1622-040CL 766.83	1632-040CL 852.22	1	0	628

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CLSR 91.83	1631-005CLSR 101.51	1	18	628
3/4	1621-007CLSR 99.87	1631-007CLSR 111.16	1	12	628
1	1621-010CLSR 111.16	1631-010CLSR 122.43	1	8	628
1-1/4	1621-012CLSR 173.98	1631-012CLSR 191.71	1	8	628
1-1/2	1621-015CLSR 193.32	1631-015CLSR 212.65	1	4	628
2	1621-020CLSR 238.42	1631-020CLSR 262.59	1	0	628
3	1621-030CLSR 483.31	1631-030CLSR 531.62	1	0	628
4	1621-040CLSR 811.94	1631-040CLSR 897.31	1	0	628

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005CL 115.98	1633-005CL 128.89	1	8	628
3/4	1623-007CL 127.26	1633-007CL 141.77	1	8	628
1	1623-010CL 153.04	1633-010CL 170.76	1	8	628
1-1/4	1623-012CL 236.81	1633-012CL 262.59	1	4	628
1-1/2	1623-015CL 251.33	1633-015CL 278.69	1	4	628
2	1623-020CL 336.69	1633-020CL 373.73	1	0	628
3	1623-030CL 658.88	1633-030CL 731.38	1	0	628
4	1623-040CL 1051.96	1633-040CL 1167.96	1	0	628

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005 96.66	163A-005 106.34	1	12	627
3/4	162A-007 103.09	163A-007 115.98	1	8	627
1	162A-010 114.38	163A-010 125.64	1	8	627
1-1/4	162A-012 178.81	163A-012 198.15	1	4	627
1-1/2	162A-015 194.93	163A-015 215.88	1	0	627
2	162A-020 241.64	163A-020 267.41	2	0	627
3	162A-030 478.45	163A-030 521.96	1	0	627
4	162A-040 834.49	163A-040 926.32	1	0	627

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005 96.66	163B-005 106.34	1	12	627
3/4	162B-007 103.09	163B-007 115.98	1	8	627
1	162B-010 114.38	163B-010 125.64	1	8	627
1-1/4	162B-012 177.22	163B-012 198.15	1	4	627
1-1/2	162B-015 194.93	163B-015 215.88	1	0	627
2	162B-020 241.64	163B-020 267.41	2	0	627
3	162B-030 478.45	163B-030 521.96	1	0	627
4	162B-040 834.49	163B-040 926.32	1	0	627

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005SR 99.87	163B-005SR 109.55	1	12	627
3/4	162B-007SR 107.93	163B-007SR 119.22	1	8	627
1	162B-010SR 119.22	163B-010SR 132.11	1	8	627
1-1/4	162B-012SR 188.48	163B-012SR 207.80	1	4	627
1-1/2	162B-015SR 211.03	163B-015SR 231.98	1	0	627
2	162B-020SR 259.37	163B-020SR 286.74	1	0	627
3	162B-030SR 525.17	163B-030SR 578.35	1	0	627
4	162B-040SR 881.20	163B-040SR 974.63	1	0	627

Schedule 80 PVC Industrial Products & Accessories
Y-Check Valves



PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005CL 96.66	163A-005CL 106.34	1	12	628
3/4	162A-007CL 103.09	163A-007CL 115.98	1	8	628
1	162A-010CL 114.38	163A-010CL 125.64	1	8	628
1-1/4	162A-012CL 178.81	163A-012CL 198.15	1	4	628
1-1/2	162A-015CL 194.93	163A-015CL 215.88	1	0	628
2	162A-020CL 241.64	163A-020CL 267.41	2	0	628
3	162A-030CL 478.45	163A-030CL 521.96	1	0	628
4	162A-040CL 834.49	163A-040CL 926.32	1	0	628

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CL 96.66	163B-005CL 106.34	1	12	628
3/4	162B-007CL 103.09	163B-007CL 115.98	1	8	628
1	162B-010CL 114.38	163B-010CL 125.64	1	8	628
1-1/4	162B-012CL 178.81	163B-012CL 198.15	1	4	628
1-1/2	162B-015CL 194.93	163B-015CL 215.88	1	0	628
2	162B-020CL 241.64	163B-020CL 267.41	2	0	628
3	162B-030CL 478.45	163B-030CL 521.96	1	0	628
4	162B-040CL 834.49	163B-040CL 926.32	1	0	628

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CLSR 99.87	163B-005CLSR 109.55	1	12	628
3/4	162B-007CLSR 107.93	163B-007CLSR 119.22	1	8	628
1	162B-010CLSR 119.22	163B-010CLSR 132.11	1	8	628
1-1/4	162B-012CLSR 188.48	163B-012CLSR 207.80	1	4	628
1-1/2	162B-015CLSR 211.03	163B-015CLSR 231.98	1	0	628
2	162B-020CLSR 259.37	163B-020CLSR 286.74	1	0	628
3	162B-030CLSR 525.17	163B-030CLSR 578.35	1	0	628
4	162B-040CLSR 881.20	163B-040CLSR 974.63	1	0	628



Schedule 80 PVC Industrial Products & Accessories Butterfly Check Valves



Wafer



Flanged



Spigot



Threaded



Grooved

Pressure Rating @ 73°F (23°C), Water

2" - 8" 150 psi
10" - 16" 100 psi
18" - 24" 50 psi

Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

General Installation Information: Butterfly Check Valve seating may be affected by normal system turbulence. Flow velocities should be limited to approximately 5 feet per second. Valves should be installed at least 5 pipe diameters away from any fitting, pump or other source of turbulence. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Wafer					
2	5420-020 405.36	5430-020 446.66	1	18	289
2-1/2	5420-025 558.62	5430-025 615.63	1	0	289
3	5420-030 714.56	5430-030 787.42	1	8	289
4	5420-040 971.78	5430-040 1070.91	1	4	289
6	5420-060 1473.27	5430-060 1623.54	1	0	289
8	5420-080 2499.61	5430-080 2754.56	1	0	289
10	5420-100 4596.12	5430-100 5101.67	1	0	289
12	5420-120 6480.46	5430-120 7193.33	1	0	289
14	5420-140 9256.78	---	1	0	289
16	5420-160 12855.58	---	1	0	289
18	5420-180 16068.26	---	1	0	289
20	5420-200 20085.32	---	1	0	289
24	5420-240 28691.31	---	1	0	289

Flanged Ends

2	5423-020 517.05	5433-020 556.04	1	8	289
2-1/2	5423-025 672.97	5433-025 732.75	1	0	289
3	5423-030 966.60	5433-030 1062.73	1	0	289
4	5423-040 1255.01	5433-040 1400.49	1	0	289
6	5423-060 2034.51	5433-060 2328.13	1	0	289
8	5423-080 2915.34	5433-080 3440.21	1	0	289
10	5423-100 5368.20	5433-100 6121.71	1	0	289
12	5423-120 7605.37	5433-120 8090.37	1	0	289
14	5423-140 10723.57	5433-140 11407.36	4	0	289
16	5423-160 15093.44	5433-160 16296.21	1	0	289
18	5423-180 19283.61	5433-180 20626.99	1	0	289
20	5423-200 25345.15	5433-200 27140.77	1	0	289
24	5423-240 33197.34	5433-240 35709.75	1	0	289

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot (Plain End)					
2	5427-020 220.86	5437-020 259.83	1	12	289
2-1/2	5427-025 304.01	5437-025 363.79	1	12	289
3	5427-030 407.94	5437-030 504.07	1	8	289
4	5427-040 535.26	5437-040 680.78	1	4	289
6	5427-060 1138.06	5437-060 1431.68	1	0	289
8	5427-080 1696.74	5437-080 2221.57	1	0	289
10	5427-100 4149.55	5437-100 4903.06	1	0	289
12	5427-120 5620.22	5437-120 6588.52	1	0	289
14	5427-140 7500.69	5437-140 8618.72	1	0	289
16	5427-160 11284.86	5437-160 13230.73	1	0	289
18	5427-180 14106.08	5437-180 16536.92	1	0	289
20	5427-200 17632.13	5437-200 20669.82	1	0	289
24	5427-240 25188.72	5437-240 29527.29	1	0	289

Threaded Ends

2	5421A-020 215.67	5431A-020 254.64	1	4	289
2-1/2	5421A-025 393.62	5431A-025 353.36	1	8	289
3	5421A-030 400.16	5431A-030 496.27	1	8	289
4	5421A-040 524.87	5431A-040 670.37	1	4	289
6	5421A-060 1117.29	5431A-060 1410.89	1	0	289
8	5421A-080 1678.56	5431A-080 2203.39	1	0	289
10	5421A-100 4141.06	5431A-100 4895.80	1	0	289
12	5421A-120 5613.29	5431A-120 6581.60	1	0	289

Grooved Ends

2	542G-020 244.24	543G-020 283.21	1	12	289
2-1/2	542G-025 319.60	543G-025 379.35	1	8	289
3	542G-030 420.93	543G-030 517.05	1	8	289
4	542G-040 566.45	543G-040 711.95	1	4	289
6	542G-060 1184.84	543G-060 1478.47	1	0	289

Schedule 80 PVC Industrial Products & Accessories
Butterfly Check Valves & Industrial Swing Check Valves



Butterfly Check Valves

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Grooved Ends					
8	542G-080 1748.67	543G-080 2273.56	1	0	289
10	542G-100 4232.69	543G-100 4986.21	1	0	289
12	542G-120 5731.94	543G-120 6701.15	1	0	289

Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
 3/4" - 4" 150 psi
 6" 100 psi
 8" 70 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up
 (Valve Shown with Arrow Indicator Option)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423-007 489.87	4433-007 518.17	1	12	108
1	4423-010 564.53	4433-010 615.23	1	4	108
1-1/4	4423-012 706.16	4433-012 747.16	1	0	108
1-1/2	4423-015 774.14	4433-015 864.87	1	0	108
2	4423-020 891.23	4433-020 990.28	1	0	108
2-1/2	4423-025 1491.55	4433-025 1759.58	1	0	110
3	4423-030 1668.08	4433-030 2185.93	1	0	110
4	4423-040 2126.11	4433-040 2496.24	1	0	110
6	4423-060 4040.65	4433-060 4742.66	1	0	110
8	4423-080 7742.14	4433-080 9049.54	1	0	110

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423I-007 497.92	4433I-007 526.24	1	12	108
1	4423I-010 572.57	4433I-010 641.02	1	4	108
1-1/4	4423I-012 731.22	4433I-012 803.54	1	0	108
1-1/2	4423I-015 848.02	4433I-015 803.54	1	0	108
2	4423I-020 918.19	4433I-020 1002.26	1	0	108
2-1/2	4423I-025 1500.05	4433I-025 1668.77	1	0	110
3	4423I-030 1746.95	4433I-030 1668.77	1	0	110

Swing Check Valve With Arrow Indicator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
4	4423I-040 2134.74	4433I-040 2536.97	1	0	110
6	4423I-060 4049.09	4433I-060 4781.72	1	0	110
8	4423I-080 7865.20	4433I-080 9095.78	1	0	110

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423CB-007 774.86	4433CB-007 829.28	1	8	108
1	4423CB-010 866.79	4433CB-010 928.46	1	4	108
1-1/4	4423CB-012 1046.99	4433CB-012 1088.37	1	0	108
1-1/2	4423CB-015 1123.33	4433CB-015 1311.98	1	0	108
2	4423CB-020 1239.38	4433CB-020 1500.17	1	0	108
2-1/2	4423CB-025 1864.98	4433CB-025 2132.38	1	0	110
3	4423CB-030 2100.28	4433CB-030 2423.29	1	0	110
4	4423CB-040 2516.60	4433CB-040 2886.71	1	0	110
6	4423CB-060 4487.07	4433CB-060 4487.07	1	0	110
8	4423CB-080 8996.31	4433CB-080 9487.41	1	0	110



Schedule 80 PVC Industrial Products & Accessories

Industrial Swing Check Valve Accessory and Repair Kits & Diaphragm Check Valves

Industrial Swing Check Valve Accessory and Repair Kits

Repair Kits include:

- 1-Bonnet O-ring
- 1-Disc O-ring
- 1-Seat O-ring

- 1-Plug O-ring
- 1-Arm Plug O-ring

Industrial Swing Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	SK-ERK-007 26.29	SK-VRK-007 32.05	1	10	299
1	SK-ERK-010 34.34	SK-VRK-010 41.88	1	10	299
1-1/2 & 1-1/4	SK-ERK-015 82.11	SK-VRK-015 103.84	1	10	299
2	SK-ERK-020 88.15	SK-VRK-020 107.48	1	10	299
2-1/2	SK-ERK-025 93.22	SK-VRK-025 119.31	1	10	299

Industrial Swing Check Valve Repair Kits (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3	SK-ERK-030 105.69	SK-VRK-030 128.97	1	10	299
4	SK-ERK-040 115.32	SK-VRK-040 140.62	1	10	299
6	SK-ERK-060 229.20	SK-VRK-060 270.57	1	10	299
8	SK-ERK-080 288.39	SK-VRK-080 349.87	1	10	299

Diaphragm Check Valves



Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 100 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 Santoprene™ TPE Seat

PVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007	3/4	15	0	004	89.09

PVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007	3/4	15	0	004	89.09

**Schedule 80 PVC Industrial Products & Accessories
PVC In-line Adjustable Spring Check Valves**



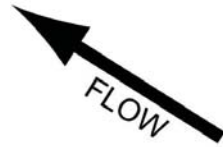
Fipt x Mipt



Mipt x Fipt



Fipt x Fipt



Pressure Rating @ 73°F (23°C), Water
200 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

2 - 14 lbs. Adjustable Spring Tension
(5 to 32 feet of head)
Factory Preset to Approx. 5 psi
(12 feet of head)
Each full turn of adjustment nut = 1 psi
(2.3 feet of head)
Stainless Steel Adjustment Hardware
EPDM Seat

Standard Unit - Female Inlet x Male Outlet

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Fipt x Mipt (Inlet x Outlet)

S1102-05	1/2	30	180	026	10.95
S1102-07	3/4	25	150	026	11.20
S1102-10	1	25	150	026	18.59
S1102-05-07	1/2X3/4	25	150	026	15.98

Male Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Mipt x Fipt (Inlet x Outlet)

S1101-05	1/2	30	180	026	10.95
----------	-----	----	-----	-----	-------

Female Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Fipt x Fipt (Inlet x Outlet)

S1100-07	3/4	25	150	026	11.57
----------	-----	----	-----	-----	-------



Schedule 80 PVC Industrial Products & Accessories Gate Valves



1/2" - 2" Socket/Threaded Style



2-1/2" - 3" Socket Style



4" Socket Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2" 200 psi

2-1/2" - 3" 150 psi

4" 235 psi

Flanged 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

PP Gate-Wedge on PVC Valves
All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

See Gate Valve Accessories & Repair Kits
Section for Additional Options and Features

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005 24.19	2021-005 26.55	2031-005 29.24	12	0	200
3/4	2011-007 29.58	2021-007 32.56	2031-007 34.27	12	0	200
1	2011-010 35.06	2021-010 38.61	2031-010 42.51	12	0	200
1-1/4	2011-012 48.48	2021-012 53.35	2031-012 58.65	6	0	200
1-1/2	2011-015 61.86	2021-015 68.73	2031-015 74.84	6	0	200
2	2011-020 79.45	2021-020 87.47	2031-020 96.16	6	0	200
2-1/2	2011-025 439.27	2021-025 483.19	2031-025 531.53	1	0	201

SR Threaded Ends

3	2011-030SR 439.27	2021-030SR 483.19	2031-030SR 531.53	1	0	201
4	2011-040SR 862.04	2021-040SR 957.83	2031-040SR 1053.58	1	0	201

Socket Ends

1/2	2012-005 24.19	2022-005 26.55	2032-005 29.24	12	0	200
3/4	2012-007 29.58	2022-007 32.56	2032-007 34.27	12	0	200
1	2012-010 35.06	2022-010 38.61	2032-010 42.51	12	0	200
1-1/4	2012-012 48.48	2022-012 53.35	2032-012 58.65	6	0	200
1-1/2	2012-015 61.86	2022-015 68.73	2032-015 74.84	6	0	200
2	2012-020 79.45	2022-020 87.47	2032-020 96.16	6	0	200
2-1/2	2012-025 439.27	2022-025 483.19	2032-025 531.53	1	0	201
3	2012-030 439.27	2022-030 483.19	2032-030 531.53	1	0	201
4	2012-040 862.04	2022-040 957.83	2032-040 1053.58	1	0	201

Flanged Ends

1/2	2013-005 117.13	2023-005 132.82	2033-005 152.23	4	0	200
3/4	2013-007 131.79	2023-007 149.14	2033-007 170.16	4	0	200
1	2013-010 144.72	2023-010 163.48	2033-010 187.76	4	0	200

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
1-1/4	2013-012 163.01	2023-012 187.15	2033-012 222.11	3	0	200
1-1/2	2013-015 190.27	2023-015 217.19	2033-015 255.16	3	0	200
2	2013-020 244.91	2023-020 257.32	2033-020 275.47	2	0	200
2-1/2	2013-025 549.07	2023-025 735.17	2033-025 808.67	1	0	201
3	2013-030 549.07	2023-030 735.17	2033-030 808.67	1	0	201
4	2013-040 1080.78	2023-040 1200.93	2033-040 1321.02	1	0	201

Schedule 80 PVC Industrial Products & Accessories Plug Gate Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 Plug-Style PE Wedge on All Valves
 Rated for Vacuum Service
 All Valves Assembled with Silicone-Free,
 Water Soluble Lubricants

PVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005 24.19	5222-005 26.55	5232-005 29.24	12	0	200
3/4	5212-007 29.58	5222-007 32.56	5232-007 34.27	12	0	200
1	5212-010 35.06	5222-010 38.61	5232-010 42.51	12	0	200
1-1/4	5212-012 48.48	5222-012 53.35	5232-012 58.65	6	0	200
1-1/2	5212-015 61.86	5222-015 68.73	5232-015 74.84	6	0	200
2	5212-020 79.45	5222-020 87.47	5232-020 96.16	6	0	200

PVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005SR 26.92	5221-005SR 29.31	5231-005SR 31.95	12	0	200
3/4	5211-007SR 33.53	5221-007SR 36.51	5231-007SR 38.22	12	0	200
1	5211-010SR 40.51	5221-010SR 44.06	5231-010SR 47.94	12	0	200
1-1/4	5211-012SR 57.22	5221-012SR 62.08	5231-012SR 67.40	6	0	200
1-1/2	5211-015SR 76.83	5221-015SR 83.69	5231-015SR 89.78	6	0	200
2	5211-020SR 95.66	5221-020SR 103.65	5231-020SR 112.39	6	0	200

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005 117.13	5223-005 132.82	5233-005 152.23	4	0	200
3/4	5213-007 131.79	5223-007 149.14	5233-007 170.16	4	0	200
1	5213-010 144.72	5223-010 163.48	5233-010 187.76	4	0	200
1-1/4	5213-012 163.01	5223-012 187.15	5233-012 222.11	3	0	200
1-1/2	5213-015 190.27	5223-015 217.19	5233-015 255.16	3	0	200
2	5213-020 244.91	5223-020 257.32	5233-020 275.47	2	0	200
6	---	5223-060 2298.84	5233-060 2995.21	1	0	201



Schedule 80 PVC Industrial Products & Accessories Butterfly Valves



Lever Handle Style



Gear Operator Style

Pressure Rating @ 73°F (23°C), Water

1-1/2" - 12" 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for
Additional Options and Features

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	-----------	------------	--------------

Lever Handle

1-1/2	721311-015 280.63	722311-015 280.63	723311-015 585.92	1	0	250
2	721311-020 291.79	722311-020 291.79	723311-020 603.85	1	0	250
2-1/2	721311-025 309.78	722311-025 309.78	723311-025 612.84	1	0	250
3	721311-030 314.28	722311-030 314.28	723311-030 624.07	1	0	250
4	721311-040 363.69	722311-040 363.69	723311-040 781.22	1	0	250
6	721311-060 538.78	722311-060 538.78	723311-060 1248.15	1	0	250
8	721311-080 915.91	722311-080 915.91	723311-080 2114.67	1	0	250

Gear Operator

1-1/2	721321-015 814.87	722321-015 814.87	723321-015 1034.89	1	0	250
2	721321-020 826.14	722321-020 826.14	723321-020 1055.11	1	0	250
2-1/2	721321-025 837.32	722321-025 837.32	723321-025 1095.48	1	0	250
3	721321-030 850.82	722321-030 850.82	723321-030 1158.38	1	0	250
4	721321-040 893.46	722321-040 893.46	723321-040 1311.01	1	0	250
6	721321-060 1073.08	722321-060 1073.08	723321-060 1782.43	1	0	250
8	721321-080 1450.18	722321-080 1450.18	723321-080 2648.97	1	0	250
10	721321-100 1961.99	722321-100 1961.99	723321-100 4328.08	1	0	250
12	721321-120 2702.82	722321-120 2702.82	723321-120 6218.33	1	0	250

Valve Only

1-1/2	721301-015 244.71	722301-015 244.71	723301-015 511.81	1	0	250
2	721301-020 271.61	722301-020 271.61	723301-020 536.53	1	0	250
2-1/2	721301-025 280.63	722301-025 280.63	723301-025 554.46	1	0	250
3	721301-030 287.36	722301-030 287.36	723301-030 565.69	1	0	250
4	721301-040 332.24	722301-040 332.24	723301-040 709.37	1	0	250
6	721301-060 502.83	722301-060 502.83	723301-060 1149.38	1	0	250
8	721301-080 871.03	722301-080 871.03	723301-080 1939.57	1	0	250
10	721301-100 1746.49	722301-100 1746.49	723301-100 3883.62	1	0	250
12	721301-120 2253.85	722301-120 2253.85	723301-120 5544.83	1	0	250

Schedule 80 PVC Industrial Products & Accessories Lug Insert Butterfly Valves



Spears® Standard Butterfly Valve
with Lug Inserts Factory Assembled

Note: Lug (insert) Valves require attention to flow direction for dead-end service. Flange must be installed on side of valve opposite the hex nut recesses for Single-Side installation. See "True Lug Butterfly Valves," where dead-end service is required in either direction.

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features. Lug Valves Use Same Accessories, Repair Kits, and Overhaul Kits as Standard Butterfly Valves



PVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311K-015 446.91	722311K-015 446.91	723311K-015 639.06	1	0	250
2	721311K-020 456.87	722311K-020 456.87	723311K-020 663.27	1	0	250
2-1/2	721311K-025 483.92	722311K-025 483.92	723311K-025 684.60	1	0	250
3	721311K-030 491.04	722311K-030 491.04	723311K-030 723.88	1	0	250
4	721311K-040 862.51	722311K-040 862.51	723311K-040 1118.72	1	0	250
6	721311K-060 1128.66	722311K-060 1128.66	723311K-060 1599.79	1	0	250
8	721311K-080 1401.95	722311K-080 1401.95	723311K-080 2284.40	1	0	250

Gear Operator

1-1/2	721321K-015 930.84	722321K-015 930.84	723321K-015 1117.29	1	0	250
2	721321K-020 950.76	722321K-020 950.76	723321K-020 1137.21	1	0	250
2-1/2	721321K-025 996.31	722321K-025 996.31	723321K-025 1178.47	1	0	250
3	721321K-030 1010.54	722321K-030 1010.54	723321K-030 1211.22	1	0	250
4	721321K-040 1391.98	722321K-040 1391.98	723321K-040 1733.58	1	0	250
6	721321K-060 1717.93	722321K-060 1717.93	723321K-060 2295.78	1	0	250
8	721321K-080 2018.23	722321K-080 2018.23	723321K-080 3011.71	1	0	250
10	721321K-100 3568.20	722321K-100 3568.20	723321K-100 5713.12	1	0	250
12	721321K-120 4111.91	722321K-120 4111.91	723321K-120 6867.40	1	0	250

Valve Only

1-1/2	721301K-015 401.38	722301K-015 401.38	723301K-015 614.86	1	0	250
2	721301K-020 441.22	722301K-020 441.22	723301K-020 631.95	1	0	250
2-1/2	721301K-025 462.57	722301K-025 462.57	723301K-025 667.53	1	0	250
3	721301K-030 471.11	722301K-030 471.11	723301K-030 674.64	1	0	250
4	721301K-040 844.01	722301K-040 844.01	723301K-040 1094.52	1	0	250
6	721301K-060 1120.15	722301K-060 1120.15	723301K-060 1571.33	1	0	250
8	721301K-080 1376.32	722301K-080 1376.32	723301K-080 2253.08	1	0	250
10	721301K-100 2811.01	722301K-100 2811.01	723301K-100 4533.20	1	0	250
12	721301K-120 3240.84	722301K-120 3240.84	723301K-120 6488.80	1	0	250

PVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311G-015 509.54	722311G-015 509.54	723311G-015 768.59	1	0	250

PVC - SS Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	721311G-020 515.24	722311G-020 515.24	723311G-020 775.68	1	0	250
2-1/2	721311G-025 566.47	722311G-025 566.47	723311G-025 807.01	1	0	250
3	721311G-030 572.17	722311G-030 572.17	723311G-030 815.56	1	0	250
4	721311G-040 1014.81	722311G-040 1014.81	723311G-040 1315.12	1	0	250
6	721311G-060 1329.36	722311G-060 1329.36	723311G-060 1881.61	1	0	250
8	721311G-080 1642.47	722311G-080 1642.47	723311G-080 2687.19	1	0	250

Gear Operator

1-1/2	721321G-015 1039.01	722321G-015 1039.01	723321G-015 1305.16	1	0	250
2	721321G-020 1051.81	722321G-020 1051.81	723321G-020 1326.51	1	0	250
2-1/2	721321G-025 1107.33	722321G-025 1107.33	723321G-025 1386.29	1	0	250
3	721321G-030 1121.56	722321G-030 1121.56	723321G-030 1419.02	1	0	250
4	721321G-040 1635.37	722321G-040 1635.37	723321G-040 2036.74	1	0	250
6	721321G-060 2021.07	722321G-060 2021.07	723321G-060 2701.41	1	0	250
8	721321G-080 2374.05	722321G-080 2374.05	723321G-080 3450.06	1	0	250
10	721321G-100 4194.45	722321G-100 4194.45	723321G-100 6725.08	1	0	250
12	721321G-120 4834.94	722321G-120 4834.94	723321G-120 8360.43	1	0	250

Valve Only

1-1/2	721301G-015 491.04	722301G-015 491.04	723301G-015 728.74	1	0	250
2	721301G-020 500.99	722301G-020 500.99	723301G-020 750.07	1	0	250
2-1/2	721301G-025 546.54	722301G-025 546.54	723301G-025 765.74	1	0	250
3	721301G-030 555.07	722301G-030 555.07	723301G-030 792.78	1	0	250
4	721301G-040 994.88	722301G-040 994.88	723301G-040 1286.65	1	0	250
6	721301G-060 1317.97	722301G-060 1317.97	723301G-060 1846.01	1	0	250
8	721301G-080 1622.57	722301G-080 1622.57	723301G-080 2651.60	1	0	250
10	721301G-100 3304.89	722301G-100 3304.89	723301G-100 5330.23	1	0	250
12	721301G-120 3811.58	722301G-120 3811.58	723301G-120 6649.64	1	0	250



Schedule 80 PVC Industrial Products & Accessories True Lug Butterfly Valves



Pressure Rating @ 73°F (23°C), Water

1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits
Section for Additional Options and Features

PVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311Z-015 637.80	722311Z-015 637.80	723311Z-015 914.57	1	0	250
2	721311Z-020 652.32	722311Z-020 652.32	723311Z-020 950.06	1	0	250
2-1/2	721311Z-025 690.91	722311Z-025 690.91	723311Z-025 980.57	1	0	250
3	721311Z-030 701.45	722311Z-030 701.45	723311Z-030 993.40	1	0	250
4	721311Z-040 1233.73	722311Z-040 1233.73	723311Z-040 1599.16	1	0	250
6	721311Z-060 1614.42	722311Z-060 1614.42	723311Z-060 2286.72	1	0	250
8	721311Z-080 2003.91	722311Z-080 2003.91	723311Z-080 3264.42	1	0	250

Gear Operator

1-1/2	721321Z-015 1035.86	722321Z-015 1035.86	723321Z-015 1316.49	1	0	250
2	721321Z-020 1057.96	722321Z-020 1057.96	723321Z-020 1339.41	1	0	250
2-1/2	721321Z-025 1108.71	722321Z-025 1108.71	723321Z-025 1388.58	1	0	250
3	721321Z-030 1121.72	722321Z-030 1121.72	723321Z-030 1423.33	1	0	250
4	721321Z-040 1638.38	722321Z-040 1638.38	723321Z-040 2039.96	1	0	250
6	721321Z-060 2021.85	722321Z-060 2021.85	723321Z-060 2702.67	1	0	250
8	721321Z-080 2375.36	722321Z-080 2375.36	723321Z-080 3544.83	1	0	250
10	721321Z-100 4197.85	722321Z-100 4197.85	723321Z-100 6723.55	1	0	250
12	721321Z-120 4838.20	722321Z-120 4838.20	723321Z-120 8080.51	1	0	250

Valve Only

1-1/2	721301Z-015 573.36	722301Z-015 573.36	723301Z-015 879.98	1	0	250
2	721301Z-020 631.09	722301Z-020 631.09	723301Z-020 902.61	1	0	250
2-1/2	721301Z-025 664.28	722301Z-025 664.28	723301Z-025 954.40	1	0	250
3	721301Z-030 673.01	722301Z-030 673.01	723301Z-030 963.38	1	0	250
4	721301Z-040 1208.07	722301Z-040 1208.07	723301Z-040 1565.17	1	0	250
6	721301Z-060 1602.52	722301Z-060 1602.51	723301Z-060 2246.29	1	0	250
8	721301Z-080 1968.05	722301Z-080 1968.05	723301Z-080 3219.98	1	0	250
10	721301Z-100 4016.72	722301Z-100 4016.72	723301Z-100 6476.74	1	0	250
12	721301Z-120 4631.53	722301Z-120 4631.53	723301Z-120 7380.32	1	0	250

PVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311L-015 727.88	722311L-015 727.88	723311L-015 1099.09	1	0	250
2	721311L-020 736.22	722311L-020 736.22	723311L-020 1109.53	1	0	250
2-1/2	721311L-025 809.62	722311L-025 809.62	723311L-025 1153.64	1	0	250
3	721311L-030 818.03	722311L-030 818.03	723311L-030 1166.02	1	0	250
4	721311L-040 1451.39	722311L-040 1451.39	723311L-040 1878.96	1	0	250
6	721311L-060 1899.12	722311L-060 1899.12	723311L-060 2688.66	1	0	250
8	721311L-080 2348.03	722311L-080 2348.03	723311L-080 3840.49	1	0	250

Gear Operator

1-1/2	721321L-015 1222.96	722321L-015 1222.96	723321L-015 1536.49	1	0	250
2	721321L-020 1239.15	722321L-020 1239.15	723321L-020 1562.08	1	0	250
2-1/2	721321L-025 1304.36	722321L-025 1304.36	723321L-025 1633.62	1	0	250
3	721321L-030 1319.63	722321L-030 1319.63	723321L-030 1672.00	1	0	250
4	721321L-040 1925.15	722321L-040 1925.15	723321L-040 2397.57	1	0	250
6	721321L-060 2378.57	722321L-060 2378.57	723321L-060 3179.59	1	0	250
8	721321L-080 2793.99	722321L-080 2793.99	723321L-080 4060.64	1	0	250
10	721321L-100 4936.32	722321L-100 4936.32	723321L-100 7912.26	1	0	250
12	721321L-120 5689.55	722321L-120 5689.55	723321L-120 9837.38	1	0	250

Valve Only

1-1/2	721301L-015 701.03	722301L-015 701.03	723301L-015 1041.07	1	0	250
2	721301L-020 715.78	722301L-020 715.78	723301L-020 1072.65	1	0	250
2-1/2	721301L-025 781.48	722301L-025 781.48	723301L-025 1093.31	1	0	250
3	721301L-030 791.71	722301L-030 791.71	723301L-030 1133.39	1	0	250
4	721301L-040 1421.01	722301L-040 1421.01	723301L-040 1838.22	1	0	250
6	721301L-060 1882.91	722301L-060 1882.91	723301L-060 2637.41	1	0	250
8	721301L-080 2317.64	722301L-080 2317.64	723301L-080 3788.13	1	0	250
10	721301L-100 4720.77	722301L-100 4720.77	723301L-100 7614.92	1	0	250
12	721301L-120 5445.81	722301L-120 5445.81	723301L-120 9501.73	1	0	250

Schedule 80 PVC Industrial Products & Accessories Large Diameter Butterfly Valves & Wafer Butterfly Valves



Large Diameter Butterfly Valves



Maximum Service Temperature
PVC = 140°F (60°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"



Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50

PVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140 6062.52	723321-140 14732.79	1	0	251

Polypropylene - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
18	722321-180P 27410.01	723321-180P 31405.12	1	0	257
20	722321-200P 30753.47	723321-200P 37381.61	1	0	257
24	722321-240P 34834.44	723321-240P 50252.52	1	0	257

Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
16	722321-160P 24883.37	723321-160P 26953.13	1	0	257

Wafer Butterfly Valves



Wafer Butterfly Valve laying lengths will directly replace common Cast Iron valves (matches Keystone Model 228 and Bray Series 30 Butterfly Valves).

IMPORTANT NOTE

All PVC valves have built-in Santoprene™ Thermoplastic Elastomer (TPE) Flange Gaskets for use with choice of Buna-N, EPDM, or FKM Seats.

Pressure Rating @ 73°F (23°C), Water
150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply



Lever Handle

Gear Operator

PVC

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	751311-020 291.79	752311-020 291.79	753311-020 603.85	1	0	250
2-1/2	751311-025 309.78	752311-025 309.78	753311-025 612.84	1	0	250
3	751311-030 314.28	752311-030 314.28	753311-030 624.07	1	0	250
4	751311-040 363.69	752311-040 363.69	753311-040 781.22	1	0	250
6	751311-060 538.78	752311-060 538.78	753311-060 1248.15	1	0	250
8	751311-080 915.91	752311-080 915.91	753311-080 2114.67	1	0	250
Gear Operator						
2	751321-020 826.14	752321-020 826.14	753321-020 1055.11	1	0	250
2-1/2	751321-025 837.32	752321-025 837.32	753321-025 1095.48	1	0	250
3	751321-030 850.82	752321-030 850.82	753321-030 1158.38	1	0	250
4	751321-040 893.46	752321-040 893.46	753321-040 1311.01	1	0	250
6	751321-060 1073.08	752321-060 1073.08	753321-060 1782.43	1	0	250
8	751321-080 1450.18	752321-080 1450.18	753321-080 2648.97	1	0	250
10	751321-100 1954.23	752321-100 1954.23	753321-100 3210.89	1	0	250

PVC (continued)

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Gear Operator						
12	751321-120 2370.75	752321-120 2370.75	753321-120 3793.67	1	0	250
Valve Only						
2	751301-020 271.61	752301-020 271.61	753301-020 536.53	1	0	250
2-1/2	751301-025 280.63	752301-025 280.63	753301-025 554.46	1	0	250
3	751301-030 287.36	752301-030 287.36	753301-030 565.69	1	0	250
4	751301-040 332.24	752301-040 332.24	753301-040 709.37	1	0	250
6	751301-060 502.83	752301-060 502.83	753301-060 1149.38	1	0	250
8	751301-080 871.03	752301-080 871.03	753301-080 1939.57	1	0	250
10	751301-100 1746.49	752301-100 1746.49	753301-100 3883.58	1	0	250
12	751301-120 2253.85	752301-120 2253.85	753301-120 5544.83	1	0	250



Schedule 80 PVC Industrial Products & Accessories Globe Valves & Needle Valves

Globe Valves



Pressure Rating @ 73°F (23°C), Water
2-1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free,
Water Soluble Lubricant
Suitable for Vacuum Service

Internal Repair Kit includes 1-Bonnet O-ring along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem/O-rings, Seat & Seal Carrier components. Install in valve using existing valve Bolts/Nuts/Washers, and Handle/Nut.

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6013-025 608.27	6023-025 643.73	6033-025 693.48	1	0	620
3	6013-030 697.26	6023-030 728.15	6033-030 810.33	1	0	620
4	6013-040 791.04	6023-040 945.64	6033-040 1039.07	1	0	620
6	6013-060 1216.55	6023-060 1454.71	6033-060 1483.69	1	0	620

PVC Internal Repair Kit

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-BRK-025 202.35	GL-ERK-025 489.42	GL-VRK-025 544.35	1	0	299
3	GL-BRK-030 225.51	GL-ERK-030 542.27	GL-VRK-030 604.42	1	0	299
4	GL-BRK-040 264.58	GL-ERK-040 635.91	GL-VRK-040 699.16	1	0	299
6	GL-BRK-060 576.49	GL-ERK-060 977.16	GL-VRK-060 997.16	1	0	299

Needle Valves



Pressure Rating @ 73°F (23°C), Water
PVC 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002 71.27	5592-002 71.27	---	1	18	218
3/8	5591-003 71.27	5592-003 71.27	---	1	18	218
1/2	5591-005 79.11	5592-005 79.11	5591-005SR 81.23	1	18	218

Angle Pattern

1/4	5691-002 71.27	5692-002 71.27	---	1	18	218
3/8	5691-003 71.27	5692-003 71.27	---	1	18	218
1/2	5691-005 79.11	5692-005 79.11	5691-005SR 81.23	1	18	218

Schedule 80 PVC Industrial Products & Accessories Diaphragm Valves



Socket/Threaded Style



Flanged Style



Spigot Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
1/2" - 4" Flanged
& Valves w/PTFE 150 psi
Diaphragms
6" 100 psi
8" 75 psi

Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section
for Additional Options and Features

Contact Spears® for Pricing on
Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings
(for True Union Style Valves)

PVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005 138.17	2739-005 153.52	2729T-005 220.23	2739T-005 244.36	2739VT-005 301.41	1	12	270
3/4	2729-007 156.82	2739-007 174.26	2729T-007 235.19	2739T-007 263.92	2739VT-007 325.84	1	8	270
1	2729-010 193.27	2739-010 212.38	2729T-010 339.29	2739T-010 351.71	2739VT-010 415.07	1	8	270
1-1/4	2729-012 289.32	2739-012 344.00	2729T-012 466.44	2739T-012 494.42	2739VT-012 559.41	1	4	270
1-1/2	2729-015 304.11	2739-015 351.93	2729T-015 497.96	2739T-015 522.87	2739VT-015 579.77	1	4	270
2	2729-020 359.78	2739-020 426.36	2729T-020 567.82	2739T-020 596.35	2739VT-020 727.21	1	0	270

PVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005SR 138.17	2731-005SR 153.52	2721T-005SR 220.23	2731T-005SR 244.36	2731VT-005SR 301.41	1	12	270
3/4	2721-007SR 156.82	2731-007SR 174.26	2721T-007SR 235.19	2731T-007SR 263.92	2731VT-007SR 325.84	1	8	270
1	2721-010SR 193.27	2731-010SR 212.38	2721T-010SR 339.29	2731T-010SR 351.71	2731VT-010SR 415.07	1	8	270
1-1/4	2721-012SR 289.32	2731-012SR 344.00	2721T-012SR 466.44	2731T-012SR 494.42	2731VT-012SR 559.41	1	4	270
1-1/2	2721-015SR 304.11	2731-015SR 351.93	2721T-015SR 497.96	2731T-015SR 522.87	2731VT-015SR 579.77	1	4	270
2	2721-020SR 359.78	2731-020SR 426.36	2721T-020SR 567.82	2731T-020SR 596.35	2731VT-020SR 727.21	1	0	270

PVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005 134.69	2737-005 149.64	2797T-005 212.65	2797VT-005 246.13	1	12	270
3/4	2727-007 151.76	2737-007 167.95	2797T-007 226.91	2797VT-007 270.23	1	8	270
1	2727-010 188.36	2737-010 205.13	2797T-010 331.25	2797VT-010 385.63	1	8	270
1-1/4	2727-012 280.05	2737-012 337.34	2797T-012 455.60	2797VT-012 506.20	1	4	270
1-1/2	2727-015 296.52	2737-015 343.13	2797T-015 485.58	2797VT-015 554.63	1	4	270
2	2727-020 348.61	2737-020 411.64	2797T-020 550.78	2797VT-020 677.99	1	0	270

PVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005 220.62	2733-005 238.83	2793T-005 301.41	2793VT-005 330.85	4	0	270
3/4	2723-007 247.91	2733-007 254.18	2793T-007 325.84	2793VT-007 367.59	4	0	270
1	2723-010 278.91	2733-010 311.92	2793T-010 415.07	2793VT-010 465.51	4	0	270
1-1/4	2723-012 378.85	2733-012 419.41	2793T-012 559.41	2793VT-012 617.51	1	4	270
1-1/2	2723-015 383.39	2733-015 428.03	2793T-015 579.77	2793VT-015 644.24	1	4	270



Schedule 80 PVC Industrial Products & Accessories
Diaphragm Valves

PVC - Flanged Ends (continued)

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2	2723-020 455.72	2733-020 487.52	2793T-020 650.22	2793VT-020 743.36	1	0	270
2-1/2	2723-025 636.56	2733-025 727.61	2793T-025 1005.45	2793VT-025 1151.62	1	0	271
3	2723-030 851.09	2733-030 945.73	2793T-030 1318.47	2793VT-030 1458.88	1	0	271
4	2723-040 1178.95	2733-040 1285.62	2793T-040 1827.12	2793VT-040 2030.06	1	0	271
6	2723-060 2848.21	2733-060 3334.72	2793T-060 4731.41	2793VT-060 5199.41	1	0	271
8	2723-080 5694.80	2733-080 6000.89	2793T-080 7022.07	2793VT-080 7888.94	1	0	271

Schedule 80 PVC Industrial Products & Accessories Y-Pattern Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 150 psi
 3" - 4" 90 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 Temperature/Pressure De-ratings Apply



True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005 83.76	1732-005 88.61	1	12	620
3/4	1722-007 98.27	1732-007 104.72	1	8	620
1	1722-010 117.59	1732-010 125.64	1	8	620
1-1/4	1722-012 143.38	1732-012 157.88	1	4	620
1-1/2	1722-015 191.71	1732-015 202.98	1	0	620
2	1722-020 272.25	1732-020 289.99	2	0	620
3	1722-030 586.39	1732-030 637.95	1	0	620
4	1722-040 995.58	1732-040 1084.20	1	0	620

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005SR 86.99	1731-005SR 91.83	1	8	620
3/4	1721-007SR 103.09	1731-007SR 109.55	1	8	620
1	1721-010SR 124.05	1731-010SR 132.11	1	8	620
1-1/4	1721-012SR 169.14	1731-012SR 178.81	1	0	620
1-1/2	1721-015SR 207.80	1731-015SR 217.48	1	0	620
2	1721-020SR 293.20	1731-020SR 307.71	1	0	620
3	1721-030SR 629.88	1731-030SR 681.44	1	0	620
4	1721-040SR 1040.69	1731-040SR 1129.28	1	0	620

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005 117.59	1733-005 122.43	1	8	620
3/4	1723-007 135.32	1733-007 141.77	1	4	620
1	1723-010 159.47	1733-010 165.93	1	4	620
1-1/4	1723-012 186.86	1733-012 199.76	1	0	620
1-1/2	1723-015 235.20	1733-015 246.49	1	0	620
2	1723-020 330.23	1733-020 346.36	1	0	620
3	1723-030 644.40	1733-030 695.95	1	0	620
4	1723-040 1279.09	1733-040 1356.44	1	0	620

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005CL 83.76	1732-005CL 88.61	1	12	621
3/4	1722-007CL 98.27	1732-007CL 104.72	1	8	621
1	1722-010CL 117.59	1732-010CL 125.64	1	8	621
1-1/4	1722-012CL 143.38	1732-012CL 157.88	1	4	621
1-1/2	1722-015CL 191.71	1732-015CL 202.98	1	0	621
2	1722-020CL 272.25	1732-020CL 289.99	2	0	621
3	1722-030CL 586.39	1732-030CL 637.95	1	0	621
4	1722-040CL 995.58	1732-040CL 1084.20	1	0	621

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CLSR 86.99	1731-005CLSR 91.83	1	8	621
3/4	1721-007CLSR 103.09	1731-007CLSR 109.55	1	8	621
1	1721-010CLSR 124.05	1731-010CLSR 132.11	1	8	621
1-1/4	1721-012CLSR 169.14	1731-012CLSR 178.81	1	0	621
1-1/2	1721-015CLSR 207.80	1731-015CLSR 217.48	1	0	621
2	1721-020CLSR 293.20	1731-020CLSR 307.71	1	0	621
3	1721-030CLSR 629.88	1731-030CLSR 681.44	1	0	621
4	1721-040CLSR 1040.69	1731-040CLSR 1129.28	1	0	621

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005CL 117.59	1733-005CL 122.43	1	8	621
3/4	1723-007CL 135.32	1733-007CL 141.77	1	8	621
1	1723-010CL 159.47	1733-010CL 165.93	1	4	621
1-1/4	1723-012CL 186.86	1733-012CL 199.76	1	0	621
1-1/2	1723-015CL 235.20	1733-015CL 246.49	1	0	621
2	1723-020CL 330.23	1733-020CL 346.36	1	0	621
3	1723-030CL 644.40	1733-030CL 695.95	1	0	621
4	1723-040CL 1279.09	1733-040CL 1356.44	1	0	621



Schedule 80 PVC Industrial Products & Accessories Y-Pattern Valves

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005 99.87	173A-005 104.72	1	8	620
3/4	172A-007 115.98	173A-007 122.43	1	8	620
1	172A-010 138.55	173A-010 148.21	1	4	620
1-1/4	172A-012 169.14	173A-012 185.27	2	0	620
1-1/2	172A-015 225.54	173A-015 238.42	2	0	620
2	172A-020 318.98	173A-020 341.54	1	0	620
3	172A-030 689.49	173A-030 749.12	1	0	620
4	172A-040 1171.18	173A-040 1274.31	1	0	620

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CL 99.87	173B-005CL 104.72	1	8	621
3/4	172B-007CL 115.98	173B-007CL 122.43	1	8	621
1	172B-010CL 138.55	173B-010CL 148.21	1	4	621
1-1/4	172B-012CL 169.14	173B-012CL 185.27	2	0	621
1-1/2	172B-015CL 225.54	173B-015CL 238.42	1	0	621
2	172B-020CL 318.98	173B-020CL 341.54	1	0	621
3	172B-030CL 689.49	173B-030CL 749.12	1	0	621
4	172B-040CL 1171.18	173B-040CL 1274.31	1	0	621

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005 99.87	173B-005 104.72	1	8	620
3/4	172B-007 115.98	173B-007 122.43	1	8	620
1	172B-010 138.55	173B-010 148.21	1	4	620
1-1/4	172B-012 169.14	173B-012 185.27	2	0	620
1-1/2	172B-015 225.54	173B-015 238.42	1	0	620
2	172B-020 318.98	173B-020 341.54	1	0	620
3	172B-030 689.49	173B-030 749.12	1	0	620
4	172B-040 1171.18	173B-040 1274.31	1	0	620

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CLSR 103.09	173B-005CLSR 107.93	1	8	621
3/4	172B-007CLSR 120.82	173B-007CLSR 128.89	1	8	621
1	172B-010CLSR 146.60	173B-010CLSR 154.66	1	4	621
1-1/4	172B-012CLSR 199.76	173B-012CLSR 211.03	2	0	621
1-1/2	172B-015CLSR 244.86	173B-015CLSR 256.15	1	0	621
2	172B-020CLSR 344.75	173B-020CLSR 362.47	1	0	621
3	172B-030CLSR 741.03	173B-030CLSR 802.25	1	0	621
4	172B-040CLSR 1224.34	173B-040CLSR 1329.06	1	0	621

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005SR 103.09	173B-005SR 107.93	1	8	620
3/4	172B-007SR 120.82	173B-007SR 128.89	1	8	620
1	172B-010SR 146.60	173B-010SR 154.66	1	4	620
1-1/4	172B-012SR 199.76	173B-012SR 211.03	1	0	620
1-1/2	172B-015SR 244.86	173B-015SR 256.15	1	0	620
2	172B-020SR 344.75	173B-020SR 362.47	1	0	620
3	172B-030SR 741.03	173B-030SR 802.25	1	0	620
4	172B-040SR 1224.34	173B-040SR 1329.06	1	0	620

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005CL 99.87	173A-005CL 104.72	1	8	621
3/4	172A-007CL 115.98	173A-007CL 122.43	1	8	621
1	172A-010CL 138.55	173A-010CL 148.21	1	4	621
1-1/4	172A-012CL 169.14	173A-012CL 185.27	2	0	621
1-1/2	172A-015CL 225.54	173A-015CL 238.42	2	0	621
2	172A-020CL 318.98	173A-020CL 341.54	1	0	621
3	172A-030CL 689.49	173A-030CL 749.12	1	0	621
4	172A-040CL 1171.18	173A-040CL 1274.31	1	0	621

Schedule 80 PVC Industrial Products & Accessories In-line Tee-Style Filters



Socket/Spigot

All Filters are 2-1/2"x 2-1/2"
Inlet/Outlet Connection

Note: 2-1/2" Socket is also a 3" Spigot

Pressure Rating @ 73°F (23°C), Water
200 psi

Mesh Size Codes

Mesh Size	Size Code
1/16" Holes	16
1/32" Holes	32
50 Mesh	50
76 Mesh	76
100 Mesh	100
150 Mesh	150
200 Mesh	200

Note: Standard flow filtration path is internal to external. Reverse-flow filtration flows from external to internal side of filter screen.

100 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 722.18	TF3-16 775.85	1	0	295
32	TF2-32 738.46	TF3-32 793.40	1	0	295
50	TF2-50 836.89	TF3-50 947.41	1	0	295
76	TF2-76 1010.88	TF3-76 1086.13	1	0	295
100	TF2-100 918.88	TF3-100 987.20	1	0	295
150	TF2-150 951.77	TF3-150 1022.47	1	0	295
200	TF2-200 1033.93	TF3-200 1110.76	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 607.18	MTF3-16 652.27	1	0	295
32	MTF2-32 617.01	MTF3-32 662.93	1	0	295
50	MTF2-50 636.66	MTF3-50 684.02	1	0	295
76	MTF2-76 771.17	MTF3-76 828.54	1	0	295
100	MTF2-100 672.75	MTF3-100 722.68	1	0	295
150	MTF2-150 705.62	MTF3-150 758.12	1	0	295
200	MTF2-200 787.60	MTF3-200 846.25	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 722.18	TF3-16 775.85	1	0	295
32	TF2-32 738.46	TF3-32 793.40	1	0	295
50	TFR2-50 836.89	TFR3-50 899.08	1	0	295
76	TFR2-76 1010.88	TFR3-76 1086.13	1	0	295
100	TFR2-100 918.88	TFR3-100 987.20	1	0	295
150	TFR2-150 951.77	TFR3-150 1022.47	1	0	295
200	TFR2-200 1033.93	TFR3-200 1110.76	1	0	295

100 GPM PVC Gray Reverse Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

50 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 607.18	MTF3-16 652.27	1	0	295
32	MTF2-32 617.01	MTF3-32 662.93	1	0	295
50	MTFR2-50 636.66	MTFR3-50 684.02	1	0	295
76	MTFR2-76 771.17	MTFR3-76 828.54	1	0	295
100	MTFR2-100 672.75	MTFR3-100 722.68	1	0	295
150	MTFR2-150 705.62	MTFR3-150 758.12	1	0	295
200	MTFR2-200 787.60	MTFR3-200 846.25	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM Filter Replacement Screens for MTF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04



Schedule 80 PVC Industrial Products & Accessories
In-line Tee-Style Filters

**50 GPM Reverse Flow Filter Replacement Screens for
MTFR Filters (continued)**

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-32-1	1/32" Holes	3	0	020	232.14
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53

Schedule 80 PVC Industrial Products & Accessories Y-Strainers



Socket



Flanged



SR Thread



True Union

Part numbers shown reflect a mesh size of 8. For different mesh sizes, substitute Mesh Code in part number as specified in chart below.

U.S. Standard Mesh Sieve No.	Sieve Opening Size (in.)	Part Number Mesh Code
8	0.094	8
12	0.062	12
20	0.033	20
30	0.024	30

Example: for 12 Mesh, specify

YS22P12-005

Additional Mesh Sizes available on request.

Pressure Rating @ 73°F (23°C), Water

1/2" - 2" 150 psi

3" - 4" 90 psi

Maximum Service Temperature

PVC = 140°F (60°C)

Temperature/Pressure
De-ratings Apply



Schedule 80 PVC Industrial Products & Accessories

Y-Strainers

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005 87.04	YS22S8-005 172.24	YS32P8-005 95.06	YS32S8-005 189.25	1	18	102
3/4	YS22P8-007 97.25	YS22S8-007 196.97	YS32P8-007 107.17	YS32S8-007 222.15	1	18	102
1	YS22P8-010 106.94	YS22S8-010 233.65	YS32P8-010 117.74	YS32S8-010 256.88	1	12	102
1-1/4	YS22P8-012 181.08	YS22S8-012 337.12	YS32P8-012 201.22	YS32S8-012 371.68	1	8	102
1-1/2	YS22P8-015 191.60	YS22S8-015 359.36	YS32P8-015 212.92	YS32S8-015 394.60	1	8	102
2	YS22P8-020 225.07	YS22S8-020 405.91	YS32P8-020 250.05	YS32S8-020 450.99	1	4	102
3	YS22P8-030 518.73	YS22S8-030 700.77	YS32P8-030 557.40	YS32S8-030 739.44	1	0	102
4	YS22P8-040 906.98	YS22S8-040 1135.74	YS32P8-040 976.26	YS32S8-040 1204.99	1	0	102

PVC - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005SR 91.73	YS21S8-005SR 176.94	YS31P8-005SR 99.73	YS31S8-005SR 193.93	1	18	102
3/4	YS21P8-007SR 104.00	YS21S8-007SR 203.71	YS31P8-007SR 113.89	YS31S8-007SR 228.94	1	12	102
1	YS21P8-010SR 116.95	YS21S8-010SR 243.69	YS31P8-010SR 127.76	YS31S8-010SR 266.94	1	8	102
1-1/4	YS21P8-012SR 197.42	YS21S8-012SR 353.45	YS31P8-012SR 217.57	YS31S8-012SR 388.01	1	8	102
1-1/2	YS21P8-015SR 211.67	YS21S8-015SR 379.44	YS31P8-015SR 232.94	YS31S8-015SR 414.79	1	4	102
2	YS21P8-020SR 259.99	YS21S8-020SR 440.82	YS31P8-020SR 284.99	YS31S8-020SR 485.93	1	0	102
3	YS21P8-030SR 562.40	YS21S8-030SR 744.27	YS31P8-030SR 600.91	YS31S8-030SR 1111.76	1	0	102
4	YS21P8-040SR 952.08	YS21S8-040SR 1180.84	YS31P8-040SR 1250.13	YS31S8-040SR 1250.13	1	0	102

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005 142.27	YS23S8-005 240.64	YS33P8-005 157.93	YS33S8-005 314.49	1	8	102
3/4	YS23P8-007 151.15	YS23S8-007 274.78	YS33P8-007 163.91	YS33S8-007 360.43	1	8	102
1	YS23P8-010 161.39	YS23S8-010 303.73	YS33P8-010 175.81	YS33S8-010 422.07	1	8	102
1-1/4	YS23P8-012 258.72	YS23S8-012 445.11	YS33P8-012 282.06	YS33S8-012 604.78	1	4	102
1-1/2	YS23P8-015 288.31	YS23S8-015 481.06	YS33P8-015 320.13	YS33S8-015 648.98	1	4	102
2	YS23P8-020 362.47	YS23S8-020 572.98	YS33P8-020 397.73	YS33S8-020 737.27	1	0	102
3	YS23P8-030 800.66	YS23S8-030 982.68	YS33P8-030 860.24	YS33S8-030 1042.78	1	0	102
4	YS23P8-040 1290.39	YS23S8-040 1519.16	YS33P8-040 1387.05	YS33S8-040 1615.79	1	0	102

PVC Clear - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005CL 87.04	YS22S8-005CL 172.24	YS32P8-005CL 95.06	YS32S8-005CL 189.25	1	18	103
3/4	YS22P8-007CL 97.25	YS22S8-007CL 196.97	YS32P8-007CL 107.17	YS32S8-007CL 222.15	1	18	103
1	YS22P8-010CL 106.94	YS22S8-010CL 233.65	YS32P8-010CL 117.74	YS32S8-010CL 256.88	1	12	103
1-1/4	YS22P8-012CL 181.08	YS22S8-012CL 337.12	YS32P8-012CL 201.22	YS32S8-012CL 371.68	1	8	103
1-1/2	YS22P8-015CL 191.60	YS22S8-015CL 359.36	YS32P8-015CL 212.92	YS32S8-015CL 394.60	1	8	103
2	YS22P8-020CL 225.07	YS22S8-020CL 439.60	YS32P8-020CL 250.05	YS32S8-020CL 450.99	1	4	103
3	YS22P8-030CL 518.73	YS22S8-030CL 700.77	YS32P8-030CL 557.40	YS32S8-030CL 739.44	1	0	103
4	YS22P8-040CL 906.98	YS22S8-040CL 1135.74	YS32P8-040CL 976.26	YS32S8-040CL 1204.99	1	0	103

Schedule 80 PVC Industrial Products & Accessories
Y-Strainers & True Union Y-Strainers



PVC Clear - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005CLSR 91.73	YS21S8-005CLSR 176.94	YS31P8-005CLSR 99.72	YS31S8-005CLSR 193.93	1	18	103
3/4	YS21P8-007CLSR 104.00	YS21S8-007CLSR 203.71	YS31P8-007CLSR 113.89	YS31S8-007CLSR 228.94	1	12	103
1	YS21P8-010CLSR 116.95	YS21S8-010CLSR 243.69	YS31P8-010CLSR 127.76	YS31S8-010CLSR 266.94	1	8	103
1-1/4	YS21P8-012CLSR 197.42	YS21S8-012CLSR 353.45	YS31P8-012CLSR 217.57	YS31S8-012CLSR 388.01	1	8	103
1-1/2	YS21P8-015CLSR 211.67	YS21S8-015CLSR 379.44	YS31P8-015CLSR 232.94	YS31S8-015CLSR 414.79	1	4	103
2	YS21P8-020CLSR 259.99	YS21S8-020CLSR 440.82	YS31P8-020CLSR 284.99	YS31S8-020CLSR 485.93	1	0	103
3	YS21P8-030CLSR 562.40	YS21S8-030CLSR 744.27	YS31P8-030CLSR 600.91	YS31S8-030CLSR 782.93	1	0	103
4	YS21P8-040CLSR 952.08	YS21S8-040CLSR 1180.84	YS31P8-040CLSR 1250.13	YS31S8-040CLSR 1250.13	1	0	103

PVC Clear - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005CL 142.27	YS23S8-005CL 240.64	YS33P8-005CL 157.93	YS33S8-005CL 314.49	1	8	103
3/4	YS23P8-007CL 151.15	YS23S8-007CL 274.78	YS33P8-007CL 163.91	YS33S8-007CL 360.43	1	8	103
1	YS23P8-010CL 161.39	YS23S8-010CL 303.73	YS33P8-010CL 175.81	YS33S8-010CL 422.07	1	8	103
1-1/4	YS23P8-012CL 258.72	YS23S8-012CL 445.11	YS33P8-012CL 282.06	YS33S8-012CL 604.78	1	4	103
1-1/2	YS23P8-015CL 288.31	YS23S8-015CL 481.06	YS33P8-015CL 320.13	YS33S8-015CL 648.98	1	4	103
2	YS23P8-020CL 362.47	YS23S8-020CL 572.98	YS33P8-020CL 397.73	YS33S8-020CL 737.27	1	0	103
3	YS23P8-030CL 800.66	YS23S8-030CL 982.68	YS33P8-030CL 860.24	YS33S8-030CL 1042.78	1	0	103
4	YS23P8-040CL 1290.39	YS23S8-040CL 1519.16	YS33P8-040CL 1387.05	YS33S8-040CL 1615.79	1	0	103

PVC Gray - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005 91.63	YS2AS8-005 181.29	YS3AP8-005 100.07	YS3AS8-005 199.22	1	12	102
3/4	YS2AP8-007 102.36	YS2AS8-007 207.33	YS3AP8-007 112.80	YS3AS8-007 233.86	1	8	102
1	YS2AP8-010 112.54	YS2AS8-010 245.96	YS3AP8-010 123.91	YS3AS8-010 270.43	1	8	102
1-1/4	YS2AP8-012 190.62	YS2AS8-012 355.49	YS3AP8-012 211.82	YS3AS8-012 391.22	1	4	102
1-1/2	YS2AP8-015 201.71	YS2AS8-015 378.27	YS3AP8-015 224.11	YS3AS8-015 415.39	1	0	102
2	YS2AP8-020 236.91	YS2AS8-020 427.24	YS3AP8-020 263.23	YS3AS8-020 474.74	1	0	102
3	YS2AP8-030 546.04	YS2AS8-030 737.64	YS3AP8-030 586.73	YS3AS8-030 778.36	1	0	102
4	YS2AP8-040 954.72	YS2AS8-040 1195.52	YS3AP8-040 1027.61	YS3AS8-040 1268.42	1	0	102

PVC Gray - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005 91.63	YS2BS8-005 181.29	YS3BP8-005 100.07	YS3BS8-005 199.22	1	12	102
3/4	YS2BP8-007 102.36	YS2BS8-007 207.33	YS3BP8-007 112.80	YS3BS8-007 233.86	1	8	102
1	YS2BP8-010 112.54	YS2BS8-010 245.96	YS3BP8-010 123.91	YS3BS8-010 270.43	1	8	102
1-1/4	YS2BP8-012 190.62	YS2BS8-012 355.49	YS3BP8-012 211.82	YS3BS8-012 391.22	1	4	102
1-1/2	YS2BP8-015 201.71	YS2BS8-015 378.27	YS3BP8-015 224.11	YS3BS8-015 415.39	1	0	102
2	YS2BP8-020 236.91	YS2BS8-020 427.24	YS3BP8-020 263.23	YS3BS8-020 474.74	1	0	102
3	YS2BP8-030 546.04	YS2BS8-030 737.64	YS3BP8-030 586.73	YS3BS8-030 778.36	1	0	102



Schedule 80 PVC Industrial Products & Accessories True Union Y-Strainers

PVC Gray - True Union Threaded Ends (continued)

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
4	YS2BP8-040 954.72	YS2BS8-040 1195.52	YS3BP8-040 1027.61	YS3BS8-040 1268.42	1	0	102

PVC Gray - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005SR 96.54	YS2BS8-005SR 186.22	YS3BP8-005SR 104.99	YS3BS8-005SR 204.16	1	12	102
3/4	YS2BP8-007SR 109.49	YS2BS8-007SR 214.43	YS3BP8-007SR 119.88	YS3BS8-007SR 240.98	1	8	102
1	YS2BP8-010SR 123.08	YS2BS8-010SR 256.48	YS3BP8-010SR 134.45	YS3BS8-010SR 280.98	1	8	102
1-1/4	YS2BP8-012SR 207.80	YS2BS8-012SR 372.05	YS3BP8-012SR 229.01	YS3BS8-012SR 408.42	1	4	102
1-1/2	YS2BP8-015SR 222.80	YS2BS8-015SR 399.41	YS3BP8-015SR 245.21	YS3BS8-015SR 436.62	1	0	102
2	YS2BP8-020SR 273.66	YS2BS8-020SR 464.01	YS3BP8-020SR 300.00	YS3BS8-020SR 511.52	1	0	102
3	YS2BP8-030SR 591.82	YS2BS8-030SR 783.44	YS3BP8-030SR 632.51	YS3BS8-030SR 824.15	1	0	102
4	YS2BP8-040SR 1002.22	YS2BS8-040SR 1243.00	YS3BP8-040SR 1075.13	YS3BS8-040SR 1315.92	1	0	102

PVC Clear - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005CL 91.63	YS2AS8-005CL 181.29	YS3AP8-005CL 100.07	YS3AS8-005CL 199.22	1	12	103
3/4	YS2AP8-007CL 102.36	YS2AS8-007CL 207.33	YS3AP8-007CL 112.80	YS3AS8-007CL 233.86	1	8	103
1	YS2AP8-010CL 112.54	YS2AS8-010CL 245.96	YS3AP8-010CL 123.91	YS3AS8-010CL 270.43	1	8	103
1-1/4	YS2AP8-012CL 190.62	YS2AS8-012CL 354.86	YS3AP8-012CL 211.82	YS3AS8-012CL 391.22	1	4	103
1-1/2	YS2AP8-015CL 201.71	YS2AS8-015CL 378.27	YS3AP8-015CL 224.11	YS3AS8-015CL 415.39	1	0	103
2	YS2AP8-020CL 236.91	YS2AS8-020CL 427.24	YS3AP8-020CL 263.23	YS3AS8-020CL 474.74	1	0	103
3	YS2AP8-030CL 546.04	YS2AS8-030CL 737.64	YS3AP8-030CL 586.73	YS3AS8-030CL 778.36	1	0	103
4	YS2AP8-040CL 954.72	YS2AS8-040CL 1195.52	YS3AP8-040CL 1027.61	YS3AS8-040CL 1268.42	1	0	103

PVC Clear - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CL 91.63	YS2BS8-005CL 181.29	YS3BP8-005CL 100.07	YS3BS8-005CL 199.22	1	12	103
3/4	YS2BP8-007CL 102.36	YS2BS8-007CL 207.33	YS3BP8-007CL 112.80	YS3BS8-007CL 233.86	1	8	103
1	YS2BP8-010CL 112.54	YS2BS8-010CL 245.97	YS3BP8-010CL 123.91	YS3BS8-010CL 270.43	1	8	103
1-1/4	YS2BP8-012CL 190.62	YS2BS8-012CL 354.86	YS3BP8-012CL 211.82	YS3BS8-012CL 391.22	1	4	103
1-1/2	YS2BP8-015CL 201.71	YS2BS8-015CL 378.27	YS3BP8-015CL 224.11	YS3BS8-015CL 415.39	1	0	103
2	YS2BP8-020CL 236.91	YS2BS8-020CL 427.24	YS3BP8-020CL 263.23	YS3BS8-020CL 474.74	1	0	103
3	YS2BP8-030CL 546.04	YS2BS8-030CL 737.64	YS3BP8-030CL 586.73	YS3BS8-030CL 778.36	1	0	103
4	YS2BP8-040CL 954.72	YS2BS8-040CL 1195.52	YS3BP8-040CL 1027.61	YS3BS8-040CL 1268.42	1	0	103

PVC Clear - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CLSR 96.54	YS2BS8-005CLSR 186.22	YS3BP8-005CLSR 104.99	YS3BS8-005CLSR 204.16	1	12	103
3/4	YS2BP8-007CLSR 109.49	YS2BS8-007CLSR 214.43	YS3BP8-007CLSR 119.88	YS3BS8-007CLSR 240.98	1	8	103
1	YS2BP8-010CLSR 123.08	YS2BS8-010CLSR 256.48	YS3BP8-010CLSR 134.45	YS3BS8-010CLSR 280.98	1	8	103
1-1/4	YS2BP8-012CLSR 207.80	YS2BS8-012CLSR 372.05	YS3BP8-012CLSR 229.01	YS3BS8-012CLSR 408.42	1	4	103
1-1/2	YS2BP8-015CLSR 222.80	YS2BS8-015CLSR 399.41	YS3BP8-015CLSR 245.21	YS3BS8-015CLSR 436.62	1	0	103

**Schedule 80 PVC Industrial Products & Accessories
True Union Y-Strainers**



PVC Clear - True Union SR Threaded Ends (continued)

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
2	YS2BP8-020CLSR 273.66	YS2BS8-020CLSR 464.01	YS3BP8-020CLSR 300.00	YS3BS8-020CLSR 511.52	1	0	103
3	YS2BP8-030CLSR 591.82	YS2BS8-030CLSR 783.44	YS3BP8-030CLSR 632.51	YS3BS8-030CLSR 824.15	1	0	103
4	YS2BP8-040CLSR 1002.22	YS2BS8-040CLSR 1243.00	YS3BP8-040CLSR 1075.13	YS3BS8-040CLSR 1315.92	1	0	103



Schedule 80 PVC Industrial Products & Accessories Basket Strainers



Pressure Rating
@ 73°F (23°C), Water

1/2"-8"	150 psi
10"-12"	50 psi

Maximum Service
Temperature

PVC = 140°F (60°C)

Temperature/Pressure
De-ratings Apply

Important Ordering Information - Column headings indicate Elastomer seal type and Strainer Basket screen material. All Part Numbers shown designate 1/8" perforated (#6 Mesh Code) Strainer Basket Screens. To order other screen perforation sizing, replace the number "6" preceding the dash-separator with the corresponding Mesh Code from chart. Pricing is the same for all listed Mesh Codes.

Perforation Size	Mesh Code
1/16"	12
3/32"	8
1/8"	6
3/16"	4
1/4"	3
3/8"	2

Example: To order a 1/16" screen perforation in listed part number BS22P6-020, change the part number to BS22P12-020

Contact Spears® for additional perforations & wire mesh sizes

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22P6-005 407.06	BS22S6-005 650.98	BS32P6-005 428.48	BS32S6-005 672.40	1	2	295
3/4	BS22P6-007 407.06	BS22S6-007 650.98	BS32P6-007 428.48	BS32S6-007 672.40	1	2	295
1	BS22P6-010 407.06	BS22S6-010 650.98	BS32P6-010 428.48	BS32S6-010 672.40	1	2	295
1-1/4	BS22P6-012 745.59	BS22S6-012 1069.75	BS32P6-012 837.53	BS32S6-012 1202.23	1	0	295
1-1/2	BS22P6-015 745.59	BS22S6-015 1069.75	BS32P6-015 837.53	BS32S6-015 1202.23	1	0	295
2	BS22P6-020 745.59	BS22S6-020 1069.75	BS32P6-020 837.53	BS32S6-020 1202.23	1	0	295
2-1/2	BS22P6-025 1410.09	BS22S6-025 1973.29	BS32P6-025 1585.14	BS32S6-025 2217.25	1	0	295
3	BS22P6-030 1720.49	BS22S6-030 2283.11	BS32P6-030 1933.19	BS32S6-030 2565.33	1	0	295
4	BS22P6-040 2278.44	BS22S6-040 2925.52	BS32P6-040 2560.03	BS32S6-040 3278.08	1	0	295
6	BS22P6-060 3252.76	BS22S6-060 4372.12	BS32P6-060 3654.91	BS32S6-060 4918.53	1	0	295
8	BS22P6-080 4335.63	BS22S6-080 5857.16	BS32P6-080 4872.53	BS32S6-080 6582.47	1	0	295
10	BS22P6-100 8308.63	BS22S6-100 10482.52	BS32P6-100 9086.61	BS32S6-100 11527.94	1	0	295
12	BS22P6-120 10294.12	BS22S6-120 13187.22	BS32P6-120 11321.27	BS32S6-120 14568.98	1	0	295

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23P6-005 469.23	BS23S6-005 713.14	BS33P6-005 492.76	BS33S6-005 736.67	1	0	295
3/4	BS23P6-007 469.23	BS23S6-007 713.14	BS33P6-007 492.76	BS33S6-007 736.67	1	0	295
1	BS23P6-010 469.23	BS23S6-010 713.14	BS33P6-010 492.76	BS33S6-010 736.67	1	0	295
1-1/4	BS23P6-012 886.35	BS23S6-012 1211.54	BS33P6-012 996.79	BS33S6-012 1361.48	1	0	295
1-1/2	BS23P6-015 886.35	BS23S6-015 1186.03	BS33P6-015 996.79	BS33S6-015 1361.48	1	0	295
2	BS23P6-020 886.35	BS23S6-020 1211.54	BS33P6-020 996.79	BS33S6-020 1361.48	1	0	295

Schedule 80 PVC Industrial Products & Accessories
Basket Strainers



PVC - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
2-1/2	BS23P6-025 1626.86	BS23S6-025 2189.51	BS33P6-025 1828.06	BS33S6-025 2460.18	1	0	295
3	BS23P6-030 2065.51	BS23S6-030 2627.33	BS33P6-030 2320.78	BS33S6-030 2951.88	1	0	295
4	BS23P6-040 2691.94	BS23S6-040 3332.17	BS33P6-040 3024.81	BS33S6-040 3744.05	1	0	295
6	BS23P6-060 5745.36	BS23S6-060 6864.52	BS33P6-060 6455.43	BS33S6-060 7712.97	1	0	295
8	BS23P6-080 7571.16	BS23S6-080 9092.69	BS33P6-080 8507.20	BS33S6-080 10217.09	1	0	295
10	BS23P6-100 10093.94	BS23S6-100 12267.65	BS33P6-100 11341.56	BS33S6-100 13783.89	1	0	295
12	BS23P6-120 13812.05	BS23S6-120 16707.00	BS33P6-120 15519.16	BS33S6-120 18771.91	1	0	295

PVC - Spigot Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27P6-005 407.06	BS27S6-005 650.98	BS37P6-005 428.48	BS37S6-005 672.40	1	0	295
3/4	BS27P6-007 407.06	BS27S6-007 650.98	BS37P6-007 428.48	BS37S6-007 672.40	1	0	295
1	BS27P6-010 407.06	BS27S6-010 650.98	BS37P6-010 428.48	BS37S6-010 672.40	1	0	295
1-1/4	BS27P6-012 745.59	BS27S6-012 1069.75	BS37P6-012 837.53	BS37S6-012 1202.23	1	0	295
1-1/2	BS27P6-015 745.59	BS27S6-015 1069.75	BS37P6-015 837.53	BS37S6-015 1202.23	1	0	295
2	BS27P6-020 745.59	BS27S6-020 1069.75	BS37P6-020 837.53	BS37S6-020 1202.23	1	0	295
2-1/2	BS27P6-025 1410.09	BS27S6-025 1973.32	BS37P6-025 1585.14	BS37S6-025 2217.25	1	0	295
3	BS27P6-030 1720.49	BS27S6-030 2283.11	BS37P6-030 1933.19	BS37S6-030 2565.33	1	0	295
4	BS27P6-040 2278.44	BS27S6-040 2925.52	BS37P6-040 2560.03	BS37S6-040 3278.08	1	0	295
6	BS27P6-060 3252.76	BS27S6-060 4372.12	BS37P6-060 3654.91	BS37S6-060 4918.53	1	0	295
8	BS27P6-080 4335.63	BS27S6-080 5857.16	BS37P6-080 4872.53	BS37S6-080 6582.47	1	0	295
10	BS27P6-100 8308.63	BS27S6-100 10482.52	BS37P6-100 9086.61	BS37S6-100 11527.94	1	0	295
12	BS27P6-120 10294.12	BS27S6-120 13187.22	BS37P6-120 11321.27	BS37S6-120 14568.98	1	0	295



Schedule 80 PVC Industrial Products & Accessories Duplex Basket Strainers

Custom configured and produced to order, Spears® Duplex Basket Strainer provides individual isolation of strainers for servicing and cleaning without shutting down the line. A center handle on the Duplex unit control valves allows selection of either strainer unit for isolation. Each Basket Strainer features a convenient quick release clamp cap equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit.



Multi-Featured Options:

- No Flow Shutdown Required
- Sizes 1/2" - 4" Constructed from Corrosion Resistant PVC or CPVC
- True Union Socket, Thread, or Flanged Connections
- Uses Spears® Standard Basket Strainers Configurations
- Simple Single-Throw Lever Operation
- Select EPDM or FKM Seal Options
- Multiple Strainer Mesh Options in Plastic or Stainless Steel
(see Industrial Basket Strainer options in this catalog)

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR ADDITIONAL CUSTOM OPTIONS, SELECTION ASSISTANCE & PRICING

Schedule 80 PVC Industrial Products & Accessories Suction Strainers



Pressure Rating @ 73°F (23°C), Water
50 psi

Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, enlarged inlet on reducing sizes performs best in suction line applications. The internal Strainer Basket is bottom-drained for direct flushing through a 360° adjustable side mounted Discharge Valve Assembly (included). Bolt-on Bonnet is fitted with Top Sight-Glass.

Standard units listed have EPDM Seals and Stainless Steel 3/16" Perforated Screen (4-mesh). Contact Spears® for other Mesh Code or Elastomer seal options required.

PVC Suction Strainer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flanged End

SS23BS4SG-040	4	1	0	295	2980.31
SS23BS4SG-420	4X2	1	0	295	2838.95
SS23BS4SG-421	4X2-1/2	1	0	295	2850.05
SS23BS4SG-422	4X3	1	0	295	2857.31
SS23BS4SG-060	6	1	0	295	3887.53
SS23BS4SG-532	6X4	1	0	295	3755.69
SS23BS4SG-080	8	1	0	295	4269.93
SS23BS4SG-582	8X4	1	0	295	3882.68
SS23BS4SG-585	8X6	1	0	295	3905.21
SS23BS4SG-100	10	1	0	295	4776.56
SS23BS4SG-626	10X6	1	0	295	4648.64
SS23BS4SG-628	10X8	1	0	295	4701.59
SS23BS4SG-120	12	1	0	295	5251.89
SS23BS4SG-668	12X8	1	0	295	5124.93
SS23BS4SG-670	12X10	1	0	295	5168.08

Suction Strainer Stainless Steel Baskets 3/16" Perforation

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SSS4-040	4	1	4	299	826.49
SSS4-060	6	1	2	299	879.25
SSS4-080	8	1	2	299	1101.83
SSS4-100	10	1	0	299	1197.65
SSS4-120	12	1	2	299	1468.25



Schedule 80 CPVC Industrial Products & Accessories

CPVC Industrial Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Schedule 40 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C-10	1/8	10	0	745	3.38
PD-400-002C-10	1/4	10	0	745	4.23
PD-400-003C-10	3/8	10	0	745	5.97
PD-400-005C-10	1/2	10	0	745	1.78
PD-400-007C-10	3/4	10	0	745	2.37
PD-400-010C-10	1	10	0	745	3.46
PD-400-012C-10	1-1/4	10	0	745	4.68
PD-400-015C-10	1-1/2	10	0	745	5.61
PD-400-020C-10	2	10	0	745	7.52
PD-400-025C-10	2-1/2	10	0	745	11.88
PD-400-030C-10	3	10	0	745	15.52
PD-400-040C-10	4	10	0	745	22.11
PD-400-060C-10	6	10	0	745	40.80
PD-400-080C-10	8	10	0	745	66.44
PD-400-100C-10	10	10	0	745	113.62
PD-400-120C-10	12	10	0	745	150.09
PD-400-140C-10	14	10	0	945	343.30
PD-400-160C-10	16	10	0	945	448.15
PD-400-180C-10	18	10	0	945	584.66
PD-400-200C-10	20	10	0	945	686.11
PD-400-240C-10	24	10	0	945	955.60

20' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C	1/8	20	0	745	3.38
PD-400-002C	1/4	20	0	745	4.23
PD-400-003C	3/8	20	0	745	5.97
PD-400-005C	1/2	20	0	745	1.78
PD-400-007C	3/4	20	0	745	2.37
PD-400-010C	1	20	0	745	3.46
PD-400-012C	1-1/4	20	0	745	4.68
PD-400-015C	1-1/2	20	0	745	5.61
PD-400-020C	2	20	0	745	7.52
PD-400-025C	2-1/2	20	0	745	11.88
PD-400-030C	3	20	0	745	15.52
PD-400-040C	4	20	0	745	22.11
PD-400-060C	6	20	0	745	40.80
PD-400-080C	8	20	0	745	66.44
PD-400-100C	10	20	0	745	113.62
PD-400-120C	12	20	0	745	150.09
PD-400-140C	14	20	0	945	361.37
PD-400-160C	16	20	0	945	471.74
PD-400-180C	18	20	0	945	615.43
PD-400-200C	20	20	0	945	722.22
PD-400-240C	24	20	0	945	1005.89

* Pipe sold in individual lengths or lift quantities. No cut lengths.

* No return on Pipe

* Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

* See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC Schedule 40 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

20' Lengths, Price Per Foot

ASTM D-1784 ASTM F-441		Schedule 40 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	910	0.405	0.068	2850/285	5700/285	.056
1/4"	790	0.540	0.088	2850/285	5700/285	.096
3/8"	620	0.675	0.091	2850/285	5700/285	.128
1/2"	600	0.840	0.109	2430/243	4860/243	.185
3/4"	480	1.050	0.113	1540/154	3080/154	.246
1"	450	1.315	0.133	2520/252	5040/252	.362
1-1/4"	370	1.660	0.140	1230/123	2460/123	.489
1-1/2"	330	1.900	0.145	1720/172	3440/172	.585
2"	280	2.375	0.154	1230/123	2460/123	.783
2-1/2"	300	2.875	0.203	540/54	1080/54	1.237
3"	260	3.500	0.216	460/46	920/46	1.619
4"	220	4.500	0.237	340/34	680/34	2.306
6"	180	6.625	0.280	170/17	340/17	4.603
8"	160	8.625	0.322	90/9	180/9	6.136
10"	140	10.750	0.365	110/11	220/11	8.886
12"	130	12.750	0.406	80/8	160/8	11.751

CPVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C-10	1/8	10	0	745	4.19
PD-800-002C-10	1/4	10	0	745	4.83
PD-800-003C-10	3/8	10	0	745	6.58
PD-800-005C-10	1/2	10	0	745	2.08
PD-800-007C-10	3/4	10	0	745	2.83
PD-800-010C-10	1	10	0	745	4.17
PD-800-012C-10	1-1/4	10	0	745	5.74
PD-800-015C-10	1-1/2	10	0	745	6.97
PD-800-020C-10	2	10	0	745	9.65
PD-800-025C-10	2-1/2	10	0	745	14.72
PD-800-030C-10	3	10	0	745	19.73
PD-800-040C-10	4	10	0	745	28.84
PD-800-060C-10	6	10	0	745	56.13
PD-800-080C-10	8	10	0	745	93.08
PD-800-100C-10	10	10	0	745	168.81
PD-800-120C-10	12	10	0	745	232.06
PD-800-140C-10	14	10	0	945	536.15
PD-800-160C-10	16	10	0	945	689.51
PD-800-180C-10	18	10	0	945	868.12
PD-800-200C-10	20	10	0	945	1093.46
PD-800-240C-10	24	10	0	945	1551.43

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C	1/8	20	0	745	4.19
PD-800-002C	1/4	20	0	745	4.83
PD-800-003C	3/8	20	0	745	6.58
PD-800-005C	1/2	20	0	745	2.08
PD-800-007C	3/4	20	0	745	2.83
PD-800-010C	1	20	0	745	4.17
PD-800-012C	1-1/4	20	0	745	5.74
PD-800-015C	1-1/2	20	0	745	6.97
PD-800-020C	2	20	0	745	9.65
PD-800-025C	2-1/2	20	0	745	14.72
PD-800-030C	3	20	0	745	19.73
PD-800-040C	4	20	0	745	28.84
PD-800-060C	6	20	0	745	56.13
PD-800-080C	8	20	0	745	93.08
PD-800-100C	10	20	0	745	168.81
PD-800-120C	12	20	0	745	232.06
PD-800-140C	14	20	0	945	564.37
PD-800-160C	16	20	0	945	725.80
PD-800-180C	18	20	0	945	913.81

Schedule 80 CPVC Industrial Products & Accessories
CPVC Industrial Pipe



CPVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

20' Lengths, Price Per Foot

PD-800-200C	20	20	0	945	1151.01
PD-800-240C	24	20	0	945	1633.08

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

ASTM D-1784 ASTM F-441		Schedule 80 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	.069
1/4"	1130	0.540	0.119	2850/285	5700/285	.117
3/8"	920	0.675	0.126	2850/285	5700/285	.162
1/2"	850	0.840	0.147	2430/243	4860/243	.231
3/4"	690	1.050	0.154	1540/154	3080/154	.314
1"	630	1.315	0.179	2520/252	5040/252	.462
1-1/4"	520	1.660	0.191	1230/123	2460/123	.636
1-1/2"	470	1.900	0.200	1720/172	3440/172	.773
2"	400	2.375	0.218	1230/123	2460/123	1.071
2-1/2"	420	2.875	0.276	540/54	1080/54	1.631
3"	370	3.500	0.300	460/46	920/46	2.187
4"	320	4.500	0.337	340/34	680/34	3.198
6"	280	6.625	0.432	170/17	340/17	6.106
8"	250	8.625	0.500	90/9	180/9	9.322
10"	230	10.750	0.593	110/11	220/11	14.095
12"	230	12.750	0.687	80/8	160/8	19.392



Schedule 80 CPVC Industrial Products & Accessories Spears® Low VOC Solvent Cements & Primers & CPVC Low VOC Cements

Essential solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

CPVC Low VOC Cements

Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 2-Year Shelf Life

CPVC-24 GRAY/ORANGE: Heavy bodied, medium setting CPVC cement for all classes and schedules with interference fit through 24" diameter. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code.



The Most Chemically Resistant Cement Available for Both PVC & CPVC Applications

CPVC-24 Gray Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24G-005	1/4 Pint	24	0	707	9.01
CPVC24G-010	1/2 Pint	24	0	707	14.34
CPVC24G-020	Pint	12	0	707	26.09
CPVC24G-030	Quart	12	0	707	46.08
CPVC24G-040	Gallon	6	0	707	159.13



CPVC-24 Orange Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24O-005	1/4 Pint	24	0	707	9.01
CPVC24O-010	1/2 Pint	24	0	707	14.34
CPVC24O-020	Pint	12	0	707	26.09
CPVC24O-030	Quart	12	0	707	46.08
CPVC24O-040	Gallon	6	0	707	159.13



Spears® Low VOC Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease. All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with SCAQMD Rule 1168/316A.

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR:

Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	1/4 Pint	24	0	709	7.89
PRIM70C-010	1/2 Pint	24	0	709	10.75
PRIM70C-020	Pint	12	0	709	21.51
PRIM70C-030	Quart	12	0	709	34.83
PRIM70C-040	Gallon	6	0	709	114.44



PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	1/4 Pint	24	0	709	7.89
PRIM70P-010	1/2 Pint	24	0	709	10.75
PRIM70P-020	Pint	12	0	709	21.51
PRIM70P-030	Quart	12	0	709	34.83
PRIM70P-040	Gallon	6	0	709	114.44

CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



CLEANER-65 Clear Cleaner

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	1/4 Pint	24	0	709	5.82
CLEAN65-010	1/2 Pint	24	0	709	8.67
CLEAN65-020	Pint	12	0	709	15.06
CLEAN65-030	Quart	12	0	709	22.12
CLEAN65-040	Gallon	6	0	709	70.83

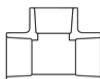


Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

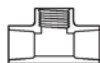
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee Soc



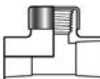
801-002C	1/4	50	300	090	14.16
801-003C	3/8	25	150	090	14.16
801-005C	1/2	25	200	090	14.16
801-007C	3/4	15	120	090	14.41
801-010C	1	15	0	090	17.66
801-012C	1-1/4	10	0	090	37.25
801-015C	1-1/2	10	0	090	42.67
801-020C	2	10	0	090	47.49
801-025C	2-1/2	10	0	090	120.91
801-030C	3	5	0	090	120.91
801-040C	4	5	0	090	160.91
801-050C	5	5	0	090	397.78
801-060C	6	2	0	090	418.74
801-080C	8	2	0	090	1199.48
801-100C	10	1	0	091	2372.94
801-100CF	10	1	0	097	1764.54
801-120C	12	1	0	091	3667.31
801-120CF	12	1	0	097	2408.22
801-140CF	14	1	0	097	6291.51
801-160CF	16	1	0	097	8987.85
801-180CF	18	1	0	097	10535.60
801-200CF	20	1	0	097	15941.67
801-240CF	24	1	0	097	22376.02

Tee Soc x Fipt



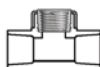
802-002C	1/4	25	150	090	35.94
802-005C	1/2	20	120	090	35.94
802-007C	3/4	20	160	090	47.93
802-010C	1	15	0	090	59.91
802-012C	1-1/4	15	0	090	70.41
802-015C	1-1/2	10	0	090	70.41
802-020C	2	10	0	090	88.43
802-030C	3	5	0	090	105.39
802-040C	4	5	0	090	198.01
802-060CF	6	1	2	097	405.25

Special Reinforced Tee Soc x SR Fipt - Stainless Steel Collar



802-005CSR	1/2	50	0	096	19.67
802-007CSR	3/4	15	120	096	28.75
802-010CSR	1	15	0	096	36.17
802-012CSR	1-1/4	15	0	096	41.96
802-015CSR	1-1/2	10	0	096	41.96
802-020CSR	2	10	0	096	68.59
802-030CSR	3	5	0	096	98.78
802-040CSR	4	5	0	096	186.09

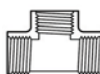
Transition Tee Soc x Fipt With Brass Thread Insert



802-005CBR	1/2	20	160	096	58.38
802-007CBR	3/4	25	0	096	116.75

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee Fipt



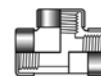
805-002C	1/4	25	150	090	31.46
805-003C	3/8	25	150	090	31.46

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee (continued) Fipt

805-005C	1/2	20	120	090	31.46
805-007C	3/4	15	120	090	45.32
805-010C	1	15	0	090	48.81
805-012C	1-1/4	10	0	090	49.09
805-015C	1-1/2	10	0	090	51.55
805-020C	2	10	0	090	57.26
805-025C	2-1/2	5	0	090	281.52
805-030C	3	5	0	090	326.63
805-040C	4	5	0	090	773.80

Special Reinforced Tee SR Fipt - Stainless Steel Collar



805-002CSR	1/4	20	160	096	17.60
805-003CSR	3/8	25	150	096	17.60
805-005CSR	1/2	25	150	096	23.55
805-007CSR	3/4	25	100	096	26.98
805-010CSR	1	15	0	096	40.29
805-015CSR	1-1/2	10	0	096	42.78
805-020CSR	2	10	0	096	50.94

Street Tee Spig x Soc x Soc



844-005C	1/2	25	200	090	17.72
844-007C	3/4	15	120	090	18.02
844-010C	1	15	0	090	22.08
844-012C	1-1/4	10	0	090	46.55
844-015C	1-1/2	10	0	090	53.36
844-020C	2	10	0	090	59.40

Reducing Tee Soc



801-101C	3/4X1/2	15	120	090	31.59
801-130C	1X1/2	15	0	090	36.41
801-131C	1X3/4	15	0	090	36.41
801-158C	1-1/4X1X1	15	0	090	45.16
801-159C	1-1/4X1X1-1/4	15	0	090	45.16
801-166C ¹	1-1/4X1/2	10	0	090	83.49
801-167C	1-1/4X3/4	12	0	090	71.25
801-168C	1-1/4X1	15	0	090	71.25
801-202C	1-1/2X1-1/4X1	10	0	090	71.25
801-209C	1-1/2X1/2	10	0	090	74.42
801-210C	1-1/2X3/4	15	0	090	74.42
801-211C	1-1/2X1	10	0	090	74.42
801-212C	1-1/2X1-1/4	10	0	090	74.42
801-247C	2X1/2	10	0	090	88.65
801-248C	2X3/4	10	0	090	88.65
801-249C	2X1	10	0	090	88.65
801-250C ¹	2X1-1/4	10	0	090	122.83
801-251C	2X1-1/2	10	0	090	88.65
801-287C	2-1/2X1/2	10	0	090	101.80
801-288C	2-1/2X3/4	10	0	090	101.80
801-289C	2-1/2X1	10	0	090	101.80
801-290C	2-1/2X1-1/4	10	0	090	101.80
801-291C	2-1/2X1-1/2	10	0	090	101.80
801-292C	2-1/2X2	10	0	090	105.37
801-333C ¹	3X1/2	5	0	090	224.08
801-334C ¹	3X3/4	5	0	090	224.08
801-335C	3X3X1	5	0	090	180.88
801-336C ¹	3X1-1/4	5	0	090	216.95
801-337C	3X3X1-1/2	5	0	090	180.88
801-338C	3X2	5	0	090	180.88
801-339C	3X2-1/2	6	0	090	180.88

Schedule 80 CPVC Industrial Products & Accessories
CPVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc

801-415C ¹	4X1/2	5	0	090	275.08
801-416C ¹	4X3/4	5	0	090	275.08
801-417C ¹	4X1	4	0	090	275.08
801-418C ¹	4X1-1/4	5	0	090	275.08
801-419C	4X1-1/2	5	0	090	275.08
801-420C	4X2	5	0	090	228.62
801-421C ¹	4X2-1/2	5	0	090	307.64
801-422C	4X3	5	0	090	228.62
801-426C ¹	4X6	4	0	090	792.52
801-525C	6X1	4	0	090	786.36
801-525CF	6X1	1	3	097	357.62
801-526C ¹	6X1-1/4	4	0	090	786.36
801-526CF	6X1-1/4	1	3	097	435.61
801-527C ¹	6X1-1/2	4	0	090	786.36
801-527CF	6X1-1/2	1	4	097	407.57
801-528C ¹	6X2	4	0	090	730.62
801-528CF	6X2	1	3	097	427.16
801-529C ¹	6X2-1/2	4	0	090	806.60
801-529CF	6X2-1/2	1	3	097	445.66
801-530C ¹	6X3	4	0	090	730.62
801-530CF	6X3	1	3	097	467.13
801-532C	6X4	5	0	090	645.69
801-575CF	8X1	1	2	097	501.51
801-576CF	8X1-1/4	1	0	097	509.48
801-577CF	8X1-1/2	1	0	097	513.26
801-578C ¹	8X2	2	0	090	1365.04
801-578CF	8X2	1	2	097	570.99
801-579CF	8X2-1/2	1	2	097	620.56
801-580C ¹	8X3	2	0	090	1365.04
801-580CF	8X3	1	2	097	700.25
801-582C ¹	8X4	2	0	090	1365.04
801-582CF	8X4	1	2	097	753.47
801-585C	8X6	2	0	090	1185.29
801-618CF	10X1	1	0	097	781.60
801-619CF	10X1-1/4	1	0	097	792.82
801-620CF	10X1-1/2	1	0	097	829.38
801-621C ¹	10X2	1	0	091	2389.55
801-621CF	10X2	1	0	097	788.14
801-622CF	10X2-1/2	1	0	097	977.49
801-623C ¹	10X3	1	0	091	2267.66
801-623CF	10X3	1	0	097	1062.07
801-624C ¹	10X4	1	0	091	2267.66
801-624CF	10X4	1	0	097	1122.64
801-626C	10X6	1	0	091	2088.20
801-626CF	10X6	1	0	097	1230.57
801-628C ¹	10X8	1	0	091	3416.27
801-628CF	10X8	1	0	097	1427.35
801-661CF	12X2	1	0	097	1337.52
801-662CF	12X2-1/2	0	0	097	1402.63
801-663CF	12X3	1	0	097	1475.21
801-664C ¹	12X4	1	0	091	4113.36
801-664CF	12X4	1	0	097	1536.16
801-666C ¹	12X6	1	0	091	3852.78
801-666CF	12X6	1	0	097	1666.85
801-668C	12X8	1	0	091	3262.88
801-668CF	12X8	1	0	097	1866.06
801-670C ¹	12X10	1	0	091	4979.23
801-670CF	12X10	1	0	097	2153.63
801-691CF	14X2	1	0	097	2763.20
801-692CF	14X2-1/2	1	0	097	2771.35
801-693CF	14X3	1	0	097	3981.56
801-694CF	14X4	1	0	097	4126.61
801-696CF	14X6	1	0	097	4494.16
801-698CF	14X8	1	0	097	4848.62
801-700CF	14X10	1	0	097	5303.43

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc

801-702CF	14X12	1	0	097	5830.46
801-751CF	16X2	1	0	097	3917.61
801-752CF	16X2-1/2	1	0	097	3973.69
801-753CF	16X3	1	0	097	4083.53
801-754CF	16X4	1	0	097	4235.22
801-756CF	16X6	1	0	097	5515.57
801-758CF	16X8	1	0	097	6165.58
801-760CF	16X10	1	0	097	6673.76
801-762CF	16X12	1	0	097	7464.55
801-764CF	16X14	1	0	097	8293.18
801-781CF	18X2	1	0	097	5325.66
801-783CF	18X3	1	0	097	5516.85
801-784CF	18X4	1	0	098	5320.01
801-786CF	18X6	1	0	097	7198.72
801-788CF	18X8	1	0	097	7729.63
801-790CF	18X10	1	0	097	8307.51
801-792CF	18X12	1	0	097	8883.53
801-794CF	18X14	1	0	097	9375.15
801-796CF	18X16	1	0	097	9898.45
801-814CF	20X4	1	0	097	10953.03
801-816CF	20X6	1	0	097	13033.84
801-818CF	20X8	1	0	097	13457.20
801-820CF	20X10	1	0	097	14627.86
801-822CF	20X12	1	0	097	15337.88
801-824CF	20X14	1	0	097	17087.84
801-826CF	20X16	1	0	097	18458.91
801-828CF	20X18	1	0	097	19610.53
801-904CF	24X4	1	0	097	13573.93
801-906CF	24X6	1	0	097	14639.59
801-908CF	24X8	1	0	097	14988.65
801-910CF	24X10	1	0	097	15797.55
801-912CF	24X12	1	0	097	16604.60
801-914CF	24X14	1	0	097	18044.21
801-916CF	24X16	1	0	097	21191.27
801-918CF	24X18	1	0	097	23557.84
801-920CF	24X20	1	0	097	26163.93

¹ Sized with Bushing

Reducing Tee
Soc x Fipt



802-101C	3/4X1/2	15	60	090	22.28
802-130C	1X1/2	50	0	090	44.73
802-131C	1X3/4	15	0	090	44.73
802-166C	1-1/4X1/2	25	0	090	77.08
802-167C ¹	1-1/4X3/4	15	0	090	77.08
802-168C	1-1/4X1	10	0	090	77.08
802-209C ¹	1-1/2X1/2	25	0	090	113.98
802-210C ¹	1-1/2X3/4	20	0	090	113.98
802-211C ¹	1-1/2X1	10	0	090	113.98
802-212C	1-1/2X1-1/4	10	0	090	113.98
802-247C	2X1/2	10	0	090	143.03
802-248C	2X3/4	10	0	090	143.03
802-249C ¹	2X1	10	0	090	143.03
802-250C ¹	2X1-1/4	10	0	090	143.03
802-251C ¹	2X1-1/2	10	0	090	143.03
802-287C	2-1/2X1/2	10	0	090	187.88
802-288C ¹	2-1/2X3/4	10	0	090	187.88
802-289C ¹	2-1/2X1	10	0	090	187.88
802-290C ¹	2-1/2X1-1/4	10	0	090	187.88
802-291C ¹	2-1/2X1-1/2	10	0	090	187.88
802-292C ¹	2-1/2X2	10	0	090	207.39
802-333C ¹	3X1/2	5	0	090	317.84



Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc x Fipt

802-334C ¹	3X3/4	5	0	090	317.84
802-335C ¹	3X1	5	0	090	317.84
802-336C ¹	3X1-1/4	5	0	090	317.84
802-337C ¹	3X1-1/2	5	0	090	317.84
802-338C ¹	3X2	5	0	090	317.84
802-339C ¹	3X2-1/2	5	0	090	317.84
802-415C ¹	4X1/2	5	0	090	532.29
802-416C ¹	4X3/4	5	0	090	532.29
802-417C ¹	4X1	5	0	090	532.29
802-418C ¹	4X1-1/4	5	0	090	532.29
802-419C ¹	4X1-1/2	5	0	090	532.29
802-420C ¹	4X2	5	0	090	532.29
802-421C ¹	4X2-1/2	5	0	090	532.29
802-422C ¹	4X3	5	0	090	532.29
802-525C ¹	6X1	4	0	090	1037.86
802-526C	6X1-1/4	4	0	090	1037.86
802-527C	6X1-1/2	4	0	090	1037.86
802-528C ¹	6X2	4	0	090	1037.86
802-529C ¹	6X2-1/2	4	0	090	1037.86
802-530C ¹	6X3	4	0	090	1037.86
802-532C ¹	6X4	2	0	090	1191.34
802-578C ¹	8X2	2	0	090	1973.55
802-580C ¹	8X3	2	0	090	1973.55
802-582C ¹	8X4	2	0	090	1973.55
802-621C ¹	10X2	1	0	091	2894.89
802-623C ¹	10X3	1	0	091	2894.89
802-624C ¹	10X4	1	0	091	2894.89
802-661C ¹	12X2	2	0	091	4803.17
802-663C ¹	12X3	2	0	091	4803.17
802-664C ¹	12X4	1	0	091	4803.17

¹ Sized with Bushing

Reducing Tee

Soc x Fipt x Soc



803-095C	3/4X1/2X3/4	50	0	090	19.94
----------	-------------	----	---	-----	-------

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar



802-072CSR	1/2X1/4	25	200	096	19.67
802-098CSR	3/4X1/4	25	100	096	26.29
802-101CSR	3/4X1/2	50	0	096	26.29
802-128CSR ¹	1X1/4	15	0	096	40.60
802-130CSR	1X1/2	50	0	096	16.06
802-131CSR	1X3/4	15	0	096	40.60
802-164CSR ¹	1-1/4X1/4	5	0	096	53.99
802-166CSR	1-1/4X1/2	15	0	096	42.77
802-168CSR	1-1/4X1	10	0	096	43.64
802-207CSR ¹	1-1/2X1/4	15	0	096	77.31
802-211CSR	1-1/2X1	10	0	096	51.24
802-212CSR	1-1/2X1-1/4	10	0	096	51.24
802-245CSR ¹	2X1/4	10	0	096	88.80
802-247CSR	2X1/2	10	0	096	79.93
802-248CSR	2X3/4	10	0	096	88.80
802-287CSR	2-1/2X1/2	10	0	096	61.07
802-331CSR ¹	3X1/4	5	0	096	169.62
802-413CSR ¹	4X1/4	5	0	096	184.06

¹ Sized with Bushing

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar x Soc



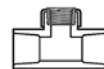
(See also Gauge & Instrument Fittings for additional configurations)

803-095CSR	3/4X1/2X3/4	15	0	096	16.20
------------	-------------	----	---	-----	-------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Transition Reducing Tee

Soc x Fipt With Brass Thread Insert



802-101CBR	3/4X1/2	50	0	096	72.36
------------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell

Soc



806-002C	1/4	25	150	090	15.41
806-003C	3/8	20	120	090	15.41
806-005C	1/2	20	240	090	6.04
806-007C	3/4	20	160	090	7.71
806-010C	1	25	0	090	12.24
806-012C	1-1/4	10	0	090	26.48
806-015C	1-1/2	10	0	090	29.54
806-020C	2	25	0	090	35.65
806-025C	2-1/2	5	0	090	82.11
806-030C	3	5	0	090	92.97
806-040C	4	5	0	090	167.44
806-050C	5	4	0	090	319.64
806-050CF	5	1	4	097	420.87
806-060C	6	4	0	090	336.46
806-080C	8	2	0	090	823.36
806-080CF	8	1	2	097	597.17
806-100C	10	1	0	091	2200.33
806-100CF	10	1	0	097	1308.26
806-120C	12	1	0	091	2977.04
806-120CF	12	1	0	097	2408.47
806-140CF	14	1	0	097	5991.56
806-160CF	16	1	0	097	8179.48
806-180CF	18	1	0	097	10246.01
806-200CF	20	1	0	097	11778.03
806-240CF	24	1	0	097	21320.83

Sweep 90° Ell

Soc



806-005SC	1/2	25	150	090	11.88
806-007SC	3/4	25	100	090	15.32
806-010SC	1	25	0	090	24.61
806-012SC	1-1/4	25	0	090	32.52
806-015SC	1-1/2	25	0	090	34.93
806-020SC	2	25	0	090	42.32

Long Sweep 90° Ell

Soc

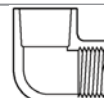


806-005LSCF	1/2	25	0	097	54.77
806-007LSCF	3/4	25	0	097	61.35
806-010LSCF	1	25	0	097	69.37
806-012LSCF	1-1/4	25	0	097	72.68
806-015LSCF	1-1/2	25	0	097	81.15
806-020LSCF	2	10	0	097	113.84
806-030LSCF	3	1	5	097	157.94
806-040LSCF	4	1	4	097	195.38
806-060LSCF	6	1	2	097	288.13

Not Listed for Electrical Conduit Use

90° Ell

Soc x Fipt



807-002C	1/4	25	450	090	13.65
807-003C	3/8	25	150	090	13.65
807-005C	1/2	20	120	090	15.94

Schedule 80 CPVC Industrial Products & Accessories
CPVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

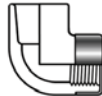
90° EII (continued)

Soc x Fipt

807-007C	3/4	20	160	090	18.72
807-010C	1	20	0	090	24.51
807-012C	1-1/4	10	0	090	35.94
807-015C	1-1/2	10	0	090	54.44
807-020C	2	10	0	090	69.88
807-030C	3	5	0	090	84.23
807-040C	4	5	0	090	159.28

Special Reinforced 90° EII

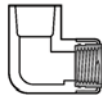
Soc x SR Fipt - Stainless Steel Collar



807-005CSR	1/2	20	240	096	9.55
807-007CSR	3/4	75	0	096	11.22
807-010CSR	1	50	0	096	13.51
807-015CSR	1-1/2	10	0	096	33.53
807-020CSR	2	10	0	096	41.95
807-030CSR	3	5	0	096	61.06
807-040CSR	4	5	0	096	112.74

Transition 90° EII

Soc x Fipt With Brass Thread Insert

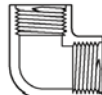


807-005CBR	1/2	20	240	096	51.33
807-007CBR	3/4	20	160	096	89.61

Not intended to convey or dispense water for human consumption through drinking or cooking

90° EII

Fipt



808-002C	1/4	25	450	090	16.19
808-003C	3/8	25	150	090	16.19
808-005C	1/2	20	120	090	9.40
808-007C	3/4	20	120	090	14.05
808-010C	1	15	120	090	19.73
808-012C	1-1/4	10	0	090	38.00
808-015C	1-1/2	10	0	090	40.89
808-020C	2	10	0	090	54.81
808-025C	2-1/2	5	0	090	170.09
808-030C	3	5	0	090	182.39
808-040C	4	5	0	090	285.41

90° Street EII

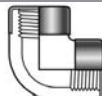
Mipt x Fipt



812-002C	1/4	50	300	090	23.06
----------	-----	----	-----	-----	-------

Special Reinforced 90° EII

SR Fipt - Stainless Steel Collar



808-003CSR	3/8	25	150	096	5.77
808-005CSR	1/2	20	120	096	5.77
808-007CSR	3/4	20	160	096	8.45
808-010CSR	1	50	0	096	10.83
808-012CSR	1-1/4	25	0	096	20.84
808-015CSR	1-1/2	10	0	096	24.54
808-020CSR	2	10	0	096	32.87

90° Street EII

Spig x Soc



809-005C	1/2	50	200	090	7.58
809-007C	3/4	50	0	090	9.64
809-010C	1	50	0	090	15.32

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

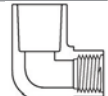
90° Street EII (continued)

Spig x Soc

809-012C	1-1/4	25	0	090	33.12
809-015C	1-1/2	10	0	090	36.96
809-020C	2	25	0	090	44.62
809-025C	2-1/2	5	0	090	90.06
809-030C	3	5	0	090	123.98
809-040C	4	4	0	090	223.26
809-060C	6	2	0	090	448.62
809-080C	8	2	0	090	1097.82
809-100C	10	1	0	091	2933.45
809-120C	12	1	0	091	3967.85

Reducing 90° EII

Soc x Fipt

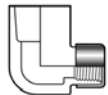


807-101C	3/4X1/2	10	60	090	15.29
807-130C ¹	1X1/2	10	80	090	21.85
807-131C ¹	1X3/4	10	80	090	21.85

¹ Sized with Bushing

Special Reinforced Reducing 90° EII

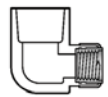
Soc x SR Fipt - Stainless Steel Collar



807-101CSR	3/4X1/2	50	0	096	12.17
807-130CSR	1X1/2	50	0	096	13.12

Transition Reducing 90° EII

Soc x Fipt With Brass Thread Insert



807-101CBR	3/4X1/2	20	120	096	64.19
------------	---------	----	-----	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

60° EII

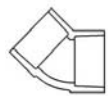
Soc



824-005CF	1/2	1	25	097	93.12
824-007CF	3/4	1	6	097	111.20
824-010CF	1	1	15	097	105.31
824-012CF	1-1/4	1	16	097	107.84
824-015CF	1-1/2	1	15	097	116.77
824-020CF	2	1	16	097	147.07
824-025CF	2-1/2	1	10	097	168.32
824-030CF	3	1	4	097	288.79
824-040CF	4	1	4	097	346.66
824-060CF	6	1	4	097	481.09
824-080CF	8	1	0	097	728.94
824-100CF	10	1	0	097	1467.44
824-120CF	12	1	0	097	2268.25
824-140CF	14	1	0	097	5468.05
824-160CF	16	1	0	097	7676.98
824-180CF	18	1	0	097	10650.42

45° EII

Soc



817-002C	1/4	25	450	090	22.92
817-003C	3/8	25	150	090	22.92
817-005C	1/2	20	120	090	7.39
817-007C	3/4	20	120	090	10.67
817-010C	1	15	120	090	16.97
817-012C	1-1/4	10	80	090	33.33
817-015C	1-1/2	10	0	090	34.22
817-020C	2	10	0	090	38.38
817-025C	2-1/2	5	0	090	78.43
817-030C	3	5	0	090	100.78



Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

45° EII (continued)

Soc

817-040C	4	5	0	090	138.35
817-050C	5	4	0	090	404.88
817-060C	6	4	0	090	426.20
817-080C	8	2	0	090	886.72
817-100C	10	1	0	091	1682.66
817-100CF	10	1	2	097	1016.13
817-120C	12	1	0	091	2960.35
817-120CF	12	1	0	097	1426.75
817-140CF	14	1	0	097	2984.57
817-160CF	16	1	0	097	4356.18
817-180CF	18	1	0	097	6741.28
817-200CF	20	1	0	097	8918.20
817-240CF	24	1	0	097	10755.98

45° EII

Fipt

819-002C	1/4	25	450	090	21.54
819-003C	3/8	25	150	090	21.54
819-005C	1/2	20	240	090	20.40
819-007C	3/4	10	60	090	22.41
819-010C	1	10	120	090	24.66
819-012C	1-1/4	10	80	090	42.13
819-015C	1-1/2	10	0	090	42.13
819-020C	2	10	0	090	55.62
819-025C	2-1/2	5	0	090	105.44
819-030C	3	5	0	090	151.87
819-040C	4	5	0	090	238.88

Special Reinforced 45° EII

SR FiPT - Stainless Steel Collar

819-007CSR	3/4	10	120	096	13.19
------------	-----	----	-----	-----	-------

45° Street EII

Spig x Soc

827-005C	1/2	50	400	090	7.39
827-007C	3/4	50	0	090	10.67
827-010C	1	50	0	090	16.97
827-012C	1-1/4	25	0	090	33.33
827-015C	1-1/2	25	0	090	34.17
827-020C	2	10	0	090	38.38
827-025C	2-1/2	12	0	090	84.94
827-030C	3	10	0	090	100.78
827-040C	4	5	0	090	138.35
827-060C	6	3	0	090	501.41
827-080C	8	2	0	090	1043.18
827-100C	10	1	0	091	1979.60
827-120C	12	1	0	091	3482.75
827-140CF	14	1	0	097	4266.85
827-160CF	16	1	0	097	5457.93
827-180CF	18	1	0	097	7963.73

30° EII

Soc

815-005CF	1/2	1	25	097	32.47
815-007CF	3/4	1	25	097	33.47
815-010CF	1	1	20	097	46.29
815-012CF	1-1/4	1	15	097	49.37
815-015CF	1-1/2	1	25	097	53.23
815-020CF	2	25	0	097	100.06
815-025CF	2-1/2	1	18	097	111.81

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

30° EII (continued)

Soc

815-030CF	3	1	10	097	124.71
815-040CF	4	1	18	097	162.85
815-060C	6	5	0	090	501.41
815-080CF	8	1	3	097	593.97
815-100CF	10	1	2	097	985.97
815-120CF	12	1	2	097	1298.61
815-140CF	14	1	0	097	2757.37
815-160CF	16	1	0	097	3881.69
815-180CF	18	1	0	097	5627.37

22-1/2° EII

Soc

816-005C	1/2	20	240	090	8.71
816-007C	3/4	20	240	090	12.54
816-010C	1	20	160	090	19.97
816-012C	1-1/4	20	0	090	39.19
816-015C	1-1/2	20	0	090	40.27
816-020C	2	20	0	090	45.16
816-025C	2-1/2	5	0	090	113.34
816-025CF	2-1/2	1	18	097	111.81
816-030C	3	5	0	090	118.57
816-040C	4	4	0	090	162.76
816-060C	6	4	0	090	501.41
816-060CF	6	1	8	097	312.57
816-080C	8	4	0	090	1043.18
816-080CF	8	1	4	097	593.97
816-100CF	10	1	2	097	985.97
816-120CF	12	1	2	097	1298.61
816-140CF	14	1	0	097	2757.37
816-160CF	16	1	0	097	3881.69
816-180CF	18	1	0	097	5627.37

22-1/2° Street EII

Spig x Soc

842-005C	1/2	50	400	090	9.91
842-007C	3/4	50	0	090	15.46
842-010C	1	50	0	090	24.19
842-012C	1-1/4	20	0	090	30.29
842-015C	1-1/2	25	0	090	43.55
842-020C	2	20	0	090	54.92
842-025C	2-1/2	5	0	090	100.83
842-030C	3	5	0	090	146.44
842-040C	4	4	0	090	187.79
842-060C	6	1	6	090	619.23
842-080C	8	1	2	090	1298.25
842-100CF	10	1	2	097	1001.75
842-120CF	12	1	2	097	1328.65

15° EII

Soc

818-005CF	1/2	1	25	097	32.47
818-007CF	3/4	1	23	097	33.47
818-010CF	1	1	20	097	46.29
818-012CF	1-1/4	1	15	097	49.37
818-015CF	1-1/2	1	25	097	53.23
818-020CF	2	1	25	097	100.06
818-025CF	2-1/2	1	18	097	111.81
818-030CF	3	1	35	097	124.71
818-040CF	4	1	18	097	162.85
818-060CF	6	1	8	097	312.57
818-080CF	8	1	3	097	593.97
818-100CF	10	1	2	097	985.97

Schedule 80 CPVC Industrial Products & Accessories
CPVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

15° Ell (continued)

Soc

818-120CF	12	1	0	097	1298.61
818-140CF	14	1	0	097	2757.37
818-160CF	16	1	0	097	3881.69
818-180CF	18	1	0	097	5627.37

11-1/4° Ell

Soc



811-005CF	1/2	1	52	097	32.47
811-007CF	3/4	1	20	097	33.47
811-010CF	1	1	50	097	46.29
811-012CF	1-1/4	1	26	097	49.37
811-015C	1-1/2	25	0	090	36.92
811-020C	2	10	0	090	45.16
811-025CF	2-1/2	1	25	097	111.81
811-030C	3	10	0	090	118.57
811-040C	4	4	0	090	162.76
811-060CF	6	1	5	097	312.57
811-080CF	8	1	3	097	593.97
811-100CF	10	1	2	097	985.97
811-120CF	12	1	2	097	1298.61
811-140CF	14	1	0	097	2757.37
811-160CF	16	1	0	097	3881.69
811-180CF	18	1	0	097	5627.37

Wye

Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-005C	1/2	25	100	090	16.41
875-007C	3/4	25	0	090	16.95
875-010C	1	20	0	090	28.56
875-012C	1-1/4	20	0	090	43.25
875-015C	1-1/2	20	0	090	46.49
875-020C	2	10	0	090	113.85
875-025C ¹	2-1/2	4	0	090	802.56
875-030C	3	5	0	090	561.37
875-040C	4	4	0	090	593.51
875-060C	6	3	0	090	812.32
875-080C	8	1	0	090	1387.25
875-080CF [*]	8	1	0	097	1213.35
875-100CF [*]	10	1	0	097	2084.38
875-120CF [*]	12	1	0	097	2903.25
875-140CF [*]	14	1	0	097	10093.83
875-160CF [*]	16	1	0	097	12660.95
875-180CF [*]	18	1	0	097	18372.52

¹ Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Reducing Wye

Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
3" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-101C ¹	3/4X1/2	25	0	090	24.23
875-130C ¹	1X1/2	20	0	090	39.93
875-131C ¹	1X3/4	20	0	090	39.93
875-166C ¹	1-1/4X1/2	20	0	090	72.78

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Wye (continued)

Soc

875-167C ¹	1-1/4X3/4	20	0	090	72.78
875-168C ¹	1-1/4X1	20	0	090	72.78
875-209C ¹	1-1/2X1/2	20	0	090	79.83
875-210C ¹	1-1/2X3/4	20	0	090	79.83
875-211C ¹	1-1/2X1	20	0	090	79.83
875-212C ¹	1-1/2X1-1/4	20	0	090	79.83
875-247C ¹	2X1/2	10	0	090	157.96
875-248C ¹	2X3/4	10	0	090	157.96
875-249C ¹	2X1	10	0	090	157.96
875-250C ¹	2X1-1/4	10	0	090	157.96
875-251C ¹	2X1-1/2	10	0	090	157.96
875-335C ¹	3X1	5	0	090	649.75
875-336C ¹	3X1-1/4	5	0	090	649.75
875-337C ¹	3X1-1/2	5	0	090	649.75
875-338C ¹	3X2	4	0	090	649.75
875-339C ¹	3X2-1/2	5	0	090	649.75
875-420C	4X2	4	0	090	657.03
875-422C ¹	4X3	4	0	090	657.03
875-528C ¹	6X2	5	0	090	832.20
875-528CF [*]	6X2	1	3	097	652.93
875-530C ¹	6X3	5	0	090	832.04
875-530CF [*]	6X3	1	2	097	725.94
875-532C	6X4	5	0	090	635.33
875-578C ¹	8X2	1	0	090	2200.71
875-578CF [*]	8X2	1	2	097	877.71
875-579CF [*]	8X2-1/2	1	2	097	919.94
875-580C ¹	8X3	1	0	090	2200.71
875-580CF [*]	8X3	1	2	097	899.54
875-582C ¹	8X4	1	0	090	2200.71
875-582CF [*]	8X4	1	2	097	923.86
875-585C ¹	8X6	1	0	090	2016.79
875-585CF [*]	8X6	1	0	097	1041.03
875-621CF [*]	10X2	1	0	097	977.78
875-623CF [*]	10X3	1	0	097	1040.93
875-624CF [*]	10X4	1	0	097	1272.08
875-626C	10X6	1	0	091	2273.47
875-626CF [*]	10X6	1	0	097	1444.36
875-628C	10X8	1	0	091	2393.72
875-628CF [*]	10X8	1	0	097	1700.86
875-661CF [*]	12X2	1	0	097	1613.25
875-663CF [*]	12X3	1	0	097	1694.85
875-664CF [*]	12X4	1	0	097	1933.34
875-666CF [*]	12X6	1	0	097	2011.19
875-668CF [*]	12X8	1	0	097	2122.81
875-670CF [*]	12X10	1	0	097	2613.59
875-694CF [*]	14X4	1	0	097	4327.35
875-696CF [*]	14X6	1	0	097	4753.01
875-698CF [*]	14X8	1	0	097	5141.54
875-702CF [*]	14X12	1	0	097	6263.59
875-754CF [*]	16X4	1	0	097	5445.08
875-756CF [*]	16X6	1	0	097	5733.40
875-758CF [*]	16X8	1	0	097	6657.34
875-760CF [*]	16X10	1	0	097	7481.91
875-762CF [*]	16X12	1	0	097	8114.48
875-764CF [*]	16X14	1	0	097	10207.76
875-784CF [*]	18X4	1	0	097	7279.23
875-786CF [*]	18X6	1	0	097	7812.35
875-788CF [*]	18X8	1	0	097	8672.77
875-790CF [*]	18X10	1	0	097	9561.44
875-792CF [*]	18X12	1	0	097	10515.23
875-794CF [*]	18X14	1	0	097	13388.92
875-796CF [*]	18X16	1	0	097	14909.73

¹ Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.



Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Double Wye Soc



100 psi Maximum internal Pressure Rating @ 73°F (23°C)

876-020CF*	2	1	4	097	472.51
876-030CF*	3	1	4	097	602.69
876-040CF*	4	1	2	097	1033.38
876-060CF*	6	1	0	097	1801.69
876-080CF*	8	1	0	097	3231.25
876-100CF*	10	1	0	097	3506.62
876-120CF*	12	1	0	097	5253.80

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Reducing Double Wye Soc



Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

876-338C	3X2	5	0	090	699.94
876-420CF*	4X2	1	2	097	880.53
876-421CF*	4X2-1/2	1	2	097	931.82
876-422CF*	4X3	1	2	097	1003.23
876-528CF*	6X2	1	3	097	1497.52
876-529CF*	6X2-1/2	1	2	097	1516.17
876-530CF*	6X3	1	2	097	1540.84
876-532CF*	6X4	1	0	097	1711.15
876-578CF*	8X2	1	2	097	2559.19
876-579CF*	8X2-1/2	1	2	097	2597.01
876-580CF*	8X3	1	2	097	2617.57
876-582CF*	8X4	1	0	097	2817.99
876-585CF*	8X6	1	0	097	2970.78
876-621CF*	10X2	1	0	097	3085.49
876-622CF*	10X2-1/2	1	0	097	3149.83
876-623CF*	10X3	1	0	097	3205.75
876-624CF*	10X4	1	0	097	3279.87
876-626CF*	10X6	1	0	097	3511.80
876-628CF*	10X8	1	0	097	3688.53
876-661CF*	12X2	1	0	097	3321.92
876-662CF*	12X2-1/2	1	0	097	3481.19
876-663CF*	12X3	1	0	097	3542.61
876-666CF*	12X6	1	0	097	4019.55
876-668CF*	12X8	1	0	097	4560.37
876-664CF*	12X4	1	0	097	3672.34
876-670CF*	12X10	1	0	097	4965.55

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Cross Soc



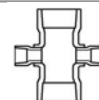
820-002C	1/4	25	150	090	60.36
820-005C	1/2	50	0	090	60.36
820-007C	3/4	50	0	090	63.53
820-010C	1	50	0	090	70.41
820-012C	1-1/4	25	0	090	75.34
820-015C	1-1/2	25	0	090	81.88
820-020C	2	10	0	090	106.21
820-025C	2-1/2	10	0	090	141.60
820-030C	3	5	0	090	180.33
820-040C	4	3	0	090	322.13
820-060CF	6	1	0	097	846.53
820-080CF	8	1	0	097	1610.20

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cross (continued) Soc

820-100CF	10	1	0	097	2395.27
820-120CF	12	1	0	097	3403.32
820-140CF	14	1	0	097	9196.80
820-160CF	16	1	0	097	10962.05
820-180CF	18	1	0	097	14738.01

Reducing Cross Soc



820-101C ¹	3/4X1/2	50	0	090	78.76
820-130C ¹	1X1/2	25	0	090	93.43
820-131C	1X3/4	20	0	090	93.43
820-166C ¹	1-1/4X1/2	25	0	090	83.58
820-167C	1-1/4X3/4	25	0	090	67.80
820-168C ¹	1-1/4X1	25	0	090	134.18
820-209C ¹	1-1/2X1/2	20	0	090	148.27
820-210C	1-1/2X3/4	15	0	090	148.27
820-211C ¹	1-1/2X1	25	0	090	148.27
820-212C ¹	1-1/2X1-1/4	25	0	090	148.27
820-247C ¹	2X1/2	10	0	090	191.97
820-248C ¹	2X3/4	10	0	090	191.97
820-249C ¹	2X1	10	0	090	191.97
820-250C ¹	2X1-1/4	10	0	090	191.97
820-251C ¹	2X1-1/2	10	0	090	191.97
820-289C	2-1/2X1	15	0	090	130.53
820-290C ¹	2-1/2X1-1/4	10	0	090	246.24
820-291C ¹	2-1/2X1-1/2	8	0	090	246.24
820-292C ¹	2-1/2X2	10	0	090	246.24
820-335C ¹	3X1	4	0	090	339.07
820-336C ¹	3X1-1/4	4	0	090	339.07
820-337C ¹	3X1-1/2	4	0	090	339.07
820-338C ¹	3X2	4	0	090	339.07
820-339C ¹	3X2-1/2	4	0	090	339.07
820-420C ¹	4X2	3	0	090	500.11
820-422C ¹	4X3	3	0	090	500.11
820-420CF	4X2	1	3	097	491.43
820-528CF	6X2	1	2	097	770.93
820-530CF	6X3	1	2	097	870.96
820-532CF	6X4	1	2	097	892.04
820-578CF	8X2	1	0	097	1004.62
820-580CF	8X3	1	0	097	1054.41
820-582CF	8X4	1	0	097	987.42
820-585CF	8X6	1	0	097	1297.36
820-621CF	10X2	1	0	097	1204.62
820-623CF	10X3	1	0	097	1295.17
820-624CF	10X4	1	0	097	1354.00
820-626CF	10X6	1	0	097	1617.54
820-628CF	10X8	1	0	097	1872.68
820-661CF	12X2	1	0	097	1470.85
820-663CF	12X3	1	0	097	1616.36
820-664CF	12X4	1	0	097	1706.59
820-666CF	12X6	1	0	097	1982.00
820-668CF	12X8	1	0	097	2311.97
820-670CF	12X10	0	0	097	2751.45
820-691CF	14X2	1	0	097	2832.47
820-693CF	14X3	1	0	097	2991.55
820-694CF	14X4	1	0	097	3124.42
820-696CF	14X6	1	0	097	4297.97
820-698CF	14X8	1	0	097	4887.06
820-700CF	14X10	1	0	097	5441.75
820-702CF	14X12	1	0	097	6203.71
820-751CF	16X2	1	0	097	4022.87
820-753CF	16X3	1	0	097	4191.95
820-754CF	16X4	1	0	097	4355.78
820-756CF	16X6	1	0	097	5783.51

Schedule 80 CPVC Industrial Products & Accessories
CPVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Cross (continued)

Soc

820-758CF	16X8	1	0	097	6392.65
820-762CF	16X12	1	0	097	7493.28
820-764CF	16X14	1	0	097	9825.52
820-781CF	18X2	1	0	097	5388.40
820-783CF	18X3	1	0	097	5593.63
820-784CF	18X4	1	0	097	6502.03
820-786CF	18X6	1	0	097	7443.87
820-788CF	18X8	1	0	097	8128.11
820-790CF	18X10	1	0	097	8913.55
820-792CF	18X12	1	0	097	9678.52
820-794CF	18X14	1	0	097	12024.76
820-796CF	18X16	1	0	097	13482.28

[†] Sized with Bushing

Coupling
Soc



829-002C	1/4	25	450	090	16.41
829-003C	3/8	25	150	090	16.41
829-005C	1/2	25	150	090	6.38
829-007C	3/4	15	90	090	8.92
829-010C	1	15	90	090	12.01
829-012C	1-1/4	10	80	090	17.99
829-015C	1-1/2	10	40	090	22.64
829-020C	2	20	0	090	26.32
829-025C	2-1/2	5	0	090	58.57
829-030C	3	5	0	090	63.64
829-040C	4	5	0	090	83.40
829-050C	5	6	0	090	186.61
829-060C	6	4	0	090	196.43
829-080C	8	4	0	090	530.87
829-100C	10	1	0	091	667.77
829-120C	12	1	0	091	782.13
829-140C	14	1	0	091	995.19
829-140CF	14	1	0	097	2195.46
829-160CF	16	1	0	097	3371.26
829-180CF	18	1	0	097	4169.98
829-200CF	20	1	0	097	5841.00
829-240CF	24	1	0	097	7299.48

Grooved Coupling Adapter
Groove x Soc



833-012C	1-1/4	10	60	090	28.71
833-015C	1-1/2	10	80	090	37.85
833-020C	2	5	40	090	49.20
833-025C	2-1/2	5	0	090	80.92
833-030C	3	5	0	090	99.77
833-040C	4	5	0	090	169.78
833-050CF	5	1	7	097	187.87
833-060C	6	5	0	090	242.87
833-080CF	8	1	4	097	306.32
833-100CF	10	1	0	097	480.74
833-120CF	12	1	0	097	678.01

Coupling
Fipt



830-002C	1/4	25	450	090	20.62
830-003C	3/8	25	150	090	20.62
830-005C	1/2	25	150	090	16.97
830-007C	3/4	25	150	090	27.41
830-010C	1	15	90	090	31.12
830-012C	1-1/4	10	60	090	33.00

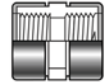
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling (continued)

Fipt

830-015C	1-1/2	10	80	090	35.46
830-020C	2	10	0	090	41.80
830-025C	2-1/2	5	0	090	75.01
830-030C	3	5	0	090	87.32
830-040C	4	5	0	090	177.99
830-060CF	6	1	8	097	242.58

Special Reinforced Coupling
SR FiPT - Stainless Steel Collar



830-005CSR	1/2	25	300	096	9.31
830-007CSR	3/4	25	300	096	15.04
830-010CSR	1	25	200	096	17.08
830-012CSR	1-1/4	10	120	096	18.15
830-015CSR	1-1/2	10	80	096	19.46
830-020CSR	2	10	0	096	23.00

Reducer Coupling
Soc



829-101C	3/4X1/2	50	400	090	16.69
829-130C	1X1/2	25	200	090	23.81
829-131C	1X3/4	25	200	090	23.81
829-166C	1-1/4X1/2	25	0	090	54.52
829-167C	1-1/4X3/4	25	0	090	54.52
829-168C	1-1/4X1	25	0	090	54.52
829-209C	1-1/2X1/2	25	0	090	54.08
829-210C	1-1/2X3/4	25	0	090	54.08
829-211C	1-1/2X1	25	0	090	54.08
829-212C	1-1/2X1-1/4	25	0	090	54.08
829-247C	2X1/2	25	0	090	71.52
829-248C	2X3/4	10	80	090	71.52
829-249C	2X1	10	40	090	71.52
829-250C	2X1-1/4	10	0	090	71.52
829-251C	2X1-1/2	10	40	090	71.52
829-291C	2-1/2X1-1/2	10	0	090	81.43
829-292C	2-1/2X2	10	0	090	81.43
829-335C [†]	3X1	8	0	090	201.41
829-336C [†]	3X1-1/4	6	0	090	207.57
829-337C [†]	3X1-1/2	8	0	090	207.57
829-338C	3X2	8	0	090	164.54
829-339C	3X2-1/2	5	0	090	165.23
829-339CF	3X2-1/2	1	9	097	156.98
829-416C [†]	4X3/4	4	0	090	237.27
829-417C [†]	4X1	4	0	090	237.27
829-419C [†]	4X1-1/2	4	0	090	237.27
829-420C	4X2	6	0	090	196.28
829-421C	4X2-1/2	4	0	090	196.28
829-422C	4X3	4	0	090	196.28
829-488CF	5X3	1	6	097	193.67
829-490CF	5X4	1	6	097	122.16
829-528C [†]	6X2	6	0	090	519.26
829-529C [†]	6X2-1/2	4	0	090	611.96
829-530C [†]	6X3	12	0	090	529.88
829-532C	6X4	4	0	090	445.86
829-580CF	8X3	1	6	097	472.21
829-582C [†]	8X4	2	0	090	809.06
829-582CF	8X4	1	4	097	418.63
829-585C	8X6	2	0	090	772.53
829-621CF	10X2	1	0	097	874.77
829-623CF	10X3	1	2	097	733.64
829-624CF	10X4	1	2	097	705.16
829-625CF	10X5	1	2	097	760.05
829-626C	10X6	1	0	091	1201.39
829-626CF	10X6	1	2	097	542.96



Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Coupling (continued)

Soc

829-628C	10X8	1	0	091	1201.39
829-628CF	10X8	1	4	097	711.46
829-664CF	12X4	1	2	097	1569.53
829-665CF	12X5	1	0	097	1568.44
829-666CF	12X6	1	0	097	1459.73
829-668C	12X8	1	0	091	1308.97
829-668CF	12X8	1	0	097	1117.05
829-670CF	12X10	1	2	097	595.68
829-694CF	14X4	1	0	097	2278.63
829-696CF	14X6	1	0	097	2151.97
829-698CF	14X8	1	0	097	1791.60
829-700CF	14X10	1	0	097	1533.43
829-702CF	14X12	1	0	097	1341.43
829-754CF	16X4	1	0	097	2807.12
829-756CF	16X6	1	0	097	2889.01
829-758CF	16X8	1	0	097	3302.15
829-760CF	16X10	1	0	097	3162.98
829-762CF	16X12	1	0	097	2997.72
829-764CF	16X14	1	0	097	2663.35
829-783CF	18X3	1	0	097	5784.52
829-784CF	18X4	1	0	097	5739.07
829-786CF	18X6	1	0	097	5696.24
829-788CF	18X8	1	0	097	5572.34
829-790CF	18X10	1	0	097	5538.84
829-792CF	18X12	1	0	097	5444.07
829-794CF	18X14	1	0	097	5358.60
829-796CF	18X16	1	0	097	3911.68
829-818CF	20X8	1	0	097	5527.60
829-826CF	20X16	1	0	097	6318.89
829-828CF	20X18	1	0	097	5855.48
829-906CF	24X6	1	0	097	9250.31
829-918CF	24X18	1	0	097	12982.88
829-920CF	24X20	1	0	097	11684.48

¹ Sized with Bushing

Eccentric Reducer Coupling

Soc

829-101CFE	3/4X1/2	1	15	097	37.02
829-130CFE	1X1/2	1	16	097	40.16
829-131CFE	1X3/4	1	15	097	38.64
829-168CFE	1-1/4X1	1	12	097	41.98
829-209CFE	1-1/2X1/2	1	10	097	66.49
829-210CFE	1-1/2X3/4	1	10	097	79.79
829-212CFE	1-1/2X1-1/4	1	20	097	43.98
829-249CFE	2X1	1	25	097	60.15
829-250CFE	2X1-1/4	1	25	097	54.75
829-251CFE	2X1-1/2	1	10	097	53.46
829-290CFE ²	2-1/2X1-1/4	1	10	097	91.27
829-291CFE ²	2-1/2X1-1/2	1	20	097	91.08
829-292CFE	2-1/2X2	1	10	097	64.68
829-335CFE ²	3X1	1	10	097	142.22
829-336CFE ²	3X1-1/4	1	10	097	135.81
829-337CFE ²	3X1-1/2	1	10	097	133.58
829-338CFE	3X2	1	20	097	86.60
829-339CFE	3X2-1/2	1	10	097	173.91
829-417CFE ³	4X1	1	18	097	219.44
829-418CFE ³	4X1-1/4	1	6	097	223.46
829-419CFE ³	4X1-1/2	1	6	097	211.48
829-420CFE ²	4X2	1	10	097	193.54
829-421CFE ²	4X2-1/2	1	6	097	178.65
829-422CFE	4X3	1	10	097	125.27
829-490CFE	5X4	1	8	097	148.45
829-528CFE ³	6X2	1	6	097	391.13
829-529CFE ³	6X2-1/2	1	4	097	364.35



Eccentric Reducer Coupling (continued)

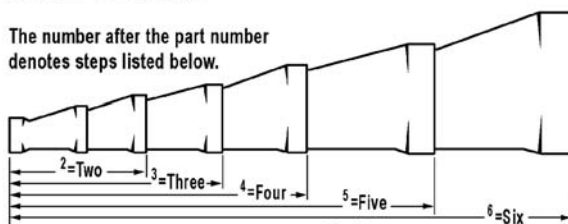
Soc

829-530CFE ²	6X3	1	6	097	312.38
829-532CFE	6X4	1	10	097	265.92
829-578CFE ⁴	8X2	1	0	097	777.20
829-580CFE ³	8X3	1	2	097	701.37
829-582CFE ²	8X4	1	2	097	667.32
829-583CFE ²	8X5	1	2	097	594.73
829-585CFE	8X6	1	4	097	578.72
829-624CFE ³	10X4	1	0	097	1385.20
829-625CFE ³	10X5	1	0	097	1226.56
829-626CFE ²	10X6	1	2	097	1187.62
829-628CFE	10X8	1	2	097	853.23
829-664CFE ⁴	12X4	1	0	097	2495.13
829-666CFE ³	12X6	1	0	097	1630.43
829-668CFE ²	12X8	1	0	097	1554.99
829-670CFE	12X10	1	0	097	1391.57
829-696CFE ³	14X6	1	0	097	2699.17
829-698CFE ²	14X8	1	0	097	2646.46
829-700CFE	14X10	1	0	097	1886.47
829-702CFE	14X12	1	0	097	1722.29
829-756CFE ⁵	16X6	1	0	097	4930.12
829-758CFE ⁴	16X8	1	0	097	4766.78
829-760CFE ³	16X10	1	0	097	4679.29
829-762CFE ²	16X12	1	0	097	4495.34
829-764CFE	16X14	1	0	097	4135.80
829-786CFE ⁶	18X6	1	0	097	9506.57
829-788CFE ⁵	18X8	1	0	097	9374.63
829-790CFE ⁴	18X10	1	0	097	9011.52
829-792CFE ³	18X12	1	0	097	8332.43
829-794CFE ²	18X14	1	0	097	7739.49
829-796CFE	18X16	1	0	097	5932.67

Eccentric Reducer Coupling Footnotes

Multi-Step Configurations

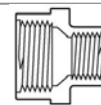
The number after the part number denotes steps listed below.



Reducer Coupling

Fipt

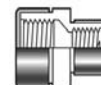
830-101C	3/4X1/2	50	200	090	27.80
----------	---------	----	-----	-----	-------



Special Reinforced Reducer Coupling

SR FiPT - Stainless Steel Collar

830-101CSR	3/4X1/2	50	200	096	16.68
830-130CSR	1X1/2	50	0	096	20.14
830-131CSR	1X3/4	25	200	096	20.14
830-168CSR	1-1/4X1	25	0	096	27.39
830-210CSR	1-1/2X3/4	25	0	096	39.17
830-211CSR	1-1/2X1	10	80	096	39.17
830-212CSR	1-1/2X1-1/4	10	80	096	39.17
830-249CSR	2X1	25	0	096	96.42
830-251CSR	2X1-1/2	15	0	096	96.42



Schedule 80 CPVC Industrial Products & Accessories
CPVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Fabricated Repair Coupling Gasket



828-020CF	2	1	5	097	129.34
828-030CF	3	1	5	097	164.76
828-040CF	4	1	4	097	205.29
828-060CF	6	1	2	097	237.88
828-080CF	8	1	2	097	639.58
828-100CF	10	1	0	097	689.98
828-120CF	12	1	0	097	907.87
828-140CF	14	1	0	097	2672.22
828-160CF	16	1	0	097	3783.44

Female Adapter Soc x Fipt



835-002C	1/4	25	450	090	20.82
835-003C	3/8	25	150	090	20.82
835-005C	1/2	25	150	090	10.32
835-007C	3/4	15	90	090	10.22
835-010C	1	15	90	090	25.17
835-012C	1-1/4	10	120	090	25.77
835-015C	1-1/2	10	80	090	30.02
835-020C	2	10	0	090	51.74
835-025C	2-1/2	5	0	090	99.24
835-030C	3	5	0	090	203.62
835-040C	4	5	0	090	338.92
835-060C	6	6	0	090	481.18
835-060CF	6	1	8	097	304.80
835-080C	8	3	0	090	760.28
835-080CF	8	1	0	097	383.40
835-100CF	10	1	2	097	557.13
835-120CF	12	1	0	097	721.95

Special Reinforced Female Adapter Soc x SR Fipt - Stainless Steel Collar



835-002CSR	1/4	25	450	096	13.06
835-003CSR	3/8	25	300	096	13.06
835-005CSR	1/2	25	300	096	5.61
835-007CSR	3/4	25	150	096	6.06
835-010CSR	1	25	200	096	13.82
835-012CSR	1-1/4	10	60	096	14.18
835-015CSR	1-1/2	10	80	096	16.46
835-020CSR	2	10	0	096	23.39
835-025CSR	2-1/2	5	0	096	54.39
835-030CSR	3	15	0	096	111.75
835-040CSR	4	5	0	096	185.99
835-060CSR	6	6	0	096	290.55

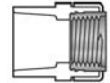
Encapsulated Special Reinforced (SR) Female Adapter Soc x ESR Fipt



835-002CESR	1/4	25	450	096	16.57
835-003CESR	3/8	25	300	096	16.57
835-005CESR	1/2	25	300	096	8.60
835-007CESR	3/4	25	300	096	9.08
835-010CESR	1	25	200	096	20.01
835-012CESR	1-1/4	10	80	096	20.48
835-015CESR	1-1/2	10	0	096	26.52
835-020CESR	2	10	0	096	41.22

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

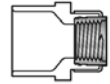
Transition Female Adapter Soc x Fipt With Brass Thread Insert



835-005CBR	1/2	25	150	096	31.64
835-007CBR	3/4	15	90	096	65.48
835-010CBR	1	15	90	096	114.92
835-012CBR	1-1/4	15	60	096	187.47
835-015CBR	1-1/2	10	80	096	247.18
835-020CBR	2	8	32	096	308.72

Not intended to convey or dispense water for human consumption through drinking or cooking

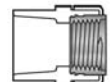
Transition Reducing Female Adapter Soc x Fipt With Brass Thread Insert



835-101CBR	3/4X1/2	50	0	096	45.81
------------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Female Adapter Soc x Fipt With Type 316 Stainless Steel Thread Insert



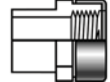
835-005CSS	1/2	25	150	096	62.13
835-007CSS	3/4	15	90	096	86.74
835-010CSS	1	15	90	096	151.81
835-012CSS	1-1/4	15	0	096	246.72
835-015CSS	1-1/2	10	60	096	321.87
835-020CSS	2	8	32	096	376.68

Transition Male Adapter w/Brass Thread Brass Mipt x Socket



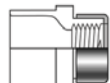
836-005CBR	1/2	40	160	096	70.14
836-007CBR	3/4	40	160	096	98.75
836-010CBR	1	10	60	096	171.99
836-012CBR	1-1/4	10	60	096	279.76
836-015CBR	1-1/2	10	40	096	363.71
836-020CBR	2	8	32	096	426.20

Special Reinforced Spigot Female Adapter Spig x SR Fipt - Stainless Steel Collar



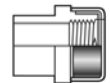
878-005CSR	1/2	50	600	096	5.98
878-007CSR	3/4	25	300	096	6.31
878-010CSR	1	50	0	096	14.19
878-012CSR	1-1/4	25	0	096	14.68
878-015CSR	1-1/2	25	0	096	17.04
878-020CSR	2	15	0	096	31.04
878-030CSR	3	5	0	096	113.15
878-040CSR	4	5	0	096	189.95

Special Reinforced Reducing Female Adapter Soc x SR Fipt - Stainless Steel Collar



835-074CSR	1/2X3/4	50	400	096	6.06
835-101CSR	3/4X1/2	50	400	096	6.06
835-102CSR	3/4X1	50	0	096	13.82
835-130CSR	1X1/2	50	0	096	13.82
835-131CSR	1X3/4	25	200	096	13.82

Encapsulated Special Reinforced (SR) Female Adapter Spig x ESR Fipt



878-005CESR	1/2	50	600	096	8.85
878-007CESR	3/4	25	300	096	9.42
878-010CESR	1	50	0	096	20.20



Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Encapsulated Special Reinforced (SR) Female Adapter

(continued)

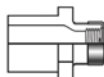
Spig x ESR Fipt

878-012CESR	1-1/4	25	0	096	20.75
878-015CESR	1-1/2	25	0	096	27.05
878-020CESR	2	15	0	096	41.81

Special Reinforced Reducing Spigot Female Adapter

Spig x SR Fipt - Stainless Steel Collar

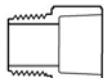
878-072CSR	1/2X1/4	25	450	096	17.14
878-098CSR	3/4X1/4	50	400	096	19.95
878-128CSR	1X1/4	50	400	096	22.33



Male Adapter

Mipt x Soc

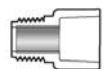
836-005C	1/2	25	150	090	8.24
836-007C	3/4	25	150	090	10.05
836-102C	3/4X1	25	0	090	37.01
836-131C	1X3/4	25	0	090	35.15
836-010C	1	20	240	090	16.94
836-012C	1-1/4	10	60	090	24.97
836-015C	1-1/2	10	120	090	33.74
836-020C	2	10	80	090	45.77
836-025C	2-1/2	5	0	090	124.80
836-030C	3	5	0	090	167.71
836-040C	4	5	0	090	283.52
836-060C	6	5	0	090	406.34
836-060CF	6	1	8	097	287.99
836-080CF	8	1	2	097	367.68
836-100CF	10	1	2	097	681.27
836-120CF	12	1	0	097	792.82



Reinforced Male Adapter

R Mipt x Soc - Stainless Steel Sleeve

836-005CR	1/2	25	150	096	8.62
836-007CR	3/4	25	300	096	9.87
836-010CR	1	10	120	096	11.71



Male Adapter

Spig x Mipt

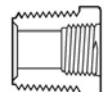
861-005C	1/2	50	300	090	10.04
861-007C	3/4	25	150	090	12.47
861-010C	1	50	0	090	21.16
861-131C	1X3/4	50	200	090	24.72
861-012C	1-1/4	25	200	090	24.00
861-015C	1-1/2	25	0	090	26.49
861-020C	2	25	0	090	31.00



Reducer (T.T.) Bushing Flush Style

Mipt x Fipt

839-041C	1/4X1/8	25	500	090	19.25
839-052C	3/8X1/4	50	450	090	19.25
839-072C	1/2X1/4	50	300	090	19.25
839-073C	1/2X3/8	50	600	090	19.25
839-098C	3/4X1/4	50	300	090	21.22
839-099C	3/4X3/8	50	300	090	21.22
839-101C	3/4X1/2	50	300	090	9.13
839-128C	1X1/4	25	150	090	22.92
839-129C	1X3/8	50	600	090	22.92
839-130C	1X1/2	50	300	090	15.38
839-131C	1X3/4	50	700	090	15.38



Reducer (T.T.) Bushing Flush Style (continued)

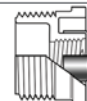
Mipt x Fipt

839-166C	1-1/4X1/2	25	150	090	30.55
839-167C	1-1/4X3/4	25	150	090	30.55
839-168C	1-1/4X1	25	300	090	30.31
839-209C	1-1/2X1/2	25	300	090	36.79
839-210C	1-1/2X3/4	25	300	090	36.79
839-211C	1-1/2X1	25	300	090	36.79
839-212C	1-1/2X1-1/4	25	300	090	36.51
839-247C	2X1/2	10	60	090	40.69
839-248C	2X3/4	10	60	090	40.69
839-249C	2X1	10	60	090	40.69
839-250C	2X1-1/4	10	60	090	40.69
839-251C	2X1-1/2	10	60	090	36.51
839-292C	2-1/2X2	10	40	090	97.82
839-337C	3X1-1/2	10	0	090	131.60
839-338C	3X2	10	0	090	131.60
839-339C	3X2-1/2	10	0	090	131.60
839-420C	4X2	6	0	090	226.13
839-422C	4X3	6	0	090	226.13
839-530C	6X3	5	0	090	816.33
839-532C	6X4	5	0	090	816.33

Special Reinforced Reducing Bushing

Mipt x SR Fipt - Stainless Steel Collar

839-209CSR	1-1/2X1/2	25	300	096	22.11
839-210CSR	1-1/2X3/4	25	300	096	22.11
839-247CSR	2X1/2	10	60	096	24.43
839-248CSR	2X3/4	10	60	096	24.43
839-249CSR	2X1	10	120	096	24.43
839-420CSR	4X2	6	0	096	135.66



Reducer Bushing Flush Style

Spig x Soc

837-052C	3/8X1/4	50	450	090	13.34
837-072C	1/2X1/4	50	300	090	13.34
837-073C	1/2X3/8	50	300	090	13.34
837-101C	3/4X1/2	50	300	090	6.80
837-129C ¹	1X3/8	50	0	090	23.18
837-130C	1X1/2	50	400	090	10.57
837-131C	1X3/4	50	300	090	10.57
837-166C	1-1/4X1/2	25	300	090	28.06
837-167C	1-1/4X3/4	25	150	090	28.06
837-168C	1-1/4X1	25	150	090	28.06
837-209C	1-1/2X1/2	25	200	090	31.73
837-210C	1-1/2X3/4	25	200	090	31.73
837-211C	1-1/2X1	25	200	090	31.73
837-212C	1-1/2X1-1/4	25	200	090	31.73
837-247C	2X1/2	10	120	090	40.95
837-248C	2X3/4	10	60	090	40.95
837-249C	2X1	10	120	090	40.95
837-250C	2X1-1/4	10	60	090	40.95
837-251C	2X1-1/2	10	60	090	40.95
837-289C ¹	2-1/2X1	10	80	090	70.42
837-290C	2-1/2X1-1/4	10	80	090	49.87
837-291C	2-1/2X1-1/2	10	40	090	49.87
837-292C	2-1/2X2	15	0	090	49.87
837-334C ¹	3X3/4	10	0	090	86.86
837-335C	3X1	10	0	090	75.98
837-336C	3X1-1/4	10	0	090	75.98
837-337C	3X1-1/2	10	0	090	75.98
837-338C	3X2	10	0	090	75.98
837-339C	3X2-1/2	15	0	090	75.98
837-420C	4X2	6	0	090	84.01
837-421C ¹	4X2-1/2	6	0	090	84.01



Schedule 80 CPVC Industrial Products & Accessories
CPVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style (continued)

Spig x Soc

837-422C	4X3	6	0	090	84.01
837-490C	5X4	4	0	090	158.80
837-528C	6X2	5	0	090	180.23
837-529C ¹	6X2-1/2	5	0	090	261.44
837-530C	6X3	5	0	090	180.23
837-532C	6X4	5	0	090	178.97
837-578C ¹	8X2	4	0	090	777.03
837-580C ¹	8X3	4	0	090	777.03
837-582C	8X4	4	0	090	777.03
837-585C	8X6	4	0	090	589.20
837-621C ¹	10X2	2	0	091	1294.45
837-623C ¹	10X3	1	2	091	1294.45
837-624C ¹	10X4	4	0	091	1294.45
837-626C	10X6	4	0	091	1042.82
837-628C	10X8	4	0	091	1042.82
837-628CF	10X8	1	6	097	902.45
837-663CF	12X3	1	2	097	1461.81
837-664C ¹	12X4	2	0	091	2125.43
837-666CF	12X6	1	2	097	1250.18
837-668C	12X8	2	0	091	1314.74
837-670CF	12X10	1	3	097	941.39
837-696CF	14X6	1	3	097	3300.05
837-698CF	14X8	1	3	097	2300.68
837-700CF	14X10	1	3	097	1868.05
837-702CF	14X12	1	3	097	1353.71
837-756CF	16X6	1	2	097	5202.65
837-758CF	16X8	1	0	097	4863.02
837-760CF	16X10	1	0	097	3888.04
837-762CF	16X12	1	2	097	1977.99
837-764CF	16X14	1	2	097	1883.56
837-788CF	18X8	1	0	097	5762.54
837-796CF	18X16	1	0	097	2102.81

¹ Sized with Bushing

Reducer Bushing Flush Style

Spig x Fipt



838-052C	3/8X1/4	50	450	090	14.34
838-071C	1/2X1/8	50	600	090	14.34
838-072C	1/2X1/4	50	600	090	14.34
838-073C	1/2X3/8	50	300	090	14.34
838-098C	3/4X1/4	50	600	090	15.99
838-099C	3/4X3/8	50	600	090	15.99
838-101C	3/4X1/2	50	600	090	7.42
838-129C	1X3/8	50	400	090	21.23
838-130C	1X1/2	50	400	090	9.41
838-131C	1X3/4	50	400	090	9.41
838-166C	1-1/4X1/2	25	300	090	30.39
838-167C	1-1/4X3/4	25	300	090	30.39
838-168C	1-1/4X1	25	300	090	30.39
838-207C	1-1/2X1/4	25	200	090	37.43
838-209C	1-1/2X1/2	25	200	090	37.43
838-210C	1-1/2X3/4	25	200	090	37.43
838-211C	1-1/2X1	25	200	090	37.43
838-212C	1-1/2X1-1/4	25	200	090	37.43
838-247C	2X1/2	10	120	090	51.46
838-248C	2X3/4	10	60	090	51.46
838-249C	2X1	10	120	090	51.46
838-250C	2X1-1/4	10	120	090	51.46
838-251C	2X1-1/2	10	120	090	51.46
838-287C	2-1/2X1/2	10	0	090	82.33
838-288C	2-1/2X3/4	10	40	090	82.33
838-289C	2-1/2X1	10	40	090	82.33
838-290C	2-1/2X1-1/4	10	0	090	82.33
838-291C	2-1/2X1-1/2	10	40	090	81.77

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducer Bushing Flush Style (continued)

Spig x Fipt

838-292C	2-1/2X2	10	40	090	81.77
838-334C	3X3/4	10	0	090	217.84
838-335C	3X1	10	0	090	217.84
838-336C	3X1-1/4	10	0	090	190.57
838-337C	3X1-1/2	10	0	090	190.57
838-338C	3X2	10	0	090	182.27
838-339C	3X2-1/2	10	0	090	183.75
838-420C	4X2	6	0	090	371.41
838-421C	4X2-1/2	6	0	090	371.41
838-422C	4X3	6	0	090	371.41
838-530C	6X3	5	0	090	748.81
838-532C	6X4	5	0	090	748.81

Special Reinforced Reducer Bushing

Spig x SR Fipt - Stainless Steel Collar



838-128CSR	1X1/4	25	150	096	12.74
838-207CSR	1-1/2X1/4	25	200	096	21.55
838-209CSR	1-1/2X1/2	10	120	096	22.46
838-210CSR	1-1/2X3/4	10	120	096	22.46
838-247CSR	2X1/2	10	80	096	30.86
838-248CSR	2X3/4	10	80	096	30.86
838-249CSR	2X1	10	80	096	30.86
838-334CSR	3X3/4	10	0	096	130.68
838-335CSR	3X1	10	0	096	130.68
838-336CSR	3X1-1/4	10	0	096	130.68
838-337CSR	3X1-1/2	10	0	096	130.68
838-528CSR	6X2	5	0	096	449.27
838-530CSR	6X3	5	0	096	449.27

Cap Soc



847-002C	1/4	25	450	090	10.98
847-003C	3/8	25	450	090	10.98
847-005C	1/2	25	150	090	9.94
847-007C	3/4	25	300	090	14.16
847-010C	1	15	90	090	25.05
847-012C	1-1/4	10	60	090	27.41
847-015C	1-1/2	10	60	090	27.41
847-020C	2	10	80	090	28.91
847-025C	2-1/2	5	40	090	97.32
847-030C	3	5	0	090	106.67
847-040C	4	5	0	090	108.43
847-060C	6	4	0	090	358.80
847-080C	8	3	0	090	1088.83
847-100CF	10	1	5	097	909.66
847-120CF	12	1	4	097	996.98
847-140CF	14	1	2	097	3058.07
847-160CF	16	1	2	097	4497.65

Cap Fipt



848-002C	1/4	25	450	090	12.85
848-003C	3/8	25	450	090	12.85
848-005C	1/2	25	150	090	11.04
848-007C	3/4	25	300	090	18.27
848-010C	1	15	90	090	25.58
848-012C	1-1/4	10	120	090	45.62
848-015C	1-1/2	10	120	090	46.74
848-020C	2	10	80	090	67.33
848-025C	2-1/2	5	40	090	155.79
848-030C	3	5	0	090	204.38
848-040C	4	5	0	090	296.89



Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Cap SR Fipt - Stainless Steel Collar



848-002CSR	1/4	25	500	096	7.06
848-003CSR	3/8	25	450	096	7.06
848-007CSR	3/4	25	300	096	11.00
848-030CSR	3	5	0	096	122.80

Plug Spig



849-005C	1/2	50	300	090	12.65
849-007C	3/4	50	300	090	15.61
849-010C	1	50	200	090	17.61
849-012C	1-1/4	25	100	090	22.46
849-015C	1-1/2	10	120	090	24.64
849-020C	2	10	120	090	33.01
849-025CF ⁴	2-1/2	1	8	097	39.16
849-030CF ⁴	3	1	4	097	90.04
849-040CF ⁴	4	1	4	097	111.11
849-060CF ⁴	6	1	6	097	137.95
849-080CF ⁴	8	1	6	097	370.53
849-100CF ⁴	10	1	2	097	737.22
849-120CF ⁴	12	1	0	097	1428.84

⁴ Plug fabricated using Cap and pipe spigot.

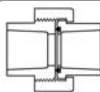
Plug Mipt



850-002C	1/4	50	900	090	10.34
850-003C	3/8	50	450	090	10.34
850-005C	1/2	50	500	090	8.98
850-007C	3/4	25	300	090	11.37
850-010C	1	15	180	090	18.71
850-012C	1-1/4	25	150	090	28.26
850-015C	1-1/2	25	150	090	23.44
850-020C	2	10	120	090	31.91
850-025C	2-1/2	5	30	090	54.17
850-030C	3	5	40	090	58.01
850-040C	4	5	0	090	102.93
850-060C	6	6	0	090	144.54
850-060CF ⁴	6	1	2	097	373.23
850-080CF ⁴	8	1	2	097	716.63
850-100CF ⁴	10	1	3	097	1034.35
850-120CF ⁴	12	1	0	097	1577.71

⁴ Plug fabricated using Cap and threaded pipe.

Union 2000 Soc with FKM O-ring Seal

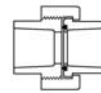


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

857-002C	1/4	25	150	090	41.15
857-003C	3/8	25	150	090	41.15
8057-005C	1/2	20	120	090	27.38
8057-007C	3/4	20	80	090	28.60
8057-010C	1	15	90	090	34.33
8057-012C	1-1/4	10	0	090	69.46
8057-015C	1-1/2	10	0	090	70.73
8057-020C	2	5	0	090	117.24
8057-025C	2-1/2	5	0	090	192.28
8057-030C	3	5	0	090	243.34
8057-040C	4	4	0	090	310.89
8057-060C	6	1	0	090	690.87

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

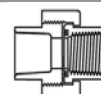
Union 2000 Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

897-002C	1/4	25	150	090	40.65
897-003C	3/8	25	150	090	40.65
8097-005C	1/2	20	120	090	27.29
8097-007C	3/4	20	80	090	28.26
8097-010C	1	15	90	090	33.86
8097-012C	1-1/4	10	0	090	68.57
8097-015C	1-1/2	10	0	090	69.87
8097-020C	2	5	0	090	115.80
8097-025C	2-1/2	5	0	090	191.78
8097-030C	3	5	0	090	240.34
8097-040C	4	4	0	090	307.36
8097-060C	6	1	0	090	683.02

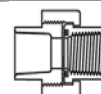
Union 2000 Soc x Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005C	1/2	20	120	090	31.17
8059-007C	3/4	20	80	090	54.39
8059-010C	1	15	90	090	75.07
8059-012C	1-1/4	10	0	090	142.99
8059-015C	1-1/2	10	0	090	142.99
8059-020C	2	5	0	090	161.65
8059-025C	2-1/2	5	0	090	262.44
8059-030C	3	5	0	090	310.41
8059-040C	4	4	0	090	358.95
8059-060C	6	1	0	090	797.67

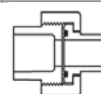
Union 2000 Soc x Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005C	1/2	20	120	090	30.40
8099-007C	3/4	20	80	090	53.75
8099-010C	1	15	90	090	74.14
8099-012C	1-1/4	10	0	090	141.22
8099-015C	1-1/2	10	0	090	141.22
8099-020C	2	5	0	090	159.65
8099-025C	2-1/2	5	0	090	228.69
8099-030C	3	5	0	090	306.60
8099-040C	4	4	0	090	353.68
8099-060C	6	1	0	090	785.98

Union 2000 Soc x Spig with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8056-005C	1/2	20	160	090	27.38
8056-007C	3/4	20	160	090	28.60
8056-010C	1	15	90	090	34.33
8056-012C	1-1/4	10	0	090	69.46
8056-015C	1-1/2	10	0	090	70.73
8056-020C	2	5	0	090	117.24
8056-025C	2-1/2	5	0	090	214.22
8056-030C	3	5	0	090	243.34
8056-040C	4	4	0	090	310.89
8056-060C	6	1	0	090	690.87

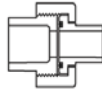
Schedule 80 CPVC Industrial Products & Accessories
CPVC Schedule 80 Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Union 2000

Soc x Spig with EPDM O-ring Seal

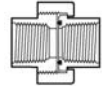


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8096-005C	1/2	20	160	090	27.29
8096-007C	3/4	20	80	090	28.26
8096-010C	1	15	90	090	33.86
8096-012C	1-1/4	10	0	090	68.57
8096-015C	1-1/2	10	0	090	69.87
8096-020C	2	5	0	090	115.80
8096-025C	2-1/2	5	0	090	191.78
8096-030C	3	5	0	090	240.34
8096-040C	4	4	0	090	307.36
8096-060C	6	1	0	090	683.02

Union 2000

Fipt with FKM O-ring Seal

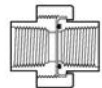


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

858-002C	1/4	25	150	090	46.27
858-003C	3/8	25	150	090	46.27
8058-005C	1/2	20	120	090	29.33
8058-007C	3/4	20	80	090	51.83
8058-010C	1	15	90	090	71.47
8058-012C	1-1/4	10	0	090	136.18
8058-015C	1-1/2	10	0	090	136.18
8058-020C	2	5	0	090	153.93
8058-025C	2-1/2	5	0	090	247.99
8058-030C	3	5	0	090	470.55
8058-040C	4	4	0	090	505.82
8058-060C	6	1	0	090	1124.07

Union 2000

Fipt with EPDM O-ring Seal

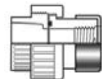


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

898-002C	1/4	25	150	090	45.72
898-003C	3/8	25	100	090	45.72
8098-005C	1/2	20	120	090	28.96
8098-007C	3/4	20	80	090	51.19
8098-010C	1	15	90	090	70.59
8098-012C	1-1/4	10	0	090	134.60
8098-015C	1-1/2	10	0	090	134.60
8098-020C	2	5	0	090	152.06
8098-025C	2-1/2	5	0	090	214.22
8098-030C	3	5	0	090	426.21
8098-040C	4	4	0	090	496.19
8098-060C	6	1	0	090	1102.63

Special Reinforced Union 2000

Soc x SR FiPT with FKM O-ring Seal



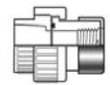
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005CSR	1/2	25	200	096	16.13
8059-007CSR	3/4	20	160	096	28.45
8059-010CSR	1	15	90	096	39.20
8059-012CSR	1-1/4	10	0	096	74.74
8059-015CSR	1-1/2	10	0	096	81.24
8059-020CSR	2	5	0	096	84.58
8059-025CSR	2-1/2	5	0	096	146.45
8059-030CSR	3	5	0	096	237.94
8059-040CSR	4	4	0	096	277.60
8059-060CSR	6	1	0	096	616.95

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Union 2000

Soc x SR FiPT with EPDM O-ring Seal - Stainless Steel Collar

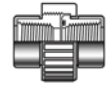


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005CSR	1/2	20	160	096	15.81
8099-007CSR	3/4	20	160	096	28.07
8099-010CSR	1	15	90	096	38.87
8099-012CSR	1-1/4	10	0	096	73.64
8099-015CSR	1-1/2	10	0	096	80.09
8099-020CSR	2	5	0	096	84.34
8099-025CSR	2-1/2	5	0	096	144.66
8099-030CSR	3	5	0	096	234.95
8099-040CSR	4	4	0	096	275.93
8099-060CSR	6	1	0	096	613.20

Special Reinforced Union 2000

SR FiPT with FKM O-ring Seal - Stainless Steel Collar

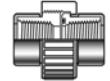


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005CSR	1/2	20	160	096	16.55
8058-007CSR	3/4	20	80	096	28.85
8058-010CSR	1	15	90	096	39.65
8058-012CSR	1-1/4	10	0	096	74.74
8058-015CSR	1-1/2	10	0	096	81.56
8058-020CSR	2	5	0	096	85.94
8058-030CSR	3	5	0	096	242.85
8058-040CSR	4	4	0	096	284.51
8058-060CSR	6	1	0	096	640.73

Special Reinforced Union 2000

SR FiPT with EPDM O-ring Seal - Stainless Steel Collar

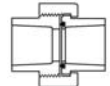


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8098-005CSR	1/2	20	160	096	16.00
8098-007CSR	3/4	20	80	096	28.59
8098-010CSR	1	15	90	096	39.20
8098-012CSR	1-1/4	10	0	096	74.01
8098-015CSR	1-1/2	10	0	096	80.93
8098-020CSR	2	5	0	096	85.09
8098-025CSR	2-1/2	5	0	096	147.05
8098-030CSR	3	5	0	096	239.09
8098-040CSR	4	4	0	096	276.79
8098-060CSR	6	1	0	096	615.09

Union (Old Style)

Soc with FKM O-ring Seal

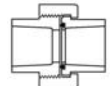


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

857-005C	1/2	15	90	090	27.38
857-007C	3/4	10	60	090	28.60
857-010C	1	10	40	090	34.33
857-012C	1-1/4	5	20	090	69.46
857-015C	1-1/2	5	0	090	70.73
857-020C	2	5	0	090	117.24
857-025C	2-1/2	5	0	090	192.28
857-030C	3	5	0	090	243.34
857-040C	4	4	0	090	310.89

Union (Old Style)

Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

897-005C	1/2	15	90	090	27.29
897-007C	3/4	10	60	090	28.26
897-010C	1	10	40	090	33.86



Schedule 80 CPVC Industrial Products & Accessories

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

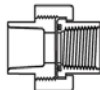
Union (Old Style) (continued)

Soc with EPDM O-ring Seal

897-012C	1-1/4	5	20	090	68.57
897-015C	1-1/2	5	0	090	69.87
897-020C	2	5	0	090	115.80
897-025C	2-1/2	5	0	090	191.78
897-030C	3	5	0	090	240.34
897-040C	4	4	0	090	307.36

Union (Old Style)

Soc x Fipt with FKM O-ring Seal

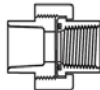


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-005C	1/2	15	90	090	31.17
859-007C	3/4	10	40	090	54.39
859-010C	1	10	40	090	75.07
859-012C	1-1/4	5	20	090	142.99
859-015C	1-1/2	5	0	090	142.99
859-020C	2	5	0	090	161.65
859-025C	2-1/2	5	0	090	262.44
859-030C	3	5	0	090	310.41
859-040C	4	4	0	090	358.95

Union (Old Style)

Soc x Fipt with EPDM O-ring Seal

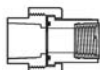


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-005C	1/2	15	90	090	30.40
899-007C	3/4	10	60	090	53.75
899-010C	1	10	40	090	74.14
899-012C	1-1/4	5	20	090	141.22
899-015C	1-1/2	5	0	090	141.22
899-020C	2	5	0	090	159.65
899-025C	2-1/2	5	0	090	228.69
899-030C	3	5	0	090	306.60
899-040C	4	4	0	090	353.68

Union

Soc x Fipt with Brass Thread Insert & FKM O-ring Seal



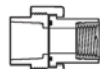
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-007CBR	3/4	10	20	096	146.17
859-010CBR	1	10	0	096	162.80
859-012CBR	1-1/4	5	0	096	272.91
859-015CBR	1-1/2	5	0	096	310.13
859-020CBR	2	5	0	096	350.51

Not intended to convey or dispense water for human consumption through drinking or cooking

Union

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



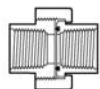
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-007CBR	3/4	10	40	096	143.69
899-010CBR	1	10	0	096	160.80
899-012CBR	1-1/4	5	20	096	269.46
899-015CBR	1-1/2	5	0	096	306.17
899-020CBR	2	5	0	096	346.21

Not intended to convey or dispense water for human consumption through drinking or cooking

Union (Old Style)

Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

858-005C	1/2	15	90	090	29.33
858-007C	3/4	10	60	090	51.83

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

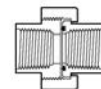
Union (Old Style) (continued)

Fipt with FKM O-ring Seal

858-010C	1	10	40	090	71.47
858-012C	1-1/4	5	20	090	136.18
858-015C	1-1/2	5	0	090	136.18
858-020C	2	5	0	090	153.93
858-025C	2-1/2	5	0	090	247.99
858-030C	3	5	0	090	470.55
858-040C	4	4	0	090	505.82

Union (Old Style)

Fipt with EPDM O-ring Seal

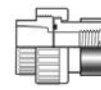


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

898-005C	1/2	15	90	090	28.96
898-007C	3/4	10	60	090	51.19
898-010C	1	10	40	090	70.59
898-012C	1-1/4	5	20	090	134.60
898-015C	1-1/2	5	0	090	134.60
898-020C	2	5	0	090	152.06
898-025C	2-1/2	5	0	090	214.22
898-030C	3	5	0	090	426.21
898-040C	4	4	0	090	496.19

Special Reinforced Union (Old Style)

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

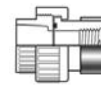


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002CSR	1/4	25	150	096	25.38
859-003CSR	3/8	25	100	096	25.38
859-005CSR	1/2	10	60	096	16.13
859-007CSR	3/4	10	40	096	28.45
859-010CSR	1	10	40	096	39.20
859-012CSR	1-1/4	5	20	096	74.74
859-015CSR	1-1/2	5	0	096	81.24
859-020CSR	2	5	0	096	84.58
859-030CSR	3	5	0	096	237.94
859-040CSR	4	4	0	096	277.60

Special Reinforced Union (Old Style)

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

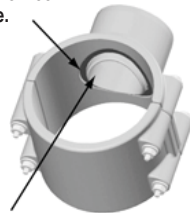
899-002CSR	1/4	25	150	096	25.21
899-003CSR	3/8	25	100	096	25.21
899-005CSR	1/2	10	60	096	15.81
899-007CSR	3/4	10	40	096	28.07
899-010CSR	1	10	40	096	38.87
899-012CSR	1-1/4	5	20	096	73.64
899-015CSR	1-1/2	5	0	096	80.09
899-020CSR	2	5	0	096	84.34
899-030CSR	3	5	0	096	234.95
899-040CSR	4	4	0	096	275.93



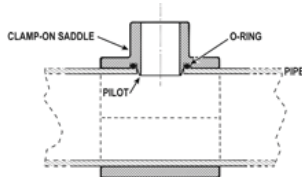
**Spears® Two-Piece Clamp-On Saddle Design Clamps onto Pipe
for Quick and Easy Installation**



O-ring seal provides positive, trouble-free sealing to pipe.

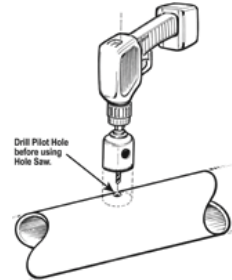


Special pilot engages with hole in pipe to prevent saddle dislocation.



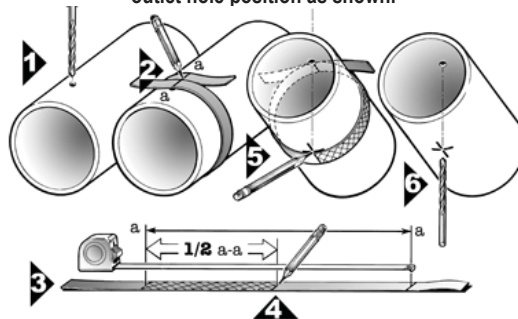
**Clamp-On Saddle
Installation Instructions**

1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers **MUST** be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.



Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque - ft/lb	8	8	8	10

For Double Outlet Saddle Installation — Determine second outlet hole position as shown.



Spears® Hot-Tap Saddles Designed for Adding Branch Connections to Piping Systems Under Live ("Hot") Pressure

Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 6" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F (23°C) is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles and 150 psi for 8" saddles. See packaged Installation Instructions for details.

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Single Outlet

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

866V-247C	2X1/2	3/4	1	10	096	56.69
866V-248C	2X3/4	7/8	1	10	096	56.69
866V-249C	2X1	1-1/8	1	10	096	56.69
866V-250C	2X1-1/4	1-1/2	1	10	096	56.69
866V-251C	2X1-1/2	1-1/2	1	10	096	56.69
866V-291C	2-1/2X1-1/2	1-3/4	1	10	096	78.78
866V-333C ¹	3X1/2	7/8	1	10	096	78.78
866V-334C	3X3/4	7/8	1	10	096	78.78
866V-335C	3X1	1-1/8	1	10	096	78.78
866V-336C ¹	3X1-1/4	2-1/4	1	10	096	78.78
866V-337C ¹	3X1-1/2	2-1/4	1	10	096	78.78
866V-338C	3X2	2-1/4	1	10	096	78.78



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

866V-415C ¹	4X1/2	1-1/8	1	10	096	94.68
866V-416C ¹	4X3/4	1-1/8	1	10	096	94.68
866V-417C	4X1	1-1/8	1	8	096	94.68
866V-418C ¹	4X1-1/4	1-3/4	1	8	096	94.68
866V-419C	4X1-1/2	1-3/4	1	8	096	94.68
866V-420C	4X2	2-1/4	1	8	096	94.68
866V-421C ¹	4X2-1/2	3	1	4	096	101.65
866V-422C	4X3	3	1	4	096	110.83
866V-523C ¹	6X1/2	1-1/8	1	4	096	157.83
866V-524C ¹	6X3/4	1-1/8	1	4	096	157.83
866V-525C	6X1	1-1/8	1	4	096	157.83
866V-526C ¹	6X1-1/4	2-1/4	1	4	096	157.83
866V-527C ¹	6X1-1/2	2-1/4	1	4	096	157.83
866V-528C	6X2	2-1/4	1	4	096	157.83



Schedule 80 CPVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Single Outlet

(continued)

with FKM O-ring Seal & Zinc-Plated Hardware

866V-529C ¹	6X2-1/2	3	1	4	096	170.81
866V-530C	6X3	3	1	4	096	181.83
866V-532C	6X4	4	1	4	096	193.74
866V-573C ¹	8X1/2	4	1	0	096	336.63
866V-574C ¹	8X3/4	4	1	0	096	336.63
866V-575C ¹	8X1	4	1	0	096	336.63
866V-576C ¹	8X1-1/4	4	1	0	096	336.63
866V-577C ¹	8X1-1/2	4	1	0	096	336.63
866V-578C ¹	8X2	4	1	0	096	336.63
866V-579C ¹	8X2-1/2	4	1	0	096	370.35
866V-580C ¹	8X3	4	1	0	096	388.59
866V-582C	8X4	4	1	0	096	423.16
866V-585C	8X6	6	1	0	096	581.80
866V-624C	10X4	4	1	0	096	544.26
866V-626C	10X6	6	1	0	096	625.79
866V-664C	12X4	4	1	0	096	682.22
866V-666C	12X6	6	1	0	096	723.15

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Single Outlet

with FKM O-ring Seal & SS Hardware

2" - 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



866SV-247C	2X1/2	3/4	1	10	096	86.53
866SV-248C	2X3/4	7/8	1	10	096	86.53
866SV-249C	2X1	1-1/8	1	10	096	86.53
866SV-250C	2X1-1/4	1-1/2	1	10	096	86.53
866SV-251C	2X1-1/2	1-1/2	1	10	096	86.53
866SV-291C	2-1/2X1-1/2	1-3/4	1	10	096	115.91
866SV-333C ¹	3X1/2	7/8	1	10	096	115.91
866SV-334C	3X3/4	7/8	1	10	096	115.91
866SV-335C	3X1	1-1/8	1	10	096	115.91
866SV-336C ¹	3X1-1/4	2-1/4	1	10	096	115.91
866SV-337C ¹	3X1-1/2	2-1/4	1	10	096	115.91
866SV-338C	3X2	2-1/4	1	10	096	115.91
866SV-415C ¹	4X1/2	1-1/8	1	10	096	149.72
866SV-416C ¹	4X3/4	1-1/8	1	10	096	149.72
866SV-417C	4X1	1-1/8	1	8	096	149.72
866SV-418C ¹	4X1-1/4	1-3/4	1	8	096	149.72
866SV-419C	4X1-1/2	1-3/4	1	8	096	149.72
866SV-420C	4X2	2-1/4	1	8	096	149.72
866SV-421C ¹	4X2-1/2	3	1	4	096	158.46
866SV-422C	4X3	3	1	4	096	166.53
866SV-523C ¹	6X1/2	1-1/8	1	4	096	238.38
866SV-524C ¹	6X3/4	1-1/8	1	4	096	238.38
866SV-525C	6X1	1-1/8	1	4	096	238.38
866SV-526C ¹	6X1-1/4	2-1/4	1	4	096	238.38
866SV-527C ¹	6X1-1/2	2-1/4	1	4	096	238.38
866SV-528C	6X2	2-1/4	1	4	096	238.38
866SV-529C ¹	6X2-1/2	3	1	4	096	247.84
866SV-530C	6X3	3	1	4	096	256.44
866SV-532C	6X4	4	1	4	096	272.57
866SV-573C ¹	8X1/2	4	1	0	096	439.84
866SV-574C ¹	8X3/4	4	1	0	096	439.84
866SV-575C ¹	8 X 1	4	1	0	096	439.84
866SV-576C ¹	8X1-1/4	4	1	0	096	439.84
866SV-577C ¹	8X1-1/2	4	1	0	096	439.84
866SV-578C ¹	8 X 2	4	1	0	096	439.84
866SV-579C ¹	8X2-1/2	4	1	0	096	465.56
866SV-580C ¹	8X3	4	1	0	096	508.13
866SV-582C	8X4	4	1	0	096	538.59
866SV-585C	8X6	6	1	0	096	597.76
866SV-624C	10X4	4	1	0	096	711.28
866SV-626C	10X6	6	1	0	096	818.09

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Single Outlet

(continued)

with FKM O-ring Seal & SS Hardware

866SV-664C	12X4	4	1	0	096	891.57
866SV-666C	12X6	6	1	0	096	1034.33

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Single Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2" - 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



866-247C	2X1/2	3/4	1	10	096	53.87
866-248C	2X3/4	7/8	1	10	096	53.87
866-249C	2X1	1-1/8	1	10	096	53.87
866-250C	2X1-1/4	1-1/2	1	10	096	53.87
866-251C	2X1-1/2	1-1/2	1	10	096	53.87
866-291C	2-1/2X1-1/2	1-3/4	1	10	096	72.17
866-333C ¹	3X1/2	7/8	1	10	096	72.17
866-334C	3X3/4	7/8	1	10	096	72.17
866-335C	3X1	1-1/8	1	10	096	72.17
866-336C ¹	3X1-1/4	2-1/4	1	10	096	72.17
866-337C ¹	3X1-1/2	2-1/4	1	10	096	72.17
866-338C	3X2	2-1/4	1	10	096	72.17
866-415C ¹	4X1/2	1-1/8	1	10	096	87.75
866-416C ¹	4X3/4	1-1/8	1	10	096	87.75
866-417C	4X1	1-1/8	1	8	096	87.75
866-418C ¹	4X1-1/4	1-3/4	1	8	096	87.75
866-419C	4X1-1/2	1-3/4	1	8	096	87.75
866-420C	4X2	2-1/4	1	8	096	87.75
866-421C ¹	4X2-1/2	3	1	4	096	96.38
866-422C	4X3	3	1	4	096	107.43
866-523C ¹	6X1/2	1-1/8	1	4	096	146.44
866-524C ¹	6X3/4	1-1/8	1	4	096	146.44
866-525C	6X1	1-1/8	1	4	096	146.44
866-526C ¹	6X1-1/4	2-1/4	1	4	096	146.44
866-527C ¹	6X1-1/2	2-1/4	1	4	096	146.44
866-528C	6X2	2-1/4	1	4	096	146.44
866-529C ¹	6X2-1/2	3	1	4	096	159.19
866-530C	6X3	3	1	4	096	170.76
866-532C	6X4	4	1	4	096	182.49
866-573C ¹	8X1/2	4	1	0	096	322.01
866-574C ¹	8X3/4	4	1	0	096	322.01
866-575C ¹	8X1	4	1	0	096	322.01
866-576C ¹	8X1-1/4	4	1	0	096	322.01
866-577C ¹	8X1-1/2	4	1	0	096	322.01
866-578C ¹	8X2	4	1	0	096	322.01
866-579C ¹	8X2-1/2	4	1	0	096	354.19
866-580C ¹	8X3	4	1	0	096	371.99
866-582C	8X4	4	1	0	096	394.27
866-585C	8X6	6	1	0	096	437.61
866-624C	10X4	4	1	0	096	520.69
866-626C	10X6	4	1	0	096	598.87
866-664C	12X4	4	1	0	096	652.81
866-666C	12X6	6	1	0	096	757.21

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Single Outlet

with EPDM O-ring Seal & SS Hardware

2" - 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



866S-247C	2X1/2	3/4	1	10	096	83.87
866S-248C	2X3/4	7/8	1	10	096	83.87
866S-249C	2X1	1-1/8	1	10	096	83.87
866S-250C	2X1-1/4	1-1/2	1	10	096	83.87
866S-251C	2X1-1/2	1-1/2	1	10	096	83.87
866S-291C	2-1/2X1-1/2	1-3/4	1	10	096	111.81
866S-333C ¹	3X1/2	7/8	1	10	096	111.81

Schedule 80 CPVC Industrial Products & Accessories
Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Single Outlet

(continued)

with EPDM O-ring Seal & SS Hardware

866S-334C	3X3/4	7/8	1	10	096	111.81
866S-335C	3X1	1-1/8	1	10	096	111.81
866S-336C ¹	3X1-1/4	2-1/4	1	10	096	111.81
866S-337C ¹	3X1-1/2	2-1/4	1	10	096	111.81
866S-338C	3X2	2-1/4	1	10	096	111.81
866S-415C ¹	4X1/2	1-1/8	1	10	096	143.04
866S-416C ¹	4X3/4	1-1/8	1	10	096	143.04
866S-417C	4X1	1-1/8	1	8	096	143.04
866S-418C ¹	4X1-1/4	1-3/4	1	8	096	143.04
866S-419C	4X1-1/2	1-3/4	1	8	096	143.04
866S-420C	4X2	2-1/4	1	8	096	143.04
866S-421C ¹	4X2-1/2	3	1	4	096	149.07
866S-422C	4X3	3	1	4	096	156.73
866S-523C ¹	6X1/2	1-1/8	1	4	096	225.40
866S-524C ¹	6X3/4	1-1/8	1	4	096	225.40
866S-525C	6X1	1-1/8	1	4	096	225.40
866S-526C ¹	6X1-1/4	2-1/4	1	4	096	225.40
866S-527C ¹	6X1-1/2	2-1/4	1	4	096	225.40
866S-528C	6X2	2-1/4	1	4	096	225.40
866S-529C ¹	6X2-1/2	3	1	4	096	238.58
866S-530C	6X3	3	1	4	096	253.05
866S-532C	6X4	4	1	4	096	264.72
866S-573C ¹	8X1/2	4	1	0	096	423.32
866S-574C ¹	8X3/4	4	1	0	096	423.32
866S-575C ¹	8X1	4	1	0	096	423.32
866S-576C ¹	8X1-1/4	4	1	0	096	423.32
866S-577C ¹	8X1-1/2	4	1	0	096	423.32
866S-578C ¹	8 X 2	4	1	0	096	423.32
866S-579C ¹	8X2-1/2	4	1	0	096	465.56
866S-580C ¹	8X3	4	1	0	096	488.87
866S-582C	8X4	4	1	0	096	518.21
866S-585C	8X6	6	1	0	096	575.04
866S-624C	10X4	4	1	0	096	684.27
866S-626C	10X6	6	1	0	096	786.97
866S-664C	12X4	4	1	0	096	857.68
866S-666C	12X6	6	1	0	096	994.95

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



867V-247CSR	2X1/2	3/4	1	10	096	64.91
867V-248CSR	2X3/4	7/8	1	10	096	64.91
867V-249CSR	2X1	1-1/8	1	10	096	64.91
867V-250CSR	2X1-1/4	1-1/2	1	10	096	64.91
867V-251CSR	2X1-1/2	1-1/2	1	10	096	64.91
867V-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	90.57
867V-333CSR ¹	3X1/2	7/8	1	10	096	90.57
867V-334CSR	3X3/4	7/8	1	10	096	90.57
867V-335CSR	3X1	1-1/8	1	10	096	90.57
867V-336CSR ¹	3X1-1/4	2-1/4	1	10	096	90.57
867V-337CSR ¹	3X1-1/2	2-1/4	1	10	096	90.57
867V-338CSR	3X2	2-1/4	1	10	096	90.57
867V-415CSR ¹	4X1/2	1-1/8	1	10	096	112.95
867V-416CSR ¹	4X3/4	1-1/8	1	10	096	112.95
867V-417CSR	4X1	1-1/8	1	8	096	112.95
867V-418CSR ¹	4X1-1/4	1-3/4	1	8	096	112.95
867V-419CSR	4X1-1/2	1-3/4	1	8	096	112.95
867V-420CSR	4X2	2-1/4	1	8	096	112.95
867V-421CSR ¹	4X2-1/2	3	1	4	096	121.83
867V-422CSR	4X3	3	1	4	096	134.12
867V-523CSR ¹	6X1/2	1-1/8	1	4	096	188.72
867V-524CSR ¹	6X3/4	1-1/8	1	4	096	188.72

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet

(continued)

with FKM O-ring Seal & Zinc-Plated Hardware

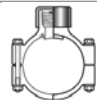
867V-525CSR	6X1	1-1/8	1	4	096	188.72
867V-526CSR ¹	6X1-1/4	2-1/4	1	4	096	188.72
867V-527CSR ¹	6X1-1/2	2-1/4	1	4	096	188.72
867V-528CSR	6X2	2-1/4	1	4	096	188.72
867V-529CSR ¹	6X2-1/2	3	1	4	096	202.08
867V-530CSR	6X3	3	1	4	096	209.36
867V-532CSR	6X4	4	1	4	096	224.25
867V-573CSR ¹	8X1/2	4	1	0	096	376.20
867V-574CSR ¹	8X3/4	4	1	0	096	376.20
867V-575CSR ¹	8X1	4	1	0	096	376.20
867V-576CSR ¹	8X1-1/4	4	1	0	096	376.20
867V-577CSR ¹	8X1-1/2	4	1	0	096	376.20
867V-578CSR ¹	8X2	4	1	0	096	376.20
867V-579CSR ¹	8X2-1/2	4	1	0	096	413.79
867V-580CSR ¹	8X3	4	1	0	096	434.52
867V-582CSR	8X4	4	1	0	096	462.31
867V-585CSR	8X6	6	1	0	096	476.68
867V-624CSR	10X4	4	1	0	096	550.02
867V-626CSR	10X6	6	1	0	096	632.49
867V-664CSR	12X4	4	1	0	096	688.06
867V-666CSR	12X6	6	1	0	096	799.87

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



867SV-245CSR ¹	2X1/4	1-1/8	1	10	096	112.88
867SV-247CSR	2X1/2	3/4	1	10	096	107.72
867SV-248CSR	2X3/4	7/8	1	10	096	107.72
867SV-249CSR	2X1	1-1/8	1	10	096	107.72
867SV-250CSR	2X1-1/4	1-1/2	1	10	096	107.72
867SV-251CSR	2X1-1/2	1-1/2	1	10	096	107.72
867SV-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	144.71
867SV-331CSR ¹	3X1/4	1-1/8	1	10	096	152.98
867SV-333CSR ¹	3X1/2	7/8	1	10	096	144.71
867SV-334CSR	3X3/4	7/8	1	10	096	144.71
867SV-335CSR	3X1	1-1/8	1	10	096	144.71
867SV-336CSR ¹	3X1-1/4	2-1/4	1	10	096	144.71
867SV-337CSR ¹	3X1-1/2	2-1/4	1	10	096	144.71
867SV-338CSR	3X2	2-1/4	1	10	096	144.71
867SV-413CSR ¹	4X1/4	1-1/8	1	8	096	182.83
867SV-415CSR ¹	4X1/2	1-1/8	1	10	096	182.83
867SV-416CSR ¹	4X3/4	1-1/8	1	10	096	182.83
867SV-417CSR	4X1	1-1/8	1	8	096	182.83
867SV-418CSR ¹	4X1-1/4	1-3/4	1	8	096	182.83
867SV-419CSR	4X1-1/2	1-3/4	1	8	096	182.83
867SV-420CSR	4X2	2-1/4	1	8	096	182.83
867SV-421CSR ¹	4X2-1/2	3	1	4	096	190.21
867SV-422CSR	4X3	3	1	4	096	200.52
867SV-521CSR ¹	6X1/4	1-1/8	1	4	096	316.48
867SV-523CSR ¹	6X1/2	1-1/8	1	4	096	304.72
867SV-524CSR ¹	6X3/4	1-1/8	1	4	096	304.72
867SV-525CSR	6X1	1-1/8	1	4	096	304.72
867SV-526CSR ¹	6X1-1/4	2-1/4	1	4	096	304.72
867SV-527CSR ¹	6X1-1/2	2-1/4	1	4	096	304.72
867SV-528CSR	6X2	2-1/4	1	4	096	304.72
867SV-529CSR ¹	6X2-1/2	3	1	4	096	319.23
867SV-530CSR	6X3	3	1	4	096	332.09
867SV-532CSR	6X4	4	1	4	096	355.49
867SV-571CSR ¹	8X1/4	4	1	0	096	538.42
867SV-573CSR ¹	8X1/2	4	1	0	096	524.93
867SV-574CSR ¹	8X3/4	4	1	0	096	524.93
867SV-575CSR ¹	8X1	4	1	0	096	524.93



Schedule 80 CPVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet (continued) with FKM O-ring Seal & SS Hardware

867SV-576CSR ¹	8X1-1/4	4	1	0	096	524.93
867SV-577CSR ¹	8X1-1/2	4	1	0	096	524.93
867SV-578CSR ¹	8X2	4	1	0	096	524.93
867SV-579CSR ¹	8X2-1/2	4	1	0	096	577.46
867SV-580CSR ¹	8X3	4	1	0	096	606.36
867SV-582CSR	8X4	4	1	0	096	642.81
867SV-585CSR	8X6	6	1	0	096	676.71
867SV-624CSR	10X4	4	1	0	096	764.96
867SV-626CSR	10X6	6	1	0	096	879.68
867SV-664CSR	12X4	4	1	0	096	958.82
867SV-666CSR	12X6	6	1	0	096	1112.24

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867-247CSR	2X1/2	3/4	1	10	096	56.35
867-248CSR	2X3/4	7/8	1	10	096	56.35
867-249CSR	2X1	1-1/8	1	10	096	56.35
867-250CSR	2X1-1/4	1-1/2	1	10	096	56.35
867-251CSR	2X1-1/2	1-1/2	1	10	096	56.35
867-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	77.01
867-333CSR ¹	3X1/2	7/8	1	10	096	77.01
867-334CSR	3X3/4	7/8	1	10	096	77.01
867-335CSR	3X1	1-1/8	1	10	096	77.01
867-336CSR ¹	3X1-1/4	2-1/4	1	10	096	77.01
867-337CSR ¹	3X1-1/2	2-1/4	1	10	096	77.01
867-338CSR	3X2	2-1/4	1	10	096	77.01
867-415CSR ¹	4X1/2	1-1/8	1	10	096	96.99
867-416CSR ¹	4X3/4	1-1/8	1	10	096	96.99
867-417CSR	4X1	1-1/8	1	8	096	96.99
867-418CSR ¹	4X1-1/4	1-3/4	1	8	096	96.99
867-419CSR	4X1-1/2	1-3/4	1	8	096	96.99
867-420CSR	4X2	2-1/4	1	8	096	96.99
867-421CSR ¹	4X2-1/2	3	1	4	096	107.62
867-422CSR	4X3	3	1	4	096	116.16
867-523CSR ¹	6X1/2	1-1/8	1	4	096	161.62
867-524CSR ¹	6X3/4	1-1/8	1	4	096	161.62
867-525CSR	6X1	1-1/8	1	4	096	161.62
867-526CSR ¹	6X1-1/4	2-1/4	1	4	096	161.62
867-527CSR ¹	6X1-1/2	2-1/4	1	4	096	161.62
867-528CSR	6X2	2-1/4	1	4	096	161.62
867-529CSR ¹	6X2-1/2	3	1	4	096	171.02
867-530CSR	6X3	3	1	4	096	180.84
867-532CSR	6X4	4	1	4	096	196.66
867-573CSR ¹	8X1/2	4	1	0	096	341.54
867-574CSR	8X3/4	4	1	0	096	341.54
867-575CSR ¹	8X1	4	1	0	096	341.54
867-576CSR ¹	8X1-1/4	4	1	0	096	341.54
867-577CSR ¹	8X1-1/2	4	1	0	096	341.54
867-578CSR ¹	8X2	4	1	0	096	341.54
867-579CSR ¹	8X2-1/2	4	1	0	096	375.68
867-580CSR ¹	8X3	4	1	0	096	398.22
867-582CSR	8X4	4	1	0	096	422.21
867-585CSR	8X6	6	1	0	096	438.98
867-624CSR	10X4	4	1	0	096	502.46
867-626CSR	10X6	6	1	0	096	577.79
867-664CSR	12X4	4	1	0	096	629.83
867-666CSR	12X6	6	1	0	096	730.55

¹Outlet-sized with Bushing



CPVC Gray Clamp-On Saddle x SR Thread Single Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867S-245CSR ¹	2X1/4	1-1/8	1	10	096	99.36
867S-247CSR	2X1/2	3/4	1	10	096	96.75
867S-248CSR	2X3/4	7/8	1	10	096	96.75
867S-249CSR	2X1	1-1/8	1	10	096	96.75
867S-250CSR	2X1-1/4	1-1/2	1	10	096	96.75
867S-251CSR	2X1-1/2	1-1/2	1	10	096	96.75
867S-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	129.51
867S-331CSR ¹	3X1/4	1-1/8	1	10	096	133.62
867S-333CSR ¹	3X1/2	7/8	1	10	096	129.51
867S-334CSR	3X3/4	7/8	1	10	096	129.51
867S-335CSR	3X1	1-1/8	1	10	096	129.51
867S-336CSR ¹	3X1-1/4	2-1/4	1	10	096	129.51
867S-337CSR ¹	3X1-1/2	2-1/4	1	10	096	129.51
867S-338CSR	3X2	2-1/4	1	10	096	129.51
867S-413CSR ¹	4X1/4	1-1/8	1	8	096	167.96
867S-415CSR ¹	4X1/2	1-1/8	1	10	096	162.99
867S-416CSR ¹	4X3/4	1-1/8	1	10	096	162.99
867S-417CSR	4X1	1-1/8	1	8	096	162.99
867S-418CSR ¹	4X1-1/4	1-3/4	1	8	096	162.99
867S-419CSR	4X1-1/2	1-3/4	1	8	096	162.99
867S-420CSR	4X2	2-1/4	1	8	096	162.99
867S-421CSR ¹	4X2-1/2	3	1	4	096	172.83
867S-422CSR	4X3	3	1	4	096	180.95
867S-521CSR ¹	6X1/4	1-1/8	1	8	096	281.78
867S-523CSR ¹	6X1/2	1-1/8	1	4	096	271.65
867S-524CSR ¹	6X3/4	1-1/8	1	4	096	271.65
867S-525CSR	6X1	1-1/8	1	4	096	271.65
867S-526CSR ¹	6X1-1/4	2-1/4	1	4	096	271.65
867S-527CSR ¹	6X1-1/2	2-1/4	1	4	096	271.65
867S-528CSR	6X2	2-1/4	1	4	096	271.65
867S-529CSR ¹	6X2-1/2	3	1	4	096	282.51
867S-530CSR	6X3	3	1	4	096	291.98
867S-532CSR	6X4	4	1	4	096	304.85
867S-571CSR ¹	8X1/4	4	1	0	096	500.37
867S-573CSR	8X1/2	4	1	0	096	482.60
867S-574CSR ¹	8X3/4	4	1	0	096	482.60
867S-575CSR ¹	8X1	4	1	0	096	482.60
867S-576CSR ¹	8X1-1/4	4	1	0	096	482.60
867S-577CSR ¹	8X1-1/2	4	1	0	096	482.60
867S-578CSR ¹	8X2	4	1	0	096	482.60
867S-579CSR ¹	8X2-1/2	4	1	0	096	530.84
867S-580CSR ¹	8X3	4	1	0	096	557.34
867S-582CSR	8X4	4	1	0	096	590.77
867S-585CSR	8X6	6	1	0	096	619.69
867S-624CSR	10X4	4	1	0	096	703.02
867S-626CSR	10X6	6	0	0	096	808.48
867S-664CSR	12X4	4	1	0	096	881.24
867S-666CSR	12X6	6	1	0	096	1022.27

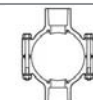
¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868V-247C	2X1/2	3/4	1	10	096	77.12
868V-248C	2X3/4	7/8	1	10	096	77.12
868V-249C	2X1	1-1/8	1	10	096	77.12
868V-250C	2X1-1/4	1-1/2	1	10	096	77.12
868V-251C	2X1-1/2	1-1/2	1	10	096	77.12
868V-291C	2-1/2X1-1/2	1-3/4	1	10	096	94.31
868V-333C ¹	3X1/2	7/8	1	10	096	94.31
868V-334C	3X3/4	7/8	1	10	096	94.31



Schedule 80 CPVC Industrial Products & Accessories
Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Double Outlet

(continued)

with FKM O-ring Seal & Zinc-Plated Hardware

868V-335C	3X1	1-1/8	1	10	096	94.31
868V-336C ¹	3X1-1/4	2-1/4	1	10	096	94.31
868V-337C ¹	3X1-1/2	2-1/4	1	10	096	94.31
868V-338C ¹	3X2	2-1/4	1	10	096	94.31
868V-415C ¹	4X1/2	1-1/8	1	10	096	126.97
868V-416C ¹	4X3/4	1-1/8	1	10	096	126.97
868V-417C	4X1	1-1/8	1	8	096	126.97
868V-418C ¹	4X1-1/4	1-3/4	1	8	096	126.97
868V-419C	4X1-1/2	1-3/4	1	8	096	126.97
868V-420C	4X2	2-1/4	1	8	096	126.97
868V-421C ¹	4X2-1/2	3	1	4	096	132.66
868V-422C	4X3	3	4	0	096	144.78
868V-523C ¹	6X1/2	1-1/8	1	4	096	205.42
868V-524C ¹	6X3/4	1-1/8	1	4	096	205.42
868V-525C	6X1	1-1/8	1	4	096	205.42
868V-526C ¹	6X1-1/4	2-1/4	1	4	096	205.42
868V-527C ¹	6X1-1/2	2-1/4	1	4	096	205.42
868V-528C	6X2	2-1/4	1	4	096	205.42
868V-529C	6X2-1/2	3	1	4	096	237.92
868V-530C	6X3	3	1	4	096	250.85
868V-532C	6X4	4	1	4	096	261.71
868V-573C ¹	8X1/2	4	1	0	096	397.71
868V-574C ¹	8X3/4	4	1	0	096	397.71
868V-575C ¹	8X1	4	1	0	096	397.71
868V-576C ¹	8X1-1/4	4	1	0	096	397.71
868V-577C ¹	8X1-1/2	4	1	0	096	397.71
868V-578C ¹	8X2	4	1	0	096	397.71
868V-579C ¹	8X2-1/2	4	1	0	096	437.44
868V-580C ¹	8X3	4	1	0	096	459.28
868V-582C	8X4	4	1	0	096	486.80
868V-585C	8X6	6	1	0	096	540.39
868V-624C	10X4	4	1	0	096	642.99
868V-626C	10X6	6	1	0	096	739.67
868V-664C	12X4	4	1	0	096	806.07
868V-666C	12X6	6	1	0	096	934.91

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



868SV-247C	2X1/2	3/4	1	10	096	117.68
868SV-248C	2X3/4	7/8	1	10	096	117.68
868SV-249C	2X1	1-1/8	1	10	096	117.68
868SV-250C	2X1-1/4	1-1/2	1	10	096	117.68
868SV-251C	2X1-1/2	1-1/2	1	10	096	117.68
868SV-291C	2-1/2X1-1/2	1-3/4	1	10	096	156.56
868SV-333C ¹	3X1/2	7/8	1	10	096	156.56
868SV-334C	3X3/4	7/8	1	10	096	156.56
868SV-335C	3X1	1-1/8	1	10	096	156.56
868SV-336C ¹	3X1-1/4	2-1/4	1	10	096	156.56
868SV-337C ¹	3X1-1/2	2-1/4	1	10	096	156.56
868SV-338C	3X2	2-1/4	1	10	096	156.56
868SV-415C ¹	4X1/2	1-1/8	1	10	096	198.96
868SV-416C ¹	4X3/4	1-1/8	1	10	096	198.96
868SV-417C	4X1	1-1/8	1	8	096	198.96
868SV-418C ¹	4X1-1/4	1-3/4	1	8	096	198.96
868SV-419C	4X1-1/2	1-3/4	1	8	096	198.96
868SV-420C	4X2	2-1/4	1	8	096	198.96
868SV-421C ¹	4X2-1/2	3	1	4	096	207.01
868SV-422C	4X3	3	4	0	096	220.53
868SV-523C ¹	6X1/2	1-1/8	1	4	096	330.94
868SV-524C ¹	6X3/4	1-1/8	1	4	096	330.94
868SV-525C	6X1	1-1/8	1	4	096	330.94

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Double Outlet

(continued)

with FKM O-ring Seal & SS Hardware

868SV-526C ¹	6X1-1/4	2-1/4	1	4	096	330.94
868SV-527C ¹	6X1-1/2	2-1/4	1	4	096	330.94
868SV-528C	6X2	2-1/4	1	4	096	330.94
868SV-529C ¹	6X2-1/2	3	1	4	096	341.12
868SV-530C	6X3	3	1	4	096	356.87
868SV-532C	6X4	4	1	4	096	365.36
868SV-573C ¹	8X1/2	4	1	0	096	558.61
868SV-574C ¹	8X3/4	4	1	0	096	558.61
868SV-575C ¹	8X1	4	1	0	096	558.61
868SV-576C ¹	8X1-1/4	4	1	0	096	558.61
868SV-577C ¹	8X1-1/2	4	1	0	096	558.61
868SV-578C ¹	8X2	4	1	0	096	558.61
868SV-579C ¹	8X2-1/2	4	1	0	096	614.26
868SV-580C ¹	8X3	4	1	0	096	645.14
868SV-582C	8X4	4	1	0	096	683.79
868SV-585C	8X6	6	1	0	096	759.11
868SV-624C	10X4	4	1	0	096	903.35
868SV-626C	10X6	6	1	0	096	1038.97
868SV-664C	12X4	4	1	0	096	1132.21
868SV-666C	12X6	6	1	0	096	1313.51

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



868-247C	2X1/2	3/4	1	10	096	64.69
868-248C	2X3/4	7/8	1	10	096	64.69
868-249C	2X1	1-1/8	1	10	096	64.69
868-250C	2X1-1/4	1-1/2	1	10	096	64.69
868-251C	2X1-1/2	1-1/2	1	10	096	64.69
868-291C	2-1/2X1-1/2	1-3/4	1	10	096	88.82
868-333C ¹	3X1/2	7/8	1	10	096	88.82
868-334C	3X3/4	7/8	1	10	096	88.82
868-335C	3X1	1-1/8	1	10	096	88.82
868-336C ¹	3X1-1/4	2-1/4	1	10	096	88.82
868-337C ¹	3X1-1/2	2-1/4	1	10	096	88.82
868-338C	3X2	2-1/4	1	10	096	88.82
868-415C ¹	4X1/2	1-1/8	1	10	096	111.47
868-416C ¹	4X3/4	1-1/8	1	10	096	111.47
868-417C	4X1	1-1/8	1	8	096	111.47
868-418C ¹	4X1-1/4	1-3/4	1	8	096	111.47
868-419C	4X1-1/2	1-3/4	1	8	096	111.47
868-420C	4X2	2-1/4	1	8	096	111.47
868-421C ¹	4X2-1/2	3	1	4	096	117.38
868-422C	4X3	3	1	4	096	127.59
868-523C ¹	6X1/2	1-1/8	1	4	096	186.11
868-524C ¹	6X3/4	1-1/8	1	4	096	186.11
868-525C	6X1	1-1/8	1	4	096	186.11
868-526C ¹	6X1-1/4	2-1/4	1	4	096	186.11
868-527C ¹	6X1-1/2	2-1/4	1	4	096	186.11
868-528C	6X2	2-1/4	1	4	096	186.11
868-529C ¹	6X2-1/2	3	1	4	096	197.85
868-530C	6X3	3	1	4	096	209.16
868-532C	6X4	4	1	4	096	215.91
868-573C ¹	8X1/2	4	1	0	096	372.93
868-574C ¹	8X3/4	4	1	0	096	372.93
868-575C ¹	8X1	4	1	0	096	372.93
868-576C ¹	8X1-1/4	4	1	0	096	372.93
868-577C ¹	8X1-1/2	4	1	0	096	372.93
868-578C ¹	8X2	4	1	0	096	372.93
868-579C ¹	8X2-1/2	4	1	0	096	410.17
868-580C ¹	8X3	4	1	0	096	430.73
868-582C	8X4	4	1	0	096	456.53



Schedule 80 CPVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x Soc Double Outlet

(continued)

with EPDM O-ring Seal & Zinc-Plated Hardware

868-585C	8X6	6	1	0	096	506.75
868-624C	10X4	4	1	0	096	603.08
868-626C	10X6	6	1	0	096	693.48
868-664C	12X4	4	1	0	096	755.84
868-666C	12X6	6	1	0	096	876.94

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



868S-247C	2X1/2	3/4	1	10	096	102.31
868S-248C	2X3/4	7/8	1	10	096	102.31
868S-249C	2X1	1-1/8	1	10	096	102.31
868S-250C	2X1-1/4	1-1/2	1	10	096	102.31
868S-251C	2X1-1/2	1-1/2	1	10	096	102.31
868S-291C	2-1/2X1-1/2	1-3/4	1	10	096	136.07
868S-333C ¹	3X1/2	7/8	1	10	096	136.07
868S-334C	3X3/4	7/8	1	10	096	136.07
868S-335C	3X1	1-1/8	1	10	096	136.07
868S-336C ¹	3X1-1/4	2-1/4	1	10	096	136.07
868S-337C ¹	3X1-1/2	2-1/4	1	10	096	136.07
868S-338C	3X2	2-1/4	1	10	096	136.07
868S-415C ¹	4X1/2	1-1/8	1	10	096	174.37
868S-416C ¹	4X3/4	1-1/8	1	10	096	174.37
868S-417C	4X1	1-1/8	1	8	096	174.37
868S-418C ¹	4X1-1/4	1-3/4	1	8	096	174.37
868S-419C	4X1-1/2	1-3/4	1	8	096	174.37
868S-420C	4X2	2-1/4	1	8	096	174.37
868S-421C ¹	4X2-1/2	3	1	4	096	182.49
868S-422C	4X3	3	4	0	096	190.85
868S-523C ¹	6X1/2	1-1/8	1	4	096	291.20
868S-524C ¹	6X3/4	1-1/8	1	4	096	291.20
868S-525C	6X1	1-1/8	1	4	096	291.20
868S-526C ¹	6X1-1/4	2-1/4	1	4	096	291.20
868S-527C ¹	6X1-1/2	2-1/4	1	4	096	291.20
868S-528C	6X2	2-1/4	1	4	096	291.20
868S-529C ¹	6X2-1/2	3	1	4	096	305.64
868S-530C	6X3	3	1	4	096	313.02
868S-532C	6X4	4	1	4	096	324.42
868S-573C ¹	8X1/2	4	1	0	096	507.62
868S-574C ¹	8X3/4	4	1	0	096	507.62
868S-575C ¹	8X1	4	1	0	096	507.62
868S-576C ¹	8X1-1/4	4	1	0	096	507.62
868S-577C ¹	8X1-1/2	4	1	0	096	507.62
868S-578C ¹	8X2	4	1	0	096	507.62
868S-579C ¹	8X2-1/2	4	1	0	096	558.37
868S-580C ¹	8X3	4	1	0	096	586.31
868S-582C	8X4	4	1	0	096	621.48
868S-585C	8X6	6	1	0	096	689.98
868S-624C	10X4	4	1	0	096	821.03
868S-626C	10X6	6	1	0	096	944.20
868S-664C	12X4	4	1	0	096	1029.17
868S-666C	12X6	6	1	0	096	1193.79

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



869V-247CSR	2X1/2	3/4	1	10	096	86.27
869V-248CSR	2X3/4	7/8	1	10	096	86.27
869V-249CSR	2X1	1-1/8	1	10	096	86.27
869V-250CSR	2X1-1/4	1-1/2	1	10	096	86.27

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)

(continued)

with FKM O-ring Seal & Zinc-Plated Hardware

869V-251CSR	2X1-1/2	1-1/2	1	10	096	86.27
869V-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	118.29
869V-333CSR ¹	3X1/2	7/8	1	10	096	118.29
869V-334CSR	3X3/4	7/8	1	10	096	118.29
869V-335CSR	3X1	1-1/8	1	10	096	118.29
869V-336CSR ¹	3X1-1/4	2-1/4	1	10	096	118.29
869V-337CSR ¹	3X1-1/2	2-1/4	1	10	096	118.29
869V-338CSR	3X2	2-1/4	1	10	096	118.29
869V-415CSR ¹	4X1/2	4-1/2	1	10	096	144.77
869V-416CSR ¹	4X3/4	1-1/8	1	10	096	144.77
869V-417CSR	4X1	1-1/8	1	8	096	144.77
869V-418CSR ¹	4X1-1/4	1-3/4	1	8	096	144.77
869V-419CSR	4X1-1/2	1-3/4	1	8	096	144.77
869V-420CSR	4X2	2-1/4	1	8	096	144.77
869V-421CSR ¹	4X2-1/2	3	1	4	096	155.48
869V-422CSR	4X3	3	4	0	096	163.75
869V-523CSR ¹	6X1/2	1-1/8	1	4	096	240.05
869V-524CSR ¹	6X3/4	1-1/8	1	4	096	240.05
869V-525CSR	6X1	1-1/8	1	4	096	240.05
869V-526CSR ¹	6X1-1/4	2-1/4	1	4	096	240.05
869V-527CSR ¹	6X1-1/2	2-1/4	1	4	096	240.05
869V-528CSR	6X2	2-1/4	1	4	096	240.05
869V-529CSR ¹	6X2-1/2	3	1	4	096	252.13
869V-530CSR	6X3	3	1	4	096	262.54
869V-532CSR	6X4	4	1	4	096	278.09
869V-573CSR ¹	8X1/2	4	1	0	096	442.09
869V-574CSR ¹	8X3/4	4	1	0	096	442.09
869V-575CSR ¹	8X1	4	1	0	096	442.09
869V-576CSR ¹	8X1-1/4	4	1	0	096	442.09
869V-577CSR ¹	8X1-1/2	4	1	0	096	442.09
869V-578CSR ¹	8X2	4	1	0	096	442.09
869V-579CSR ¹	8X2-1/2	4	1	0	096	486.29
869V-580CSR ¹	8X3	4	1	0	096	510.56
869V-582CSR	8X4	4	1	0	096	541.18
869V-585CSR	8X6	6	1	0	096	598.60
869V-624CSR	10X4	4	1	0	096	643.86
869V-626CSR	10X6	6	1	0	096	740.54
869V-664CSR	12X4	4	1	0	096	807.25
869V-666CSR	12X6	6	1	0	096	936.28

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)



869SV-247CSR	2X1/2	3/4	1	10	096	126.97
869SV-248CSR	2X3/4	7/8	1	10	096	126.97
869SV-249CSR	2X1	1-1/8	1	10	096	126.97
869SV-250CSR	2X1-1/4	1-1/2	1	10	096	126.97
869SV-251CSR	2X1-1/2	1-1/2	1	10	096	126.97
869SV-291CSR	2-1/2X1-1/2	1-1/2	1	10	096	160.91
869SV-333CSR ¹	3X1/2	7/8	1	10	096	160.91
869SV-334CSR	3X3/4	7/8	1	10	096	160.91
869SV-335CSR	3X1	1-1/8	1	10	096	160.91
869SV-336CSR ¹	3X1-1/4	2-1/4	1	10	096	160.91
869SV-337CSR ¹	3X1-1/2	2-1/4	1	10	096	160.91
869SV-338CSR	3X2	2-1/4	1	10	096	160.91
869SV-415CSR ¹	4X1/2	1-1/8	1	10	096	211.29
869SV-416CSR ¹	4X3/4	1-1/8	1	10	096	211.29
869SV-417CSR	4X1	1-1/8	1	8	096	211.29
869SV-418CSR ¹	4X1-1/4	1-3/4	1	8	096	211.29
869SV-419CSR	4X1-1/2	1-3/4	1	8	096	211.29
869SV-420CSR	4X2	2-1/4	1	8	096	211.29
869SV-421CSR ¹	4X2-1/2	3	1	4	096	221.83

Schedule 80 CPVC Industrial Products & Accessories
Clamp-On & Hot-Tap Saddles



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)
with FKM O-ring Seal & SS Hardware

869SV-422CSR	4X3	3	4	0	096	237.65
869SV-523CSR ¹	6X1/2	1-1/8	1	4	096	377.55
869SV-524CSR ¹	6X3/4	1-1/8	1	4	096	377.55
869SV-525CSR	6X1	1-1/8	1	4	096	377.55
869SV-526CSR ¹	6X1-1/4	2-1/4	1	4	096	377.55
869SV-527CSR ¹	6X1-1/2	2-1/4	1	4	096	377.55
869SV-528CSR	6X2	2-1/4	1	4	096	377.55
869SV-529CSR ¹	6X2-1/2	3	1	4	096	392.06
869SV-530CSR	6X3	3	1	4	096	404.49
869SV-532CSR	6X4	4	1	4	096	413.76
869SV-573CSR ¹	8X1/2	4	1	0	096	618.39
869SV-574CSR ¹	8X3/4	4	1	0	096	618.39
869SV-575CSR ¹	8X1	4	1	0	096	618.39
869SV-576CSR ¹	8X1-1/4	4	1	0	096	618.39
869SV-577CSR ¹	8X1-1/2	4	1	0	096	618.39
869SV-578CSR ¹	8X2	4	1	0	096	618.39
869SV-579CSR ¹	8X2-1/2	4	1	0	096	680.14
869SV-580CSR ¹	8X3	4	1	0	096	701.67
869SV-582CSR	8X4	4	1	0	096	757.04
869SV-585CSR	8X6	6	1	0	096	808.81
869SV-624CSR	10X4	4	1	0	096	900.86
869SV-626CSR	10X6	6	1	0	096	1036.04
869SV-664CSR	12X4	4	1	0	096	1129.27
869SV-666CSR	12X6	6	1	0	096	1310.06

¹Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869-247CSR	2X1/2	3/4	1	10	096	74.96
869-248CSR	2X3/4	7/8	1	10	096	74.96
869-249CSR	2X1	1-1/8	1	10	096	74.96
869-250CSR	2X1-1/4	1-1/2	1	10	096	74.96
869-251CSR	2X1-1/2	1-1/2	1	10	096	74.96
869-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	101.22
869-333CSR ¹	3X1/2	7/8	1	10	096	101.22
869-334CSR	3X3/4	7/8	1	10	096	101.22
869-335CSR	3X1	1-1/8	1	10	096	101.22
869-336CSR ¹	3X1-1/4	1-1/8	1	10	096	101.22
869-337CSR ¹	3X1-1/2	2-1/4	1	10	096	101.22
869-338CSR	3X2	2-1/4	1	10	096	101.22
869-415CSR ¹	4X1/2	1-1/8	1	10	096	125.65
869-416CSR ¹	4X3/4	1-1/8	1	10	096	125.65
869-417CSR	4X1	1-1/8	1	8	096	125.65
869-418CSR ¹	4X1-1/4	1-3/4	1	8	096	125.65
869-419CSR	4X1-1/2	1-3/4	1	8	096	125.65
869-420CSR	4X2	2-1/4	1	8	096	125.65
869-421CSR ¹	4X2-1/2	3	1	4	096	138.96
869-422CSR	4X3	3	1	4	096	150.38
869-523CSR ¹	6X1/2	1-1/8	1	4	096	205.25
869-524CSR ¹	6X3/4	1-1/8	1	4	096	205.25
869-525CSR	6X1	1-1/8	1	4	096	205.25
869-526CSR ¹	6X1-1/4	2-1/4	1	4	096	205.25
869-527CSR ¹	6X1-1/2	2-1/4	1	4	096	205.25
869-528CSR	6X2	2-1/4	1	4	096	205.25
869-529CSR ¹	6X2-1/2	3	1	4	096	219.69
869-530CSR	6X3	3	1	4	096	237.69
869-532CSR	6X4	4	1	4	096	252.07
869-573CSR ¹	8X1/2	4	1	0	096	397.37
869-574CSR ¹	8X3/4	4	1	0	096	397.37
869-575CSR ¹	8X1	4	1	0	096	397.37
869-576CSR ¹	8X1-1/4	4	1	0	096	397.37
869-577CSR ¹	8X1-1/2	4	1	0	096	397.37



Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

869-578CSR ¹	8X2	4	1	0	096	397.37
869-579CSR ¹	8X2-1/2	4	1	0	096	437.18
869-580CSR ¹	8X3	4	1	0	096	459.13
869-582CSR	8X4	4	1	0	096	486.62
869-585CSR	8X6	6	1	0	096	525.81
869-624CSR	10X4	4	1	0	096	578.99
869-626CSR	10X6	6	1	0	096	665.96
869-664CSR	12X4	4	1	0	096	725.91
869-666CSR	12X6	6	1	0	096	842.03

¹Outlet-sized with Bushing

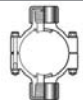
CPVC Gray Clamp-On Saddle x SR Thread Double Outlet

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869S-247CSR	2X1/2	3/4	1	10	096	120.48
869S-248CSR	2X3/4	7/8	1	10	096	120.48
869S-249CSR	2X1	1-1/8	1	10	096	120.48
869S-250CSR	2X1-1/4	1-1/2	1	10	096	120.48
869S-251CSR	2X1-1/2	1-1/2	1	10	096	120.48
869S-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	158.89
869S-333CSR ¹	3X1/2	7/8	1	10	096	158.89
869S-334CSR	3X3/4	7/8	1	10	096	158.89
869S-335CSR	3X1	1-1/8	1	10	096	158.89
869S-336CSR ¹	3X1-1/4	2-1/4	1	10	096	158.89
869S-337CSR ¹	3X1-1/2	2-1/4	1	10	096	158.89
869S-338CSR	3X2	2-1/4	1	10	096	158.89
869S-415CSR ¹	4X1/2	1-1/8	1	10	096	198.95
869S-416CSR ¹	4X3/4	1-1/8	1	10	096	198.95
869S-417CSR	4X1	1-1/8	1	8	096	198.95
869S-418CSR ¹	4X1-1/4	1-3/4	1	8	096	198.95
869S-419CSR	4X1-1/2	1-3/4	1	8	096	198.95
869S-420CSR	4X2	2-1/4	1	8	096	198.95
869S-421CSR ¹	4X2-1/2	3	1	4	096	213.72
869S-422CSR	4X3	3	4	0	096	229.08
869S-523CSR ¹	6X1/2	1-1/8	1	4	096	335.07
869S-524CSR ¹	6X3/4	1-1/8	1	4	096	335.07
869S-525CSR	6X1	1-1/8	1	4	096	335.07
869S-526CSR ¹	6X1-1/4	2-1/4	1	4	096	335.07
869S-527CSR ¹	6X1-1/2	2-1/4	1	4	096	335.07
869S-528CSR	6X2	2-1/4	1	4	096	335.07
869S-529CSR ¹	6X2-1/2	3	1	4	096	342.60
869S-530CSR	6X3	3	1	4	096	357.74
869S-532CSR	6X4	4	1	4	096	367.73
869S-573CSR ¹	8X1/2	4	1	0	096	563.97
869S-574CSR ¹	8X3/4	4	1	0	096	563.97
869S-575CSR ¹	8X1	4	1	0	096	563.97
869S-576CSR ¹	8X1-1/4	4	1	0	096	563.97
869S-577CSR ¹	8X1-1/2	4	1	0	096	563.97
869S-578CSR ¹	8X2	4	1	0	096	563.97
869S-579CSR ¹	8X2-1/2	4	1	0	096	620.31
869S-580CSR ¹	8X3	4	1	0	096	651.25
869S-582CSR	8X4	4	1	0	096	690.38
869S-585CSR	8X6	6	1	0	096	725.01
869S-624CSR	10X4	4	1	0	096	821.56
869S-626CSR	10X6	6	1	0	096	944.72
869S-664CSR	12X4	4	1	0	096	1029.85
869S-666CSR	12X6	6	1	0	096	1194.49

¹Outlet-sized with Bushing





Schedule 80 CPVC Industrial Products & Accessories

Clamp-On & Hot-Tap Saddles & Glue-on Saddles

Clamp-On & Hot-Tap Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Gray Hot-Tap Saddle

EPDM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT2-248C	2X3/4 (1)	1	5	050	85.15
HT2-251C	2X1-1/2 (2)	1	5	050	175.76
HT2-288C	2-1/2X3/4 (1)	1	5	050	90.89
HT2-291C	2-1/2X1-1/2 (2)	1	5	050	181.63
HT2-334C	3X3/4 (1)	1	5	050	104.14
HT2-337C	3X1-1/2 (2)	1	5	050	200.31
HT2-416C	4X3/4 (1)	1	5	050	120.32
HT2-419C	4X1-1/2 (2)	1	0	050	211.79
HT2-524C	6X3/4 (1)	1	5	050	135.31
HT2-527C	6X1-1/2 (2)	1	0	050	225.46
HT2-574C	8X3/4 (1)	1	5	050	124.62
HT2-577C	8X1-1/2 (2)	1	0	050	232.81

CPVC Gray Hot-Tap Saddle

EPDM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT2S-248C	2X3/4 (1)	1	5	050	132.36
HT2S-251C	2X1-1/2 (2)	1	5	050	273.56
HT2S-288C	2-1/2X3/4 (1)	1	5	050	141.48
HT2S-291C	2-1/2X1-1/2 (2)	1	5	050	282.82
HT2S-334C	3X3/4 (1)	1	5	050	162.23
HT2S-337C	3X1-1/2 (2)	1	5	050	311.80
HT2S-416C	4X3/4 (1)	1	5	050	187.38
HT2S-419C	4X1-1/2 (2)	1	0	050	329.75
HT2S-524C	6X3/4 (1)	1	5	050	210.32
HT2S-527C	6X1-1/2 (2)	1	0	050	350.92
HT2S-574C	8X3/4 (1)	1	0	050	227.38
HT2S-577C	8X1-1/2 (2)	1	0	050	379.45

CPVC Gray Hot-Tap Saddle

FKM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT3-248C	2X3/4 (1)	1	5	050	92.52
HT3-251C	2X1-1/2 (2)	1	5	050	190.75
HT3-288C	2-1/2X3/4 (1)	1	5	050	98.84
HT3-291C	2-1/2X1-1/2 (2)	1	5	050	197.07
HT3-334C	3X3/4 (1)	1	5	050	112.95
HT3-337C	3X1-1/2 (2)	1	5	050	217.66
HT3-416C	4X3/4 (1)	1	5	050	203.26
HT3-419C	4X1-1/2 (2)	1	0	050	230.02
HT3-524C	6X3/4 (1)	1	5	050	146.92
HT3-527C	6X1-1/2 (2)	1	0	050	244.14
HT3-574C	8X3/4 (1)	1	0	050	158.83
HT3-577C	8X1-1/2 (2)	1	0	050	295.93

CPVC Gray Hot-Tap Saddle

FKM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT3S-248C	2X3/4 (1)	1	5	050	144.14
HT3S-251C	2X1-1/2 (2)	1	5	050	297.08
HT3S-288C	2-1/2X3/4 (1)	1	5	050	153.83
HT3S-291C	2-1/2X1-1/2 (2)	1	5	050	306.65
HT3S-334C	3X3/4 (1)	1	5	050	175.61
HT3S-337C	3X1-1/2 (2)	1	5	050	345.04
HT3S-416C	4X3/4 (1)	1	5	050	203.26
HT3S-419C	4X1-1/2 (2)	1	0	050	358.13
HT3S-524C	6X3/4 (1)	1	5	050	228.71
HT3S-527C	6X1-1/2 (2)	1	0	050	380.03
HT3S-574C	8X3/4 (1)	1	0	050	247.23
HT3S-577C	8X1-1/2 (2)	1	5	050	410.85

CPVC Gray Hot-Tap Saddle

EPDM with Stainless Steel Cutter & Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HTS2S-248C	2X3/4 (1)	1	5	050	407.25
HTS2S-251C	2X1-1/2 (2)	1	5	050	603.55
HTS2S-288C	2-1/2X3/4 (1)	1	5	050	435.76
HTS2S-291C	2-1/2X1-1/2 (2)	1	5	050	604.52
HTS2S-334C	3X3/4 (1)	1	5	050	415.62
HTS2S-337C	3X1-1/2 (2)	1	5	050	621.38
HTS2S-416C	4X3/4 (1)	1	5	050	442.54
HTS2S-419C	4X1-1/2 (2)	1	0	050	636.83
HTS2S-524C	6X3/4 (1)	1	5	050	515.85
HTS2S-527C	6X1-1/2 (2)	1	0	050	719.88
HTS2S-574C	8X3/4 (1)	1	0	050	715.60
HTS2S-577C	8X1-1/2 (2)	1	0	050	852.33

CPVC Gray Hot-Tap Saddle

FKM with Stainless Steel Cutter & Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HTS3S-248C	2X3/4 (1)	1	5	050	413.63
HTS3S-251C	2X1-1/2 (2)	1	5	050	612.74
HTS3S-288C	2-1/2X3/4 (1)	1	5	050	442.68
HTS3S-291C	2-1/2X1-1/2 (2)	1	5	050	615.15
HTS3S-334C	3X3/4 (1)	1	5	050	380.64
HTS3S-337C	3X1-1/2 (2)	1	5	050	632.17
HTS3S-416C	4X3/4 (1)	1	5	050	450.88
HTS3S-419C	4X1-1/2 (2)	1	0	050	652.81
HTS3S-524C	6X3/4 (1)	1	5	050	523.92
HTS3S-527C	6X1-1/2 (2)	1	0	050	735.84
HTS3S-574C	8X3/4 (1)	1	0	050	731.43
HTS3S-577C	8X1-1/2 (2)	1	0	050	859.96

Glue-on Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

3963-528C	6X2	1	5	099	96.52
3963-530C	6X3	1	5	099	109.35
3963-532C	6X4	1	10	099	133.83
3963-578C	8X2	1	5	099	146.48

Saddle (continued)

IPS O.D. x Socket Schedule 80

3963-580C	8X3	1	8	099	162.61
3963-582C	8X4	1	5	099	209.04
3963-585C	8X6	1	0	099	239.28
3963-621C	10X2	1	5	099	163.84
3963-623C	10X3	1	8	099	180.42
3963-624C	10X4	1	5	099	221.59

Schedule 80 CPVC Industrial Products & Accessories
Glue-on Saddles



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle (continued)

IPS O.D. x Socket Schedule 80

3963-626C	10X6	1	5	099	271.57
3963-628C	10X8	1	5	099	300.38
3963-661C	12X2	1	10	099	180.34
3963-663C	12X3	1	8	099	210.61
3963-664C	12X4	1	8	099	252.14
3963-666C	12X6	1	0	099	292.33
3963-668C	12X8	1	4	099	368.58
3963-670C	12X10	1	0	099	576.45
3963-693C	14X3	1	8	099	226.63
3963-694C	14X4	1	5	099	293.46
3963-696C	14X6	1	10	099	342.97
3963-698C	14X8	1	4	099	408.45
3963-700C	14X10	1	3	099	717.76
3963-702C	14X12	1	4	099	841.72
3963-751C	16X2	1	5	099	217.93
3963-753C	16X3	1	8	099	272.94
3963-754C	16X4	1	10	099	342.56
3963-756C	16X6	1	3	099	464.24
3963-758C	16X8	1	3	099	582.65
3963-760C	16X10	1	0	099	800.91
3963-762C	16X12	1	0	099	1122.84
3963-764C	16X14	1	0	099	1291.16
3963-781C	18X2	1	5	409	265.43
3963-783C	18X3	1	4	099	298.60
3963-784C	18X4	1	5	099	435.14
3963-786C	18X6	1	5	099	596.49
3963-788C	18X8	1	5	099	673.21
3963-790C	18X10	1	0	099	878.13
3963-792C	18X12	1	0	099	1261.44
3963-794C	18X14	1	0	099	1379.15
3963-796C	18X16	1	0	099	1592.36
3963-811C	20X2	1	0	099	279.52
3963-813C	20X3	1	4	099	323.26
3963-814C	20X4	1	4	099	485.51
3963-816C	20X6	1	0	099	644.74
3963-818C	20X8	1	0	099	794.62
3963-820C	20X10	1	5	099	971.47
3963-822C	20X12	1	0	099	1311.81
3963-824C	20X14	1	0	099	1530.77
3963-826C	20X16	1	0	099	1706.20
3963-828C	20X18	1	0	099	1860.54
3963-901C	24X2	1	5	099	306.38
3963-903C	24X3	1	5	099	511.17
3963-904C	24X4	1	5	099	593.53
3963-906C	24X6	1	5	099	844.41
3963-908C	24X8	1	5	099	992.65
3963-910C	24X10	1	5	099	1228.37
3963-912C	24X12	1	0	099	1392.32
3963-914C	24X14	1	0	099	1626.20
3963-916C	24X16	1	0	099	1799.68
3963-918C	24X18	1	0	099	1993.79
3963-920C	24X20	1	0	099	2374.32

Stub Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

3965-528C	6X2	1	10	099	121.51
3965-530C	6X3	1	3	099	130.54
3965-532C	6X4	1	5	099	162.23
3965-578C	8X2	1	5	099	151.88
3965-580C	8X3	1	4	099	99.66
3965-582C	8X4	1	5	099	225.85
3965-585C	8X6	1	4	099	284.15
3965-621C	10X2	1	6	099	173.63

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Stub Saddle (continued)

IPS O.D. x Socket Schedule 80

3965-623C	10X3	1	5	099	194.99
3965-624C	10X4	1	4	099	237.05
3965-626C	10X6	1	4	099	183.15
3965-628C	10X8	1	4	099	305.19
3965-661C	12X2	1	2	099	196.68
3965-663C	12X3	1	2	099	232.84
3965-664C	12X4	1	2	099	271.20
3965-666C	12X6	1	2	099	316.22
3965-668C	12X8	1	2	099	405.86
3965-670C	12X10	1	2	099	717.61
3965-691C	14X2	1	10	099	211.73
3965-693C	14X3	1	0	099	259.13
3965-694C	14X4	1	5	099	307.55
3965-696C	14X6	1	2	099	395.87
3965-700C	14X10	1	0	099	799.58
3965-702C	14X12	1	0	099	982.35
3965-751C	16X2	1	5	099	244.96
3965-753C	16X3	1	4	099	279.17
3965-754C	16X4	1	3	099	367.75
3965-756C	16X6	1	2	099	492.93
3965-758C	16X8	1	0	099	621.68
3965-760C	16X10	1	0	099	835.56
3965-762C	16X12	1	0	099	1165.87
3965-764C	16X14	1	0	099	1584.51
3965-781C	18X2	1	2	099	280.42
3965-783C	18X3	1	0	099	311.89
3965-784C	18X4	1	0	099	460.82
3965-786C	18X6	1	2	099	625.34
3965-788C	18X8	1	0	099	688.75
3965-790C	18X10	1	0	099	1002.81
3965-792C	18X12	1	0	099	1953.57
3965-794C	18X14	1	0	099	2508.54
3965-796C	18X16	1	0	099	3213.57
3965-811C	20X2	1	0	099	293.99
3965-813C	20X3	1	2	099	333.03
3965-814C	20X4	1	0	099	503.89
3965-816C	20X6	1	0	099	669.20
3965-818C	20X8	1	0	099	831.65
3965-820C	20X10	1	0	099	1138.05
3965-822C	20X12	1	0	099	2092.63
3965-824C	20X14	1	0	099	2714.15
3965-826C	20X16	1	0	099	3436.73
3965-828C	20X18	1	0	099	4189.82
3965-901C	24X2	1	5	099	324.05
3965-903C	24X3	1	2	099	542.97
3965-904C	24X4	1	5	099	636.11
3965-906C	24X6	1	3	099	897.73
3965-908C	24X8	1	0	099	1051.60
3965-910C	24X10	1	0	099	1317.91
3965-912C	24X12	1	0	099	2259.86
3965-914C	24X14	1	0	099	2856.87
3965-916C	24X16	1	0	099	3504.23
3965-918C	24X18	1	0	099	4273.22
3965-920C	24X20	1	0	099	5508.66



Schedule 80 CPVC Industrial Products & Accessories

Tank Adapters

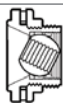
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Self Aligning Tank Adapter with Neoprene Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172SA-010C	1	5	0	101	211.31
8172SA-020C	2	4	0	101	318.92
8172SA-030C	3	2	0	101	496.95

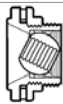


CPVC Self Aligning Tank Adapter with EPDM Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172ESA-010C	1	5	0	101	222.15
8172ESA-020C	2	4	0	101	336.43
8172ESA-030C	3	2	0	101	523.27

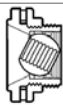


CPVC Self Aligning Tank Adapter with FKM Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172VSA-010C	1	5	0	101	439.07
8172VSA-020C	2	4	0	101	664.61
8172VSA-030C	3	2	0	101	1032.62

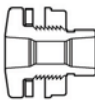


CPVC New Style Standard Tank Adapters with Neoprene Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170-002C	1/4	25	150	101	48.33
8170-003C	3/8	25	150	101	48.33
8170-005C	1/2	25	0	101	48.33
8170-007C	3/4	25	0	101	57.49
8170-010C	1	25	0	101	64.53
8170-012C	1-1/4	20	0	101	82.31
8170-015C	1-1/2	20	0	101	89.62
8170-020C	2	15	0	101	126.52
8170-025C	2-1/2	4	0	101	185.95
8170-030C	3	4	0	101	221.34
8170-040C	4	2	0	101	368.87
8170-060C	6	1	0	101	1014.41
8170-080C	8	1	0	101	2254.08

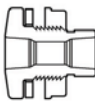


CPVC New Style Standard Tank Adapters with EPDM Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170E-002C	1/4	25	150	101	54.97
8170E-003C	3/8	25	150	101	54.97
8170E-005C	1/2	25	0	101	54.97
8170E-007C	3/4	25	0	101	61.69
8170E-010C	1	25	0	101	71.64
8170E-012C	1-1/4	20	0	101	90.66
8170E-015C	1-1/2	20	0	101	95.12
8170E-020C	2	15	0	101	137.14
8170E-025C	2-1/2	4	0	101	194.80
8170E-030C	3	4	0	101	231.92
8170E-040C	4	2	0	101	384.98
8170E-060C	6	1	0	101	1056.68
8170E-080C	8	1	0	101	2319.98

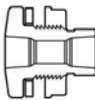


CPVC New Style Standard Tank Adapters with FKM Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170V-002C	1/4	25	150	101	72.08
------------	-----	----	-----	-----	-------



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC New Style Standard Tank Adapters with FKM Gaskets (continued)

Soc

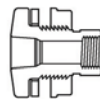
8170V-003C	3/8	25	150	101	72.08
8170V-005C	1/2	25	0	101	72.08
8170V-007C	3/4	25	0	101	82.92
8170V-010C	1	25	0	101	95.98
8170V-012C	1-1/4	20	0	101	117.93
8170V-015C	1-1/2	20	0	101	122.94
8170V-020C	2	15	0	101	186.12
8170V-025C	2-1/2	4	0	101	267.89
8170V-030C	3	4	0	101	318.92
8170V-040C	4	2	0	101	706.39
8170V-060C	6	1	0	101	1775.27
8170V-080C	8	1	0	101	4152.82

CPVC New Style Standard Tank Adapters with Neoprene Gaskets

Soc x Fi

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002C	1/4	25	150	101	48.33
8171-003C	3/8	25	200	101	48.33
8171-005C	1/2	25	0	101	48.33
8171-007C	3/4	25	0	101	57.49
8171-010C	1	25	0	101	64.53
8171-012C	1-1/4	20	0	101	82.31
8171-015C	1-1/2	20	0	101	89.62
8171-020C	2	15	0	101	126.52
8171-025C	2-1/2	4	0	101	185.95
8171-030C	3	4	0	101	221.34
8171-040C	4	2	0	101	368.87
8171-060C	6	1	0	101	1014.41

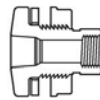


CPVC New Style Standard Tank Adapters with EPDM Gaskets

Soc x Fi

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002C	1/4	25	150	101	54.97
8171E-003C	3/8	25	200	101	54.97
8171E-005C	1/2	25	0	101	54.97
8171E-007C	3/4	25	0	101	61.69
8171E-010C	1	25	0	101	71.64
8171E-012C	1-1/4	20	0	101	90.66
8171E-015C	1-1/2	20	0	101	95.12
8171E-020C	2	15	0	101	137.14
8171E-025C	2-1/2	4	0	101	194.80
8171E-030C	3	4	0	101	231.92
8171E-040C	4	2	0	101	384.98
8171E-060C	6	1	0	101	1056.67

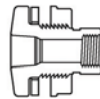


CPVC New Style Standard Tank Adapters with FKM Gaskets

Soc x Fi

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002C	1/4	25	150	101	72.08
8171V-003C	3/8	25	200	101	72.08
8171V-005C	1/2	25	0	101	72.08
8171V-007C	3/4	25	0	101	82.92
8171V-010C	1	25	0	101	95.98
8171V-012C	1-1/4	20	0	101	117.93
8171V-015C	1-1/2	20	0	101	122.94
8171V-020C	2	15	0	101	186.12
8171V-025C	2-1/2	4	0	101	267.93
8171V-030C	3	4	0	101	318.92
8171V-040C	4	2	0	101	706.39
8171V-060C	6	1	0	101	1775.27



Schedule 80 CPVC Industrial Products & Accessories
Tank Adapters



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**CPVC New Style Special Reinforced (SR)
Threaded Tank Adapters with Neoprene
Gaskets**



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002CSR	1/4	25	150	101	49.80
8171-003CSR	3/8	25	200	101	49.80
8171-005CSR	1/2	25	0	101	49.80
8171-007CSR	3/4	25	0	101	59.60
8171-010CSR	1	25	0	101	67.42
8171-012CSR	1-1/4	20	0	101	86.97
8171-015CSR	1-1/2	20	0	101	97.64
8171-020CSR	2	15	0	101	135.02
8171-025CSR	2-1/2	4	0	101	205.39
8171-030CSR	3	4	0	101	244.46
8171-040CSR	4	2	0	101	392.88
8171-060CSR	6	1	0	101	1037.65

**CPVC New Style Special Reinforced (SR)
Threaded Tank Adapters with EPDM Gaskets**



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002CSR	1/4	25	150	101	56.44
8171E-003CSR	3/8	25	200	101	56.44
8171E-005CSR	1/2	25	0	101	56.44
8171E-007CSR	3/4	25	0	101	63.79
8171E-010CSR	1	25	0	101	76.27
8171E-012CSR	1-1/4	20	0	101	95.32
8171E-015CSR	1-1/2	20	0	101	103.13
8171E-020CSR	2	15	0	101	145.79
8171E-025CSR	2-1/2	4	0	101	214.24
8171E-030CSR	3	4	0	101	255.05
8171E-040CSR	4	2	0	101	408.93
8171E-060CSR	6	2	0	101	1079.93

**CPVC New Style Special Reinforced (SR)
Threaded Tank Adapters with FKM Gaskets**



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002CSR	1/4	25	150	101	73.54
8171V-003CSR	3/8	25	200	101	73.54
8171V-005CSR	1/2	25	0	101	73.54
8171V-007CSR	3/4	25	0	101	85.01
8171V-010CSR	1	25	0	101	98.89
8171V-012CSR	1-1/4	20	0	101	122.59
8171V-015CSR	1-1/2	20	0	101	130.91
8171V-020CSR	2	15	0	101	194.93
8171V-025CSR	2-1/2	4	0	101	287.26
8171V-030CSR	3	4	0	101	342.05
8171V-040CSR	4	2	0	101	730.36
8171V-060CSR	6	2	0	101	1803.22

**CPVC New Style Standard Tank Adapters with
Neoprene Gaskets**



Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002C	1/4	25	150	101	64.53
8172-003C	3/8	25	200	101	64.53
8172-005C	1/2	25	0	101	64.53
8172-007C	3/4	25	0	101	74.51
8172-010C	1	25	0	101	81.51
8172-012C	1-1/4	20	0	101	115.07
8172-015C	1-1/2	20	0	101	125.78
8172-020C	2	15	0	101	156.77
8172-025C	2-1/2	4	0	101	220.62
8172-030C	3	4	0	101	262.63

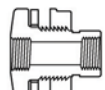
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**CPVC New Style Standard Tank Adapters with
Neoprene Gaskets (continued)**

Fipt

8172-040C	4	2	0	101	414.96
8172-060C	6	1	0	101	1152.74

**CPVC New Style Standard Tank Adapters with
EPDM Gaskets**

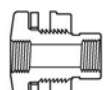


Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002C	1/4	25	150	101	67.07
8172E-003C	3/8	25	200	101	67.07
8172E-005C	1/2	25	0	101	67.07
8172E-007C	3/4	25	0	101	79.08
8172E-010C	1	25	0	101	85.21
8172E-012C	1-1/4	20	0	101	119.71
8172E-015C	1-1/2	20	0	101	136.61
8172E-020C	2	15	0	101	168.84
8172E-025C	2-1/2	4	0	101	248.22
8172E-030C	3	4	0	101	295.54
8172E-040C	4	2	0	101	492.03
8172E-060C	6	1	0	101	1170.14

**CPVC New Style Standard Tank Adapters with
FKM Gaskets**

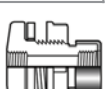


Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002C	1/4	25	150	101	103.79
8172V-003C	3/8	25	200	101	103.79
8172V-005C	1/2	25	0	101	103.79
8172V-007C	3/4	25	0	101	116.99
8172V-010C	1	25	0	101	134.62
8172V-012C	1-1/4	20	0	101	165.14
8172V-015C	1-1/2	20	0	101	170.87
8172V-020C	2	15	0	101	266.18
8172V-025C	2-1/2	4	0	101	377.73
8172V-030C	3	4	0	101	449.64
8172V-040C	4	2	0	101	1182.45
8172V-060C	6	1	0	101	2167.27

**CPVC New Style Special Reinforced (SR)
Threaded Tank Adapters with Neoprene
Gaskets**

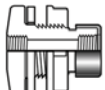


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002CSR	1/4	25	150	101	65.97
8172-003CSR	3/8	25	200	101	65.97
8172-005CSR	1/2	25	0	101	65.97
8172-007CSR	3/4	25	0	101	76.61
8172-010CSR	1	25	0	101	84.41
8172-012CSR	1-1/4	20	0	101	119.75
8172-015CSR	1-1/2	20	0	101	133.78
8172-020CSR	2	15	0	101	165.40
8172-025CSR	2-1/2	4	0	101	240.05
8172-030CSR	3	4	0	101	285.78
8172-040CSR	4	2	0	101	438.93
8172-060CSR	6	2	0	101	1175.97

**CPVC New Style Special Reinforced (SR)
Threaded Tank Adapters with EPDM Gaskets**



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002CSR	1/4	25	150	101	68.55
8172E-003CSR	3/8	25	200	101	68.55
8172E-005CSR	1/2	25	0	101	68.55
8172E-007CSR	3/4	25	0	101	81.17



Schedule 80 CPVC Industrial Products & Accessories

Tank Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets (continued)

Fipt x SR FiPT - Stainless Steel Collar

8172E-010CSR	1	25	0	101	88.12
8172E-012CSR	1-1/4	20	0	101	124.38
8172E-015CSR	1-1/2	20	0	101	144.60
8172E-020CSR	2	15	0	101	177.48
8172E-025CSR	2-1/2	4	0	101	267.74
8172E-030CSR	3	4	0	101	318.73
8172E-040CSR	4	2	0	101	515.99
8172E-060CSR	6	2	0	101	1193.37

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

Fipt x SR FiPT - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002CSR	1/4	25	150	101	105.26
8172V-003CSR	3/8	25	200	101	105.26
8172V-005CSR	1/2	25	0	101	105.26
8172V-007CSR	3/4	25	0	101	119.08
8172V-010CSR	1	25	0	101	137.53
8172V-012CSR	1-1/4	20	0	101	169.80
8172V-015CSR	1-1/2	20	0	101	178.83
8172V-020CSR	2	15	0	101	274.84
8172V-025CSR	2-1/2	4	0	101	397.14
8172V-030CSR	3	4	0	101	472.79
8172V-040CSR	4	2	0	101	1206.41
8172V-060CSR	6	2	0	101	2190.53

Tank Adapter with Neoprene Gasket (Old Style)

Soc x FiPT

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871-005C	1/2	25	0	101	48.33
871-007C	3/4	25	0	101	57.49
871-010C	1	25	0	101	64.53
871-012C	1-1/4	20	0	101	82.31
871-015C	1-1/2	20	0	101	89.62
871-020C	2	15	0	101	126.52
871-030C	3	4	0	101	221.34
871-040C	4	2	0	101	368.87

Tank Adapter with Neoprene Gasket (Old Style)

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872-005C	1/2	25	0	101	64.53
872-007C	3/4	25	0	101	74.51
872-010C	1	25	0	101	81.51
872-012C	1-1/4	20	0	101	115.07
872-015C	1-1/2	20	0	101	125.78
872-020C	2	15	0	101	156.77
872-030C	3	4	0	101	262.63
872-040C	4	2	0	101	414.96

Neoprene Tank Adapter Gasket Only (New Style)

3N-002	1/4	100	0	901	2.71
3N-003	3/8	50	0	901	2.71
3N-005	1/2	10	0	901	2.71
3N-007	3/4	10	0	901	2.91
3N-010	1	10	0	901	3.09
3N-012	1-1/4	10	0	901	4.27
3N-015	1-1/2	10	0	901	5.01
3N-020	2	10	0	901	6.56

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Neoprene Tank Adapter Gasket Only (New Style) (continued)

3N-025	2-1/2	10	0	901	6.84
3N-030	3	10	0	901	7.14
3N-040	4	10	0	901	19.75
2N-060	6	10	0	901	24.67
3N-080	8	10	0	901	113.14

EPDM Tank Adapter Gasket Only (New Style)

3E-002	1/4	10	0	901	3.15
3E-003	3/8	10	0	901	3.15
3E-005	1/2	10	0	901	3.15
3E-007	3/4	10	0	901	3.25
3E-010	1	10	0	901	5.64
3E-012	1-1/4	10	0	901	8.26
3E-015	1-1/2	10	0	901	8.48
3E-020	2	10	0	901	9.71
3E-025	2-1/2	10	0	901	13.76
3E-030	3	10	0	901	14.79
3E-040	4	10	0	901	22.28
2E-060	6	10	0	901	40.22
3E-080	8	10	0	901	145.99

FKM Tank Adapter Gasket Only (New Style)

3V-002	1/4	10	0	901	11.53
3V-003	3/8	10	0	901	13.59
3V-005	1/2	10	0	901	20.28
3V-007	3/4	10	0	901	25.12
3V-010	1	10	0	901	34.34
3V-012	1-1/4	10	0	901	54.61
3V-015	1-1/2	10	0	901	58.99
3V-020	2	10	0	901	94.48
3V-025	2-1/2	10	0	901	104.38
3V-030	3	10	0	901	108.76
3V-040	4	10	0	901	246.09
2V-060	6	10	0	901	616.03
3V-080	8	10	0	901	1033.18

Neoprene Tank Adapter Gasket Only (Old Style)

2N-005	1/2	10	0	901	2.71
2N-007	3/4	10	0	901	2.91
2N-010	1	10	0	901	3.09
2N-015	1-1/4 OR 1-1/2	10	0	901	5.01
2N-020	2	10	0	901	6.56
2N-030	3	10	0	901	7.14
2N-040	4	10	0	901	19.75

EPDM Tank Adapter Gasket Only (Old Style)

2E-005	1/2	10	0	901	3.15
2E-007	3/4	10	0	901	3.25
2E-010	1	10	0	901	5.64
2E-015	1-1/4 OR 1-1/2	10	0	901	8.48
2E-020	2	10	0	901	9.71
2E-030	3	10	0	901	14.79
2E-040	4	10	0	901	22.28

Schedule 80 CPVC Industrial Products & Accessories
Tank Adapters & Expansion Joints



Tank Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Wrench Sets (New Style)
Body Wrench & Nut Wrench



TAW-002	1/4	1	25	299	21.89
TAW-003	3/8	1	25	299	21.89
TAW-005	1/2	1	25	299	21.89
TAW-007	3/4	1	25	299	22.32
TAW-010	1	1	25	299	23.21
TAW-012	1-1/4	1	20	299	26.18
TAW-015	1-1/2	1	20	299	28.40
TAW-020	2	1	10	299	32.35
TAW-025	2-1/2	1	10	299	35.79
TAW-030	3	1	10	299	39.44
TAW-040	4	1	10	299	42.26

Individual Body Wrench (New Style)



TAW1-002	1/4	500	0	299	12.28
TAW1-003	3/8	400	0	299	12.28
TAW1-005	1/2	250	0	299	12.28
TAW1-007	3/4	220	0	299	12.52
TAW1-010	1	200	0	299	13.03
TAW1-012	1-1/4	300	0	299	14.76

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Individual Body Wrench (New Style) (continued)

TAW1-015	1-1/2	150	0	299	15.89
TAW1-020	2	100	0	299	17.25
TAW1-025	2-1/2	80	0	299	18.03
TAW1-030	3	74	0	299	22.61
TAW1-040	4	35	0	299	23.26

Individual Nut Wrench (New Style)



TAW2-002	1/4	300	0	299	12.28
TAW2-003	3/8	250	0	299	12.28
TAW2-005	1/2	200	0	299	12.28
TAW2-007	3/4	160	0	299	12.52
TAW2-010	1	110	0	299	13.03
TAW2-012	1-1/4	200	0	299	14.76
TAW2-015	1-1/2	120	0	299	15.89
TAW2-020	2	100	0	299	17.25
TAW2-025	2-1/2	50	0	299	18.03
TAW2-030	3	40	0	299	22.61
TAW2-040	4	35	0	299	23.26

Expansion Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Fabricated Expansion Joints
6" Travel with FKM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
 2-1/2" - 12" 150 psi @ 73°F (23°C)

826-005X6C	1/2	10	0	085	387.05
826-007X6C	3/4	6	0	085	423.54
826-010X6C	1	5	0	085	457.80
826-012X6C	1-1/4	4	0	085	480.84
826-015X6C	1-1/2	4	0	085	524.06
826-020X6C	2	2	0	085	664.05
826-025X6C	2-1/2	1	0	085	788.00
826-030X6C	3	1	0	085	915.43
826-040X6C	4	1	0	085	1350.14
826-060X6C	6	1	0	085	1451.36
826-080X6C	8	1	0	085	2753.19
826-100X6C	10	1	0	085	3514.77
826-120X6C	12	1	0	085	4662.63

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X6C

CPVC Fabricated Expansion Joints
12" Travel with FKM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
 2-1/2" - 12" 150 psi @ 73°F (23°C)

826-005X12C	1/2	10	0	085	394.20
826-007X12C	3/4	6	0	085	452.06
826-010X12C	1	5	0	085	482.24
826-012X12C	1-1/4	4	0	085	764.46
826-015X12C	1-1/2	4	0	085	605.32
826-020X12C	2	2	0	085	772.65
826-025X12C	2-1/2	1	0	085	1169.72
826-030X12C	3	1	0	085	940.04
826-040X12C	4	1	0	085	1557.18
826-060X12C	6	1	0	085	1715.44

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Fabricated Expansion Joints (continued)
12" Travel with FKM O-rings

826-080X12C	8	1	0	085	3284.37
826-100X12C	10	1	0	085	3847.76

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X12C

CPVC Elastomer Expansion Joint
with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ22-007C	3/4	10	0	085	205.88
EJ22-010C	1	10	0	085	234.92
EJ22-012C	1-1/4	15	0	085	256.68
EJ22-015C	1-1/2	10	0	085	314.45
EJ22-020C	2	8	0	085	392.46
EJ22-025C	2-1/2	4	0	085	573.51
EJ22-030C	3	2	0	085	779.00

CPVC Elastomer Expansion Joint
with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ21-007CSR	3/4	10	0	085	208.22
EJ21-010CSR	1	10	0	085	239.45
EJ21-012CSR	1-1/4	15	0	085	264.60
EJ21-015CSR	1-1/2	10	0	085	337.27
EJ21-020CSR	2	8	0	085	445.81
EJ21-025CSR	2-1/2	4	0	085	619.13
EJ21-030CSR	3	2	0	085	824.60



Schedule 80 CPVC Industrial Products & Accessories

Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange One Piece Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

851-005C	1/2	25	0	090	26.87
851-007C	3/4	25	0	090	27.49
851-010C	1	15	0	090	30.02
851-012C	1-1/4	15	0	090	36.64
851-015C	1-1/2	20	0	090	40.67
851-020C	2	10	0	090	49.23
851-025C	2-1/2	10	0	090	102.01
851-030C	3	10	0	090	106.67
851-040C	4	5	0	090	144.12
851-050C	5	5	0	090	264.12
851-060C	6	5	0	090	245.51
851-080C	8	2	0	090	560.85

Flange One Piece Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005C	1/2	25	0	090	37.57
852-007C	3/4	25	0	090	45.55
852-010C	1	15	0	090	49.71
852-012C	1-1/4	15	0	090	68.99
852-015C	1-1/2	20	0	090	73.03
852-020C	2	10	0	090	74.37
852-025C	2-1/2	10	0	090	120.72
852-030C	3	10	0	090	119.78
852-040C	4	5	0	090	186.21

Special Reinforced Flange One Piece Threaded



SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005CSR	1/2	25	0	096	20.65
852-007CSR	3/4	25	0	096	25.05
852-010CSR	1	15	0	096	27.41
852-012CSR	1-1/4	15	0	096	37.93
852-015CSR	1-1/2	15	0	096	40.21
852-020CSR	2	10	0	096	41.19
852-025CSR	2-1/2	10	0	096	66.27
852-030CSR	3	10	0	096	65.76
852-040CSR	4	5	0	096	123.22

Blind Flange



1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

853-005C	1/2	25	100	090	40.28
853-007C	3/4	25	0	090	43.67
853-010C	1	20	0	090	54.44
853-012C	1-1/4	20	0	090	61.60
853-015C	1-1/2	15	0	090	86.21
853-020C	2	10	0	090	90.57
853-025C	2-1/2	10	0	090	137.01
853-030C	3	10	0	090	170.33
853-040C	4	8	0	090	230.72
853-060C	6	5	0	090	387.01
853-080C	8	5	0	090	717.85
853-100C	10	3	0	091	1294.36
853-120C	12	2	0	091	2174.52
853-140CF	14	1	0	097	2527.08
853-160CF	16	1	0	097	3918.21
853-180CF	18	1	0	097	4830.15

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Blind Flange (continued)

853-200CF	20	1	0	097	5175.66
853-240CF	24	1	0	097	6297.71

Flange Van Stone Style with Plastic Ring Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

854-005C	1/2	25	0	090	27.05
854-007C	3/4	25	0	090	27.66
854-010C	1	15	0	090	30.21
854-012C	1-1/4	15	0	090	36.88
854-015C	1-1/2	20	0	090	40.95
854-020C	2	10	0	090	49.59
854-025C	2-1/2	10	0	090	102.73
854-030C	3	10	0	090	107.56
854-040C	4	5	0	090	145.25
854-050C	5	5	0	090	247.51
854-060C	6	5	0	090	247.51
854-080C	8	2	0	090	744.72
854-100C	10	2	0	091	1792.81
854-120C	12	2	0	091	2690.18
854-140C	14	1	0	091	3031.38
854-160C	16	1	0	091	3789.24
854-180C	18	1	0	091	6151.38

Flange Van Stone Style with Plastic Ring Spig



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

856-005C	1/2	25	0	090	31.28
856-007C	3/4	25	0	090	33.58
856-010C	1	15	0	090	38.13
856-012C	1-1/4	15	0	090	47.18
856-015C	1-1/2	15	0	090	52.17
856-020C	2	10	0	090	73.02
856-025C	2-1/2	10	0	090	114.37
856-030C	3	10	0	090	125.24
856-040C	4	5	0	090	128.88
856-060C	6	4	0	090	281.40
856-080C	8	2	0	090	573.59
856-100C	10	2	0	091	1926.06
856-120C	12	2	0	091	2893.23
856-140CF	14	1	0	097	3078.41
856-160CF	16	1	0	097	3813.33

Flange Van Stone Style with Plastic Solid Ring Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

S854-030C	3	10	0	090	153.63
S854-040C	4	5	0	090	207.55
S854-060C	6	4	0	090	353.57
S854-080C	8	2	0	090	1063.86
S854-100C	10	2	0	091	2561.17
S854-120C	12	2	0	091	3843.11

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with Plastic Ring



Soc

Molded with fabricated ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)

854-005CL300C	1/2	1	25	097	205.84
854-007CL300C	3/4	1	25	097	275.78
854-010CL300C	1	1	15	097	336.27

Schedule 80 CPVC Industrial Products & Accessories
Pipe Flanges & Van Stone Style Flange Replacement Split Rings



Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style Class 300 Bolt Pattern
Fabricated with Plastic Ring (continued)

Soc

854-012CL300C	1-1/4	1	15	097	357.25
854-015CL300C	1-1/2	1	20	097	370.95
854-020CL300C	2	1	10	097	412.06
854-025CL300C	2-1/2	1	10	097	490.33
854-030CL300C	3	1	10	097	532.87
854-040CL300C	4	1	5	097	840.37
854-060CL300C	6	1	4	097	1586.91
854-080CL300C	8	1	3	097	1826.03
854-100CL300C	10	1	2	097	2064.60
854-120CL300C	12	1	0	097	2579.31
854-140CL300C	14	1	0	097	2864.68
854-160CL300C	16	1	0	097	3014.23

Flange Van Stone Style with Plastic Ring
Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-005C	1/2	25	0	090	37.82
855-007C	3/4	25	0	090	45.84
855-010C	1	15	0	090	50.05

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Van Stone Style with Plastic Ring (continued)
Fipt

855-012C	1-1/4	15	0	090	68.88
855-015C	1-1/2	20	0	090	73.55
855-020C	2	10	0	090	74.93
855-025C	2-1/2	10	0	090	120.63
855-030C	3	10	0	090	120.63
855-040C	4	5	0	090	187.54
855-060C ¹	6	1	0	090	317.48
855-080C ¹	8	1	2	090	487.97
855-080CF	8	1	2	097	433.74

1 - Flange assembled with molded Female Adapter

Flange Van Stone Style with Plastic Ring ASTM
Soc x Multi-bolt Pattern Ring



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-020C	2	10	0	090	48.63
M854-060C	6	4	0	090	247.51
M854-080C	8	2	0	090	744.72

Van Stone Style Flange Replacement Split Rings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Application & Use of Van Stone Style
Flange Replacement Split Rings



Designed for easy Van Stone style flange ring replacement in the event of system modification, repair, or improper assembly without having to remove existing flange hub. Split rings are made as a direct replacement of existing one-piece rings used on Spears® brand only of Van Stone style flanges with ANSI Class 150 bolt pattern plastic rings. Remove old ring to be replaced then simply place the split ring sections around hub and install flange bolts (not included) through special designed section overlap to hold in position. Install appropriate user supplied bolts, washers and gasket (see Flange Gasket and Bolt Hardware Kits in this catalog); torque to specifications according to normal flange assembly. Split rings are a set of either 2-pieces or 4-pieces (illustrated) sections depending on size, in regular PVC, Glass Filled PVC, or CPVC for flange type and sizes listed.

CPVC Flange Replacement Split Rings
For Spears® Flanges with CPVC Rings



854-005-1SC	1/2	10	0	090	78.55
854-007-1SC	3/4	10	0	090	83.38
854-010-1SC	1	10	0	090	93.25
854-012-1SC	1-1/4	10	0	090	95.06
854-015-1SC	1-1/2	20	0	090	97.40
854-020-1SC	2	40	0	090	129.27
854-025-1SC	2-1/2	10	0	090	149.54
854-030-1SC	3	10	0	090	165.79
854-040-1SC	4	10	0	090	175.58
854-050-1SC	5	10	0	090	240.72
854-060-1SC	6	5	0	090	284.84
854-080-1SC	8	4	0	090	325.43
854-100-1SC	10	4	0	091	410.81
854-120-1SC	12	2	0	091	509.17
854-140-1SC	14	1	0	091	697.42
854-160-1SC	16	1	0	091	866.39
854-180-1SC	18	1	0	091	941.00
854-200-1SC	20	1	0	097	5998.99

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Flange Replacement Split Rings (continued)
For Spears® Flanges with CPVC Rings

854-240-1SC	24	1	0	097	6119.36
-------------	----	---	---	-----	---------

Fits 854-xxxC Socket, 855-xxxC Threaded, and 856-xxxC Spigot hub configurations



Schedule 80 CPVC Industrial Products & Accessories Flange Insulating Joints & Flange Bolt Kits

Flange Insulating Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Insulating Joints - Class 150 Bolt Pattern

PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)

For Dielectric Insulation Between Dissimilar Metal Flanges

300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

IJ-030-010P	3X1	1	0	016	460.69
IJ-040-010P	4X1	1	0	016	514.74
IJ-060-010P	6X1	1	0	016	611.82
IJ-080-010P	8X1	1	0	016	710.06
IJ-100-010P	10X1	1	0	016	1443.20
IJ-120-010P	12X1	1	0	016	1563.13
IJ-140-010P	14X1	1	0	016	2025.46
IJ-160-010P	16X1	1	0	016	2573.78
IJ-180-010P	18X1	1	0	016	3445.23
IJ-200-010P	20X1	1	0	016	4447.74
IJ-240-010P	24X1	1	0	016	6177.09



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange Insulating Joints - Class 300 Bolt Pattern

PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)

For Dielectric Insulation Between Dissimilar Metal Flanges

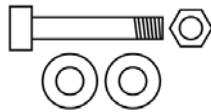
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

IJ300-030-010P	3X1	1	0	016	678.67
IJ300-040-010P	4X1	1	0	016	754.83
IJ300-060-010P	6X1	1	0	016	1156.18
IJ300-080-010P	8X1	1	0	016	1442.38
IJ300-100-010P	10X1	1	0	016	2392.84
IJ300-120-010P	12X1	1	0	016	3144.45
IJ300-140-010P	14X1	1	0	016	3961.23
IJ300-160-010P	16X1	1	0	016	4223.97
IJ300-180-010P	18X1	1	0	016	5278.95
IJ300-200-010P	20X1	1	0	016	6116.11
IJ300-240-010P	24X1	1	0	016	7509.49



Flange Bolt Kits

Bolt Kit Selection Guide



Order Gaskets & Bolt Kits Separately

- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

Flange Size	Bolts ¹ Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120

1 - Each Bolt includes Nut & two (2) Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Zinc Plated Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers



HK-005	1/2	1	10	017	10.03
HK-010	3/4 & 1	1	10	017	12.54
HK-015	1-1/4 & 1-1/2	1	10	017	18.85
HK-020	2	1	10	017	25.23
HK-025	2-1/2	1	10	017	30.25
HK-030	3	1	10	017	34.81
HK-040	4	1	5	017	72.12
HK-060	5 & 6	1	5	017	80.21
HK-080	8	1	0	017	94.00
HK-120	10 & 12	1	0	017	127.18

Type 316 Stainless Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers



HK1-005	1/2	1	10	017	30.11
---------	-----	---	----	-----	-------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Type 316 Stainless Steel Flange Bolt Hardware Kits

(continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK1-010	3/4 & 1	1	10	017	43.37
HK1-015	1-1/4 & 1-1/2	1	10	017	47.78
HK1-020	2	1	10	017	57.46
HK1-025	2-1/2	1	10	017	61.59
HK1-030	3	1	10	017	81.26
HK1-040	4	1	5	017	162.96
HK1-060	5 & 6	1	5	017	212.54
HK1-080	8	1	0	017	266.69
HK1-120	10 & 12	1	0	017	542.58

Type 304 Stainless Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers



HK2-005	1/2	1	10	017	26.34
HK2-010	3/4 & 1	1	10	017	37.57
HK2-015	1-1/4 & 1-1/2	1	10	017	44.26

Schedule 80 CPVC Industrial Products & Accessories
Flange Bolt Kits & Full-Faced Flange Gaskets



Flange Bolt Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK2-020	2	1	10	017	52.06
HK2-025	2-1/2	1	10	017	55.20
HK2-030	3	1	10	017	68.55
HK2-040	4	1	5	017	137.09
HK2-060	5 & 6	1	5	017	144.51

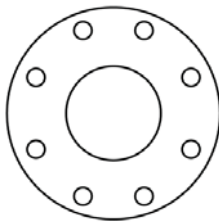
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK2-080	8	1	0	017	190.02
HK2-120	10 & 12	1	0	017	336.78

Full-Faced Flange Gaskets
Gasket Selection Guide



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	1/2	1	25	017	3.22
GK1-007	3/4	1	25	017	3.69
GK1-010	1	1	25	017	3.80
GK1-012	1-1/4	1	25	017	3.89
GK1-015	1-1/2	1	25	017	4.18
GK1-020	2	1	25	017	4.67
GK1-025	2-1/2	1	25	017	5.14
GK1-030	3	1	25	017	7.91
GK1-040	4	1	25	017	8.84
GK1-050	5	1	25	017	10.48
GK1-060	6	1	25	017	10.77
GK1-080	8	1	25	017	14.20
GK1-100	10	1	25	017	18.02
GK1-120	12	1	25	017	24.31
GK1-140	14	1	25	017	47.02
GK1-160	16	1	25	017	226.21
GK1-180	18	1	25	017	257.63
GK1-240	24	1	25	017	311.31

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	1/2	1	25	017	4.27
GK2-007	3/4	1	25	017	4.55
GK2-010	1	1	25	017	4.75
GK2-012	1-1/4	1	25	017	4.99
GK2-015	1-1/2	1	25	017	5.36
GK2-020	2	1	25	017	6.54
GK2-025	2-1/2	1	25	017	7.85
GK2-030	3	1	25	017	11.54
GK2-040	4	1	25	017	13.14
GK2-050	5	1	25	017	16.43

EPDM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-060	6	1	25	017	17.24
GK2-080	8	1	25	017	22.97
GK2-100	10	1	25	017	29.93
GK2-120	12	1	25	017	41.18
GK2-140	14	1	25	017	100.45
GK2-160	16	1	25	017	178.22
GK2-180	18	1	25	017	208.16
GK2-200	20	1	25	017	241.60
GK2-240	24	1	25	017	364.73

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	1/2	1	25	017	15.25
GK3-007	3/4	1	25	017	18.11
GK3-010	1	1	25	017	20.01
GK3-012	1-1/4	1	5	017	22.59
GK3-015	1-1/2	1	25	017	28.49
GK3-020	2	1	25	017	39.83
GK3-025	2-1/2	1	25	017	53.27
GK3-030	3	1	25	017	119.04
GK3-040	4	1	25	017	137.42
GK3-050	5	1	25	017	160.20
GK3-060	6	1	25	017	181.75
GK3-080	8	1	25	017	258.94
GK3-100	10	1	25	017	344.42
GK3-120	12	1	25	017	485.28
GK3-140	14	1	25	017	711.26
GK3-160	16	1	25	017	810.63
GK3-180	18	1	25	017	912.00
GK3-240	24	1	25	017	1160.91



Schedule 80 CPVC Industrial Products & Accessories

CPVC Cut-in Kit

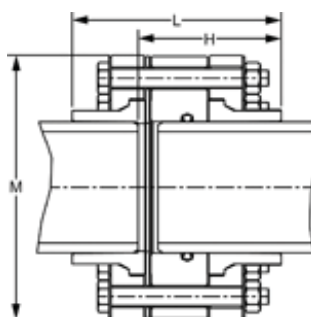
When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-in Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".



Pressure Rated to 150 psi @ 73°F (22°C)
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply

Size (in.)	H	L	M
2	2-3/8	4-7/8	6
2-1/2	3-3/4	5-1/2	7
3	4	5-7/8	7-1/2
4	4-7/8	7-1/8	9
6	5-7/8	9	11
8	6-3/4	10-7/8	13-1/2
10	8-3/8	13-1/2	16
12	10	16-3/4	19



Flange Cut-in Kit

Size	EPDM Gasket	FKM Gasket	Std Pk	Mstr Pk	Disc Code
2	FCKE-020C 693.79	FCKV-020C 732.07	1	0	017
2-1/2	FCKE-025C 739.29	FCKV-025C 800.29	1	0	017
3	FCKE-030C 805.37	FCKV-030C 836.33	1	0	017
4	FCKE-040C 1232.08	FCKV-040C 1279.94	1	0	017
6	FCKE-060C 1995.37	FCKV-060C 2273.05	1	0	017
8	FCKE-080C 2532.21	FCKV-080C 2884.84	1	0	017
10	FCKE-100C 4101.17	FCKV-100C 4237.68	1	0	017
12	FCKE-120C 4880.05	FCKV-120C 5094.11	1	0	017

Schedule 80 CPVC Industrial Products & Accessories Gauge Guards



Connections use Spears® Patented Special Reinforced (SR)
Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water
on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

CPVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002C 134.98	G0004-005C 134.98	1	18	625
0-30 in-Hg	G30V4-002C 227.88	G30V4-005C 227.88	1	18	625
0-15 psi	G0154-002C 215.43	G0154-005C 215.43	1	18	625
0-30 psi	G0304-002C 215.43	G0304-005C 215.43	1	18	625
0-60 psi	G0604-002C 215.43	G0604-005C 215.43	1	18	625
0-100 psi	G1004-002C 215.43	G1004-005C 215.43	1	18	625
0-160 psi	G1604-002C 215.43	G1604-005C 215.43	1	18	625
0-200 psi	G2004-002C 215.43	G2004-005C 215.43	1	18	625
0-300 psi	G3004-002C 215.43	G3004-005C 215.43	1	18	625

FKM Diaphragm

No Gauge	G0003-002C 134.98	G0003-005C 134.98	1	18	625
0-30 in-Hg	G30V3-002C 227.88	G30V3-005C 227.88	1	18	625
0-15 psi	G0153-002C 215.43	G0153-005C 215.43	1	18	625
0-30 psi	G0303-002C 215.43	G0303-005C 215.43	1	18	625
0-60 psi	G0603-002C 215.43	G0603-005C 215.43	1	18	625
0-100 psi	G1003-002C 215.43	G1003-005C 215.43	1	18	625
0-160 psi	G1603-002C 215.43	G1603-005C 215.43	1	18	625
0-200 psi	G2003-002C 215.43	G2003-005C 215.43	1	18	625
0-300 psi	G3003-002C 215.43	G3003-005C 215.43	1	18	625

EPDM Diaphragm

No Gauge	G0002-002C 129.60	G0002-005C 129.60	1	18	625
0-30 in-Hg	G30V2-002C 218.74	G30V2-005C 218.74	1	18	625
0-15 psi	G0152-002C 206.91	G0152-005C 206.91	1	18	625
0-30 psi	G0302-002C 206.91	G0302-005C 206.91	1	18	625
0-60 psi	G0602-002C 206.91	G0602-005C 206.91	1	18	625
0-100 psi	G1002-002C 206.91	G1002-005C 206.91	1	18	625
0-160 psi	G1602-002C 206.91	G1602-005C 206.91	1	18	625
0-200 psi	G2002-002C 206.91	G2002-005C 206.91	1	18	625

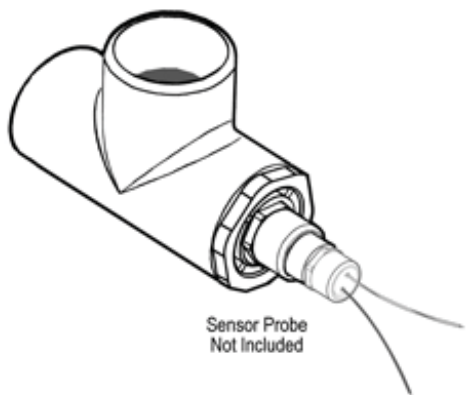
CPVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-300 psi	G3002-002C 206.91	G3002-005C 206.91	1	18	625



Schedule 80 CPVC Industrial Products & Accessories

Gauge & Instrument Fittings Schedule 80 Specialty Fittings for Sensor Probes



Use with a wide variety of commercial sensor probes including pressure, temperature, pH, ORP (REDOX), Conductivity, Dissolved Oxygen and other specialty electrodes that are used in industrial, municipal water, wastewater treatment, solid landfills, chemical manufacturing, electroplating, boilers and cooling towers, pulp and paper, DI water skids, pool & spa and other OEM applications. Features Spears® patented Special Reinforced (SR) female plastic thread connection that eliminates splitting from inadvertent over tightening.

- Centers Probe in Fluid Stream
- Suitable for Horizontal or Vertical Installations
- Available in 1/2" Through 8" Tee Configuration with 1/2", 3/4" or 1" NPT Connection

CPVC Instrument Probe Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Special Reinforced					
803-005CSR	1/2	25	0	096	10.94
803-095CSR	3/4X1/2X3/4	15	0	096	16.20
803-007CSR	3/4	15	0	096	17.36
803-113CSR	1X1/4X1	15	0	096	49.11
803-122CSR	1X1/2X1	15	0	096	18.62
803-126CSR	1X3/4X1	15	0	096	26.07
803-010CSR	1	15	0	096	20.34
803-142CSR	1-1/4X1/2X1-1/4	10	0	096	32.17
803-149CSR	1-1/4X3/4X1-1/4	10	0	096	32.53
803-159CSR	1-1/4X1X1-1/4	10	0	096	35.69
803-177CSR	1-1/2X1/2X1-1/2	10	0	096	36.68
803-188CSR	1-1/2X3/4X1-1/2	10	0	096	39.29
803-197CSR	1-1/2X1X1-1/2	10	0	096	38.99
803-221CSR	2X1/2X2	10	0	096	48.76
803-227CSR	2X3/4X2	10	0	096	54.79
803-233CSR	2X1X2	10	0	096	55.39
803-333CSR	3X1/2X3	5	0	096	78.24
803-334CSR	3X3/4X3	5	0	096	81.71
803-335CSR	3X1X3	5	0	096	82.87
803-415CSR	4X1/2X4	4	0	096	119.04
803-416CSR	4X3/4X4	4	0	096	126.79
803-417CSR	4X1X4	4	0	096	129.11
803-523CSR	6X1/2X6	2	0	096	250.40
803-524CSR	6X3/4X6	2	0	096	258.13
803-525CSR	6X1X6	2	0	096	265.63
803-573CSR	8X1/2X8	1	0	096	527.58
803-574CSR	8X3/4X8	1	0	096	534.08
803-575CSR	8X1X8	1	0	096	548.47

Schedule 80 CPVC Industrial Products & Accessories True Union 2000 Industrial Ball Valves



Socket Style



SR Threaded Style



6" Lever Handle Style

All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Custom Elastomer Seals

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

Pressure Rating @ 73°F (23°C), Water

1/2" - 4" 235 psi
6" - 8" 150 psi
All Flanged 150 psi

Maximum Service Temperature

CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Note: Standard 6" Valve uses lockout type Lever-Style Handle for proper leverage.

Non-locking T-Handle is more compact, but will increase difficulty of operation.

True Union 2000 Industrial Ball Valves have Built-in Handle Lockouts (except 6" T-Handle Option)

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Threaded & Socket Ends

1/2	1829-005C 65.63	1839-005C 72.93	1	18	602
3/4	1829-007C 82.65	1839-007C 91.86	1	18	602
1	1829-010C 98.40	1839-010C 109.33	1	12	602
1-1/4	1829-012C 156.43	1839-012C 173.86	1	8	602
1-1/2	1829-015C 165.21	1839-015C 183.57	1	8	602
2	1829-020C 220.95	1839-020C 254.00	1	4	602

Socket Ends

2-1/2	1822-025C 495.39	1832-025C 550.40	1	0	603
3	1822-030C 579.22	1832-030C 643.63	1	0	603
4	1822-040C 1049.59	1832-040C 1166.19	1	0	603
6	1822-060C 2234.41	1832-060C 2482.51	1	0	613
8	1822-080C 2971.79	1832-080C 3301.76	1	0	613

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	1821-025C 495.39	1831-025C 550.40	1	0	603
3	1821-030C 579.22	1831-030C 643.63	1	0	603
4	1821-040C 1049.59	1831-040C 1166.19	1	0	603
6	1821-060C 2234.41	1831-060C 2482.51	1	0	613

SR Threaded Ends

1/2	1821-005CSR 66.68	1831-005CSR 73.99	1	18	602
3/4	1821-007CSR 85.23	1831-007CSR 94.43	1	18	602
1	1821-010CSR 100.98	1831-010CSR 111.88	1	12	602
1-1/4	1821-012CSR 164.17	1831-012CSR 181.60	1	8	602
1-1/2	1821-015CSR 173.53	1831-015CSR 191.85	1	8	602
2	1821-020CSR 229.95	1831-020CSR 263.00	1	4	602
2-1/2	1821-025CSR 519.58	1831-025CSR 574.58	1	0	603
3	1821-030CSR 603.40	1831-030CSR 667.80	1	0	603
4	1821-040CSR 1077.80	1831-040CSR 1194.44	1	0	603
6	1821-060CSR 2295.64	1831-060CSR 2543.73	1	0	613

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Spigot Ends

1/2	1827-005C 65.63	1837-005C 72.93	1	18	602
3/4	1827-007C 82.65	1837-007C 91.86	1	18	602
1	1827-010C 98.40	1837-010C 109.33	1	12	602
1-1/4	1827-012C 156.43	1837-012C 173.86	1	8	602
1-1/2	1827-015C 165.21	1837-015C 183.57	1	8	602
2	1827-020C 220.95	1837-020C 254.00	1	4	602
2-1/2	1827-025C 495.39	1837-025C 550.40	1	0	603
3	1827-030C 579.22	1837-030C 643.63	1	0	603
4	1827-040C 1049.59	1837-040C 1166.19	1	0	603
6	1827-060C 2234.41	1837-060C 2482.51	1	0	613

Flanged Ends

1/2	1823-005C 111.36	1833-005C 113.76	1	8	602
3/4	1823-007C 136.51	1833-007C 142.17	1	8	602
1	1823-010C 156.26	1833-010C 165.88	1	8	602
1-1/4	1823-012C 233.48	1833-012C 241.68	1	8	602
1-1/2	1823-015C 256.82	1833-015C 265.38	1	4	602
2	1823-020C 357.38	1833-020C 425.63	1	0	602
2-1/2	1823-025C 667.02	1833-025C 800.64	1	0	603
3	1823-030C 975.47	1833-030C 997.72	1	0	603
4	1823-040C 1710.82	1833-040C 1779.24	1	0	603
6	1823-060C 3644.03	1833-060C 3789.02	1	0	613
8	1823-080C 4846.55	1833-080C 5039.38	1	0	613

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket Ends

6	18226-060C 2234.41	18326-060C 2482.51	1	0	613
----------	------------------------------	------------------------------	---	---	-----



Schedule 80 CPVC Industrial Products & Accessories
True Union 2000 Industrial Ball Valves & True Union 2000 Industrial Vented/Bleach Ball Valves

True Union 2000 Industrial Ball Valves

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
6	18216-060C 2234.41	18316-060C 2482.51	1	0	613
SR Threaded Ends					
6	18216-060CSR 2295.64	18316-060CSR 2543.73	1	0	613
Flanged Ends					
6	18236-060C 3644.03	18336-060C 3789.02	1	0	613

True Union 2000 Industrial Vented/Bleach Ball Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 4" 235 psi
 6" 150 psi
 Flanged 150 psi

Same True Union 2000 Industrial Ball Valve with Special Ball Vent Design for Sodium Hypochlorite (Bleach) and other Chemical Applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Custom Elastomer Seals. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829V-005C 77.20	1839V-005C 85.79	1	18	602
3/4	1829V-007C 97.23	1839V-007C 108.07	1	18	602
1	1829V-010C 115.77	1839V-010C 128.62	1	12	602
1-1/4	1829V-012C 184.04	1839V-012C 204.57	1	8	602
1-1/2	1829V-015C 194.37	1839V-015C 215.96	1	8	602
2	1829V-020C 259.96	1839V-020C 298.81	1	4	602

Socket Ends

2-1/2	1822V-025C 582.81	1832V-025C 647.51	1	0	603
3	1822V-030C 681.44	1832V-030C 757.19	1	0	603
4	1822V-040C 1234.79	1832V-040C 1372.00	1	0	603
6	1822V-060C 2628.74	1832V-060C 2920.60	1	0	613

SR Threaded Ends

1/2	1821V-005CSR 78.43	1831V-005CSR 87.05	1	18	602
3/4	1821V-007CSR 100.28	1831V-007CSR 111.07	1	18	602
1	1821V-010CSR 118.77	1831V-010CSR 131.62	1	12	602
1-1/4	1821V-012CSR 193.12	1831V-012CSR 213.65	1	8	602
1-1/2	1821V-015CSR 204.15	1831V-015CSR 225.73	1	8	602
2	1821V-020CSR 270.54	1831V-020CSR 309.41	1	4	602

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2-1/2	1821V-025CSR 611.26	1831V-025CSR 675.97	1	0	603
3	1821V-030CSR 709.89	1831V-030CSR 785.65	1	0	603
4	1821V-040CSR 1268.01	1831V-040CSR 1405.23	1	0	603

Flanged Ends

1/2	1823V-005C 131.00	1833V-005C 133.82	1	8	602
3/4	1823V-007C 160.59	1833V-007C 167.29	1	8	602
1	1823V-010C 183.84	1833V-010C 195.16	1	8	602
1-1/4	1823V-012C 274.69	1833V-012C 284.33	1	8	602
1-1/2	1823V-015C 302.14	1833V-015C 312.22	1	4	602
2	1823V-020C 420.45	1833V-020C 500.73	1	0	602
2-1/2	1823V-025C 784.74	1833V-025C 941.93	1	0	603
3	1823V-030C 1147.61	1833V-030C 1173.76	1	0	603
4	1823V-040C 2093.21	1833V-040C 2093.23	1	0	603
6	1823V-060C 4457.67	1833V-060C 4457.67	1	0	613

Schedule 80 CPVC Industrial Products & Accessories
True Union 2000 Industrial 3-Way Ball Valves



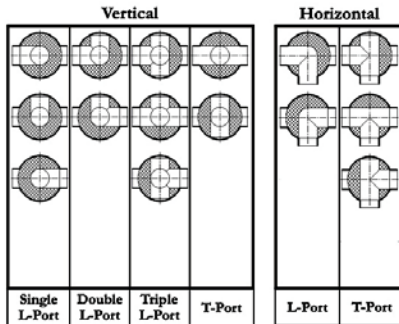
Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 4" 150 psi
 Flanged 150 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
 Vertical 3-Way or Horizontal Diverter Design
 (No Branch Shut-off)

All Standard Carton Quantities are one
 All Valves assembled with Silicone-Free,
 Water Soluble Lubricant

See Ball Valve Accessories & Repair Kits Section
 for Additional Options and Features

Ball Port Options



Ball port options viewed from top of valve



Horizontal Diverter Valve



Vertical 3-Way Valve

CPVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint	Ball Port	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	
	Price Each	Price Each	Price Each	Price Each	Price Each	Price Each	Price Each	Price Each	Price Each	
1/2	L-Port	5022L1-005C 157.82	5021L1-005CSR 162.83	5027L1-005C 157.82	5023L1-005C 322.20	5032L1-005C 170.98	5031L1-005CSR 178.77	5037L1-005C 170.98	5033L1-005C 336.56	617
	T-Port	5022T1-005C 157.82	5021T1-005CSR 162.83	5027T1-005C 157.82	5023T1-005C 322.20	5032T1-005C 170.98	5031T1-005CSR 178.77	5037T1-005C 170.98	5033T1-005C 336.56	617
3/4	L-Port	5022L1-007C 188.12	5021L1-007CSR 194.37	5027L1-007C 188.12	5023L1-007C 337.09	5032L1-007C 202.49	5031L1-007CSR 208.73	5037L1-007C 202.49	5033L1-007C 355.80	617
	T-Port	5022T1-007C 188.12	5021T1-007CSR 194.37	5027T1-007C 188.12	5023T1-007C 337.09	5032T1-007C 202.49	5031T1-007CSR 208.73	5037T1-007C 202.49	5033T1-007C 355.80	617
1	L-Port	5022L1-010C 228.12	5021L1-010CSR 234.21	5027L1-010C 228.12	5023L1-010C 480.34	5032L1-010C 251.35	5031L1-010CSR 257.40	5037L1-010C 251.35	5033L1-010C 525.21	617
	T-Port	5022T1-010C 228.12	5021T1-010CSR 234.21	5027T1-010C 228.12	5023T1-010C 480.34	5032T1-010C 251.35	5031T1-010CSR 257.40	5037T1-010C 251.35	5033T1-010C 525.21	617
1-1/4	L-Port	5022L1-012C 264.35	5021L1-012CSR 276.29	5027L1-012C 264.35	5023L1-012C 908.74	5032L1-012C 296.38	5031L1-012CSR 309.89	5037L1-012C 296.38	5033L1-012C 962.62	617
	T-Port	5022T1-012C 264.35	5021T1-012CSR 276.29	5027T1-012C 264.35	5023T1-012C 908.74	5032T1-012C 296.38	5031T1-012CSR 309.89	5037T1-012C 296.38	5033T1-012C 962.62	617
1-1/2	L-Port	5022L1-015C 309.22	5021L1-015CSR 329.13	5027L1-015C 309.22	5023L1-015C 936.25	5032L1-015C 338.44	5031L1-015CSR 358.39	5037L1-015C 338.44	5033L1-015C 979.05	617
	T-Port	5022T1-015C 309.22	5021T1-015CSR 329.13	5027T1-015C 309.22	5023T1-015C 936.25	5032T1-015C 338.44	5031T1-015CSR 358.39	5037T1-015C 338.44	5033T1-015C 979.05	617
2	L-Port	5022L1-020C 379.35	5021L1-020CSR 399.20	5027L1-020C 379.35	5023L1-020C 1215.68	5032L1-020C 442.12	5031L1-020CSR 463.73	5037L1-020C 442.12	5033L1-020C 1276.82	617
	T-Port	5022T1-020C 379.35	5021T1-020CSR 399.20	5027T1-020C 379.35	5023T1-020C 1215.68	5032T1-020C 442.12	5031T1-020CSR 463.73	5037T1-020C 442.12	5033T1-020C 1276.82	617
2-1/2	L-Port	5022L1-025C 1278.73	5021L1-025CSR 1334.51	5027L1-025C 1278.73	5023L1-025C 2134.61	5032L1-025C 1359.63	5031L1-025CSR 1415.62	5037L1-025C 1359.63	5033L1-025C 2501.60	617
	T-Port	5022T1-025C 1278.73	5021T1-025CSR 1334.51	5027T1-025C 1278.73	5023T1-025C 2134.61	5032T1-025C 1359.63	5031T1-025CSR 1415.62	5037T1-025C 1359.63	5033T1-025C 2501.60	617
3	L-Port	5022L1-030C 1304.72	5021L1-030CSR 1363.43	5027L1-030C 1304.72	5023L1-030C 2163.38	5032L1-030C 1380.93	5031L1-030CSR 1436.91	5037L1-030C 1380.93	5033L1-030C 2513.13	617
	T-Port	5022T1-030C 1304.72	5021T1-030CSR 1363.43	5027T1-030C 1304.72	5023T1-030C 2163.38	5032T1-030C 1380.93	5031T1-030CSR 1436.91	5037T1-030C 1380.93	5033T1-030C 2513.13	617
4	L-Port	5022L1-040C 2362.94	5021L1-040CSR 2426.84	5027L1-040C 2362.94	5023L1-040C 3142.08	5032L1-040C 2389.62	5031L1-040CSR 2453.65	5037L1-040C 2389.62	5033L1-040C 3434.33	617
	T-Port	5022T1-040C 2362.94	5021T1-040CSR 2426.84	5027T1-040C 2362.94	5023T1-040C 3142.08	5032T1-040C 2389.62	5031T1-040CSR 2453.65	5037T1-040C 2389.62	5033T1-040C 3434.33	617



Schedule 80 CPVC Industrial Products & Accessories
True Union 2000 Industrial 3-Way Ball Valves

CPVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005C 156.94	4721L1-005CSR 159.53	4727L1-005C 156.94	4723L1-005C 324.26	4732L1-005C 169.93	4731L1-005CSR 172.52	4737L1-005C 169.93	4733L1-005C 336.06	617
	Double L-Port	4722L2-005C 312.67	4721L2-005CSR 315.08	4727L2-005C 312.67	4723L2-005C 480.00	4732L2-005C 325.66	4731L2-005CSR 328.09	4737L2-005C 325.66	4733L2-005C 491.61	617
	Triple L-Port	4722L3-005C 312.67	4721L3-005CSR 315.08	4727L3-005C 312.67	4723L3-005C 480.00	4732L3-005C 325.66	4731L3-005CSR 328.09	4737L3-005C 325.66	4733L3-005C 491.61	617
	T-Port	4722T1-005C 156.94	4721T1-005CSR 159.53	4727T1-005C 156.94	4723T1-005C 324.26	4732T1-005C 169.93	4731T1-005CSR 172.52	4737T1-005C 169.93	4733T1-005C 336.06	617
3/4	L-Port	4722L1-007C 184.15	4721L1-007CSR 190.54	4727L1-007C 184.15	4723L1-007C 340.56	4732L1-007C 200.60	4731L1-007CSR 207.00	4737L1-007C 200.60	4733L1-007C 354.93	617
	Double L-Port	4722L2-007C 339.86	4721L2-007CSR 345.92	4727L2-007C 339.86	4723L2-007C 496.13	4732L2-007C 356.32	4731L2-007CSR 362.56	4737L2-007C 356.32	4733L2-007C 510.48	617
	Triple L-Port	4722L3-007C 339.86	4721L3-007CSR 345.92	4727L3-007C 339.86	4723L3-007C 496.13	4732L3-007C 356.32	4731L3-007CSR 362.56	4737L3-007C 356.32	4733L3-007C 510.48	617
	T-Port	4722T1-007C 184.15	4721T1-007CSR 190.54	4727T1-007C 183.68	4723T1-007C 340.56	4732T1-007C 200.60	4731T1-007CSR 207.00	4737T1-007C 200.60	4733T1-007C 354.93	617
1	L-Port	4722L1-010C 223.81	4721L1-010CSR 230.05	4727L1-010C 223.81	4723L1-010C 485.72	4732L1-010C 249.27	4731L1-010CSR 255.51	4737L1-010C 249.27	4733L1-010C 525.73	617
	Double L-Port	4722L2-010C 379.52	4721L2-010CSR 385.76	4727L2-010C 379.52	4723L2-010C 641.43	4732L2-010C 404.81	4731L2-010CSR 411.07	4737L2-010C 404.81	4733L2-010C 681.45	617
	Triple L-Port	4722L3-010C 379.52	4721L3-010CSR 385.76	4727L3-010C 379.52	4723L3-010C 641.43	4732L3-010C 404.81	4731L3-010CSR 411.07	4737L3-010C 404.81	4733L3-010C 681.45	617
	T-Port	4722T1-010C 223.81	4721T1-010CSR 230.05	4727T1-010C 223.81	4723T1-010C 485.72	4732T1-010C 249.27	4731T1-010CSR 255.51	4737T1-010C 249.27	4733T1-010C 525.73	617
1-1/4	L-Port	4722L1-012C 270.75	4721L1-012CSR 283.21	4727L1-012C 270.75	4723L1-012C 915.65	4732L1-012C 319.07	4731L1-012CSR 331.55	4737L1-012C 319.07	4733L1-012C 968.48	617
	Double L-Port	4722L2-012C 426.29	4721L2-012CSR 438.77	4727L2-012C 426.29	4723L2-012C 1071.22	4732L2-012C 474.62	4731L2-012CSR 487.97	4737L2-012C 474.62	4733L2-012C 730.66	617
	Triple L-Port	4722L3-012C 426.29	4721L3-012CSR 438.77	4727L3-012C 426.29	4723L3-012C 1071.22	4732L3-012C 474.62	4731L3-012CSR 487.97	4737L3-012C 474.62	4733L3-012C 1124.04	617
	T-Port	4722T1-012C 270.75	4721T1-012CSR 283.21	4727T1-012C 270.75	4723T1-012C 915.65	4732T1-012C 319.07	4731T1-012CSR 331.55	4737T1-012C 319.07	4733T1-012C 968.48	617
1-1/2	L-Port	4722L1-015C 313.00	4721L1-015CSR 333.11	4727L1-015C 313.00	4723L1-015C 949.80	4732L1-015C 343.15	4731L1-015CSR 363.23	4737L1-015C 343.15	4733L1-015C 979.05	617
	Double L-Port	4722L2-015C 468.76	4721L2-015CSR 488.65	4727L2-015C 468.76	4723L2-015C 1105.32	4732L2-015C 498.89	4731L2-015CSR 558.62	4737L2-015C 498.89	4733L2-015C 1134.78	617
	Triple L-Port	4722L3-015C 468.76	4721L3-015CSR 488.65	4727L3-015C 468.76	4723L3-015C 1105.32	4732L3-015C 498.89	4731L3-015CSR 558.62	4737L3-015C 498.89	4733L3-015C 1134.78	617
	T-Port	4722T1-015C 313.00	4721T1-015CSR 333.11	4727T1-015C 313.00	4723T1-015C 949.80	4732T1-015C 343.15	4731T1-015CSR 363.23	4737T1-015C 343.15	4733T1-015C 979.05	617
2	L-Port	4722L1-020C 384.04	4721L1-020CSR 405.67	4727L1-020C 384.04	4723L1-020C 1223.99	4732L1-020C 445.86	4731L1-020CSR 467.52	4737L1-020C 445.86	4733L1-020C 1278.04	617
	Double L-Port	4722L2-020C 539.61	4721L2-020CSR 561.41	4727L2-020C 539.61	4723L2-020C 1332.96	4732L2-020C 601.44	4731L2-020CSR 623.06	4737L2-020C 601.44	4733L2-020C 1433.76	617
	Triple L-Port	4722L3-020C 539.61	4721L3-020CSR 561.41	4727L3-020C 539.61	4723L3-020C 1332.96	4732L3-020C 601.44	4731L3-020CSR 623.06	4737L3-020C 601.44	4733L3-020C 1433.76	617
	T-Port	4722T1-020C 384.04	4721T1-020CSR 405.67	4727T1-020C 384.04	4723T1-020C 1223.99	4732T1-020C 445.86	4731T1-020CSR 467.52	4737T1-020C 445.86	4733T1-020C 1278.04	617
2-1/2	L-Port	4722L1-025C 1350.63	4721L1-025CSR 1406.56	4727L1-025C 1350.63	4723L1-025C 2143.79	4732L1-025C 1365.85	4731L1-025CSR 1421.81	4737L1-025C 1365.85	4733L1-025C 2498.75	617
	Double L-Port	4722L2-025C 1506.17	4721L2-025CSR 1544.08	4727L2-025C 1506.17	4723L2-025C 2299.54	4732L2-025C 1521.42	4731L2-025CSR 1577.38	4737L2-025C 1521.42	4733L2-025C 2654.31	617
	Triple L-Port	4722L3-025C 1506.17	4721L3-025CSR 1544.08	4727L3-025C 1506.17	4723L3-025C 2299.54	4732L3-025C 1521.42	4731L3-025CSR 1577.38	4737L3-025C 1521.42	4733L3-025C 2654.31	617
	T-Port	4722T1-025C 1350.63	4721T1-025CSR 1406.56	4727T1-025C 1350.63	4723T1-025C 2143.79	4732T1-025C 1365.85	4731T1-025CSR 1421.81	4737T1-025C 1365.85	4733T1-025C 2498.75	617
3	L-Port	4722L1-030C 1378.33	4721L1-030CSR 1434.28	4727L1-030C 1378.33	4723L1-030C 2173.62	4732L1-030C 1390.47	4731L1-030CSR 1446.60	4737L1-030C 1390.47	4733L1-030C 2515.20	617
	Double L-Port	4722L2-030C 1533.91	4721L2-030CSR 1571.82	4727L2-030C 1533.91	4723L2-030C 2329.15	4732L2-030C 1546.18	4731L2-030CSR 1602.15	4737L2-030C 1546.18	4733L2-030C 2670.75	617
	Triple L-Port	4722L3-030C 1533.91	4721L3-030CSR 1571.82	4727L3-030C 1533.91	4723L3-030C 2329.15	4732L3-030C 1546.18	4731L3-030CSR 1602.15	4737L3-030C 1546.18	4733L3-030C 2670.75	617
	T-Port	4722T1-030C 1378.33	4721T1-030CSR 1434.28	4727T1-030C 1378.33	4723T1-030C 2173.62	4732T1-030C 1390.47	4731T1-030CSR 1446.60	4737T1-030C 1390.47	4733T1-030C 2515.20	617
4	L-Port	4722L1-040C 2382.52	4721L1-040CSR 2446.43	4727L1-040C 2382.52	4723L1-040C 3191.12	4732L1-040C 2405.72	4731L1-040CSR 2469.64	4737L1-040C 2405.72	4733L1-040C 3309.60	617
	Double L-Port	4722L2-040C 2538.05	4721L2-040CSR 2601.98	4727L2-040C 2538.05	4723L2-040C 3315.47	4732L2-040C 2561.27	4731L2-040CSR 2625.20	4737L2-040C 2561.27	4733L2-040C 3465.15	617
	Triple L-Port	4722L3-040C 2538.05	4721L3-040CSR 2601.98	4727L3-040C 2538.05	4723L3-040C 3315.47	4732L3-040C 2561.27	4731L3-040CSR 2625.20	4737L3-040C 2561.27	4733L3-040C 3465.15	617
	T-Port	4722T1-040C 2382.52	4721T1-040CSR 2446.43	4727T1-040C 2382.52	4723T1-040C 3191.12	4732T1-040C 2405.72	4731T1-040CSR 2469.64	4737T1-040C 2405.72	4733T1-040C 3309.60	617

Schedule 80 CPVC Industrial Products & Accessories
Tee-Style "Zero Dead-Leg" Ball Valves



Valves are produced to order in Ball Valve sizes 1/2" – 2". Tee Valves can be custom produced in any standard Tee and Valve size combination.

Pressure Rating @ 73°F (23°C), Water
 Valve Sizes 1/2" - 2" (20mm - 63mm) = 235 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply

Additional Notes

The Tee Valve is assembled with socket end connector. Tee Valves are a non-stock configuration. All orders are non-cancelable, non-returnable.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1/2	182901-005C 251.47	183901-005C 263.35	1	12	264
3/4	182901-007C 274.80	183901-007C 288.40	1	8	264
1	182901-010C 279.99	183901-010C 300.41	1	8	264
2	182901-020C 305.92	183901-020C 353.36	1	4	264
3/4X1/2	182901-101C 255.63	183901-101C 267.48	1	12	264
1X1/2	182901-130C 231.83	183901-130C 277.07	1	8	264
1X3/4	182901-131C 279.99	183901-131C 293.61	1	8	264
1-1/4X1/2	182901-166C 283.69	183901-166C 295.58	1	8	264
1-1/4X3/4	182901-167C 285.19	183901-167C 298.78	1	8	264
1-1/4X1	182901-168C 326.88	183901-168C 347.29	1	8	264
1-1/2X1/2	182901-209C 318.65	183901-209C 329.88	1	8	264
1-1/2X3/4	182901-210C 327.88	183901-210C 335.95	1	8	264
1-1/2X1	182901-211C 339.20	183901-211C 347.29	1	8	264
2X1/2	182901-247C 363.89	183901-247C 375.75	1	8	264
2X3/4	182901-248C 392.64	183901-248C 406.24	1	8	264
2X1	182901-249C 413.22	183901-249C 433.63	1	8	264
2X1-1/2	182901-251C 485.20	183901-251C 510.64	1	0	264
3X1/2	182901-333C 479.02	183901-333C 490.88	1	0	264
3X1	182901-335C 501.63	183901-335C 522.04	1	0	264
3X1-1/2	182901-337C 571.54	183901-337C 596.99	1	0	264
3X2	182901-338C 627.05	183901-338C 674.49	1	0	264
4X1	182901-417C 616.77	183901-417C 637.18	1	0	264
4X1-1/2	182901-419C 686.65	183901-419C 712.13	1	0	264
4X2	182901-420C 818.23	183901-420C 865.67	1	0	264
6X2	182901-528C 1068.74	183901-528C 1116.17	1	0	264
8X2	182901-578C 1576.85	183901-578C 1624.31	1	0	264

CPVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
20	182901M-020C 251.47	183901M-020C 263.35	1	8	264

CPVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
25	182901M-025C 292.34	183901M-025C 288.40	1	8	263
32	182901M-032C 279.99	183901M-032C 300.41	1	8	264
40	182901M-040C 283.87	183901M-040C 302.98	1	8	264
50	182901M-050C 288.93	183901M-050C 340.43	1	8	264
63	182901M-063C 305.92	183901M-063C 353.36	1	8	264



Schedule 80 CPVC Industrial Products & Accessories True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" = 235 psi
 2-1/2" - 4" = 150 psi
 Flanged = 150 psi

Maximum Service Temperature
 CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free, Water Soluble Lubricant
 See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

CPVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1/2	3629-005C 52.48	3639-005C 58.36	1	18	610
3/4	3629-007C 66.13	3639-007C 73.49	1	18	610
1	3629-010C 78.73	3639-010C 87.47	1	12	610
1-1/4	3629-012C 125.16	3639-012C 139.11	1	8	610
1-1/2	3629-015C 132.16	3639-015C 146.85	1	8	610
2	3629-020C 176.78	3639-020C 203.21	1	4	610

Socket Ends

2-1/2	3622-025C 396.31	3632-025C 440.32	1	0	611
3	3622-030C 463.39	3632-030C 514.91	1	0	611
4	3622-040C 839.66	3632-040C 932.96	1	0	611

Threaded Ends

2-1/2	3621-025C 396.31	3631-025C 440.32	1	0	611
3	3621-030C 463.39	3631-030C 514.91	1	0	611
4	3621-040C 839.66	3631-040C 932.96	1	0	611

SR Threaded Ends

1/2	3621-005CSR 53.34	3631-005CSR 59.19	1	18	610
3/4	3621-007CSR 68.21	3631-007CSR 75.56	1	18	610
1	3621-010CSR 80.77	3631-010CSR 89.48	1	18	610
1-1/4	3621-012CSR 131.34	3631-012CSR 145.26	1	12	610
1-1/2	3621-015CSR 138.17	3631-015CSR 153.47	1	8	610
2	3621-020CSR 183.94	3631-020CSR 210.39	1	8	610
2-1/2	3621-025CSR 415.65	3631-025CSR 459.67	1	0	611
3	3621-030CSR 482.73	3631-030CSR 534.25	1	0	611
4	3621-040CSR 862.26	3631-040CSR 956.28	1	0	611

Spigot Ends

1/2	3627-005C 52.48	3637-005C 58.36	1	18	610
3/4	3627-007C 66.13	3637-007C 73.49	1	18	610
1	3627-010C 78.73	3637-010C 87.47	1	12	610
1-1/4	3627-012C 125.16	3637-012C 139.11	1	12	610
1-1/2	3627-015C 132.16	3637-015C 146.85	1	8	610
2	3627-020C 176.78	3637-020C 203.21	1	8	610

CPVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Spigot Ends

2-1/2	3627-025C 396.31	3637-025C 440.32	1	0	611
3	3627-030C 463.39	3637-030C 514.91	1	0	611
4	3627-040C 839.66	3637-040C 932.96	1	0	611

Flanged Ends

1/2	3623-005C 89.08	3633-005C 91.01	1	8	610
3/4	3623-007C 109.19	3633-007C 113.80	1	8	610
1	3623-010C 125.01	3633-010C 132.71	1	8	610
1-1/4	3623-012C 186.79	3633-012C 193.34	1	4	610
1-1/2	3623-015C 205.47	3633-015C 212.31	1	4	610
2	3623-020C 285.91	3633-020C 340.49	1	0	610
2-1/2	3623-025C 533.62	3633-025C 640.52	1	0	611
3	3623-030C 731.60	3633-030C 798.18	1	0	611
4	3623-040C 1368.66	3633-040C 1423.40	1	0	611

Schedule 80 CPVC Industrial Products & Accessories
True Union 2000 Industrial Retrofit Ball Valves - Replaces Other Brand Valves



Industrial Valve

Complete universal replacement valve for domestic and import CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

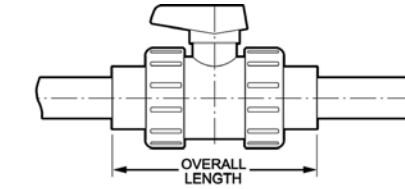
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
 1/2" - 4" = 235 psi

All Valves Assembled with Silicone-Free,
 Water Soluble Lubricant

Suitable for Vacuum Service

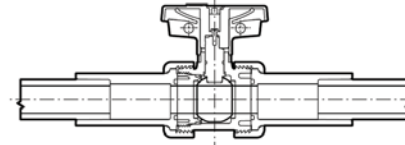
Retrofit End Connector Sets without
 valve are also available - See
 Ball Valve Accessories & Repair Kits



**BALL VALVE FOR
 REPLACEMENT**



**PIPE LAYING LENGTH
 AFTER CUTTING**



**TRUE UNION 2000
 INDUSTRIAL BALL
 VALVE INSTALLED
 WITH RETROFIT KIT**

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005C 65.63	1832R-005C 72.93	1	18	602
3/4	1822R-007C 82.65	1832R-007C 91.86	1	18	602
1	1822R-010C 98.40	1832R-010C 109.33	1	12	602
1-1/4	1822R-012C 156.43	1832R-012C 173.86	1	8	602
1-1/2	1822R-015C 165.21	1832R-015C 183.57	1	8	602
2	1822R-020C 220.95	1832R-020C 254.00	1	4	602
2-1/2	1822R-025C 495.39	1832R-025C 550.40	1	0	603
3	1822R-030C 579.22	1832R-030C 643.63	1	0	603
4	1822R-040C 1049.59	1832R-040C 1166.19	1	0	603



Schedule 80 CPVC Industrial Products & Accessories

True Union 2000 Industrial Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Industrial Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

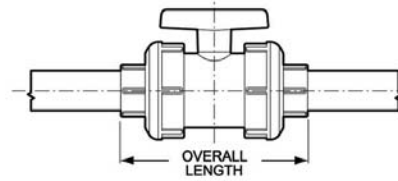
Pressure Rating @ 73°F (23°C),
Water

1/2" - 4" 235 psi

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

Suitable for Vacuum Service

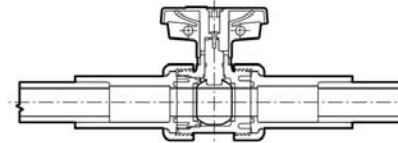
Retrofit End Connector Sets without
valve are also available - See
Ball Valve Accessories & Repair Kits



BALL VALVE FOR
REPLACEMENT



PIPE LAYING LENGTH
AFTER CUTTING



TRUE UNION 2000
INDUSTRIAL BALL
VALVE INSTALLED
WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005C 65.63	1832RS-005C 72.93	1	18	602
3/4	1822RS-007C 82.65	1832RS-007C 91.86	1	18	602
1	1822RS-010C 98.40	1832RS-010C 109.33	1	12	602
1-1/4	1822RS-012C 156.43	1832RS-012C 173.86	1	8	602
1-1/2	1822RS-015C 165.21	1832RS-015C 183.57	1	8	602
2	1822RS-020C 220.95	1832RS-020C 254.00	1	4	602
2-1/2	1822RS-025C 495.39	1832RS-025C 550.40	1	0	603
3	1822RS-030C 579.22	1832RS-030C 643.63	1	0	603
4	1822RS-040C 1049.59	1832RS-040C 1166.19	1	0	603



True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves



Standard Valve

Complete universal replacement valve for domestic and import CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

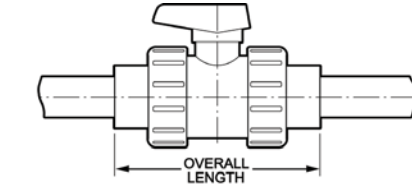
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.

Suitable for Vacuum Service.

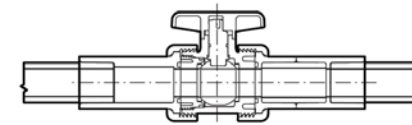
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 STANDARD BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005C 52.48	3632R-005C 58.36	1	18	610
3/4	3622R-007C 66.13	3632R-007C 73.49	1	12	610
1	3622R-010C 78.73	3632R-010C 87.47	1	8	610
1-1/4	3622R-012C 125.16	3632R-012C 139.11	1	8	610
1-1/2	3622R-015C 132.16	3632R-015C 146.85	1	8	610

CPVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	3622R-020C 176.78	3632R-020C 203.21	1	4	610
2-1/2	3622R-025C 396.31	3632R-025C 440.32	1	0	611
3	3622R-030C 463.39	3632R-030C 514.91	1	0	611
4	3622R-040C 839.66	3632R-040C 932.96	1	0	611

True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Standard Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

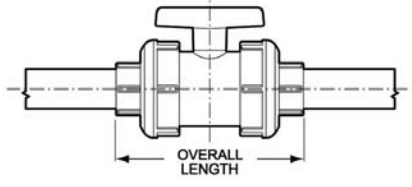
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

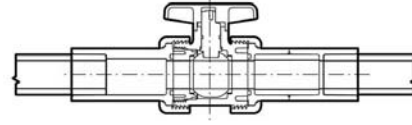
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 STANDARD BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005C 52.48	3632RS-005C 58.36	1	18	610
3/4	3622RS-007C 66.13	3632RS-007C 73.49	1	18	610
1	3622RS-010C 78.73	3632RS-010C 87.47	1	12	610
1-1/4	3622RS-012C 125.16	3632RS-012C 139.11	1	8	610
1-1/2	3622RS-015C 132.16	3632RS-015C 146.85	1	8	610

CPVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	3622RS-020C 176.78	3632RS-020C 203.21	1	4	610
2-1/2	3622RS-025C 396.31	3632RS-025C 440.32	1	0	611
3	3622RS-030C 463.39	3632RS-030C 514.91	1	0	611
4	3622RS-040C 839.66	3632RS-040C 932.96	1	0	611



Schedule 80 CPVC Industrial Products & Accessories True Union Ball Valves (Regular Style) & Compact 2000 Ball Valves

True Union Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2" 235 psi

2-1/2" - 6" 150 psi

Flanged 150 psi

Maximum Service Temperature

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant.

6" Venturied Valves are 4" Ball Valves equipped with 4x6 End Connectors.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

Threaded End Connectors available on request

1/2	2329-005C 75.57	2339-005C 84.00	1	18	232
3/4	2329-007C 95.21	2339-007C 105.80	1	12	232
1	2329-010C 113.32	2339-010C 125.92	1	8	232
1-1/4	2329-012C 180.16	2339-012C 200.24	1	8	232
1-1/2	2329-015C 190.27	2339-015C 211.42	1	8	232
2	2329-020C 254.49	2339-020C 292.53	1	4	232

Socket Ends

2-1/2	2322-025C 542.01	2332-025C 602.21	1	0	232
3	2322-030C 633.75	2332-030C 704.19	1	0	232
4	2322-040C 1148.37	2332-040C 1275.97	1	0	232

Socket Venturied Ends

6 VENTURIED	2322-060C 1910.38	2332-060C 1982.16	1	0	233
--------------------	----------------------	----------------------	---	---	-----

Threaded Ends

2-1/2	2321-025C 542.01	2331-025C 602.21	1	0	232
3	2321-030C 633.75	2331-030C 704.19	1	0	232

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Threaded Ends

4	2321-040C 1148.37	2331-040C 1275.97	1	0	232
----------	----------------------	----------------------	---	---	-----

Flanged Ends

1/2	2323-005C 128.23	2333-005C 131.00	6	0	232
3/4	2323-007C 157.20	2333-007C 163.75	5	0	232
1	2323-010C 179.99	2333-010C 191.05	5	0	232
1-1/4	2323-012C 268.89	2333-012C 278.33	2	0	232
1-1/2	2323-015C 295.79	2333-015C 305.61	3	0	232
2	2323-020C 411.60	2333-020C 490.19	2	0	232
2-1/2	2323-025C 729.80	2333-025C 875.99	1	0	232
3	2323-030C 1067.29	2333-030C 1091.61	1	0	232
4	2323-040C 1871.83	2333-040C 1946.69	1	0	232

Flanged Venturied Ends

6 VENTURIED	2323-060C 2901.42	2333-060C 3001.97	1	0	233
--------------------	----------------------	----------------------	---	---	-----

Compact 2000 Ball Valves



Pressure Rating @ 73°F (23°C), Water

1/2" - 2" 235 psi

Maximum Service Temperature

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free, Water Soluble Lubricants.

Rated for Vacuum Service

Compact 2000 Ball Valves are a Maintenance-Free, Sealed Unit (non-repairable).
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features.

CPVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket Ends

1/2	6622-005C 24.93	6632-005C 27.74	10	120	212
3/4	6622-007C 32.88	6632-007C 36.95	10	80	212

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket Ends

1	6622-010C 41.09	6632-010C 46.21	10	0	212
1-1/4	6622-012C 67.25	6632-012C 83.12	6	0	212

Schedule 80 CPVC Industrial Products & Accessories
Compact 2000 Ball Valves & Compact Ball Valves (Regular Style)



Compact 2000 Ball Valves

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1-1/2	6622-015C 83.18	6632-015C 92.42	5	0	212
2	6622-020C 108.97	6632-020C 122.43	8	0	212
Threaded Ends					
1/2	6621-005C 24.93	6631-005C 27.74	10	120	212
3/4	6621-007C 32.88	6631-007C 36.95	10	80	212
1	6621-010C 41.09	6631-010C 46.21	10	0	212
1-1/4	6621-012C 67.25	6631-012C 83.12	6	0	212
1-1/2	6621-015C 83.18	6631-015C 92.42	5	0	212

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
2	6621-020C 108.97	6631-020C 122.43	8	0	212
Flanged Ends					
1/2	6623-005C 68.21	6633-005C 70.32	1	0	212
3/4	6623-007C 80.63	6633-007C 84.19	1	0	212
1	6623-010C 106.11	6633-010C 112.37	1	0	212
1-1/4	6623-012C 133.47	6633-012C 140.63	1	0	212
1-1/2	6623-015C 168.63	6633-015C 178.73	1	0	212
2	6623-020C 234.95	6633-020C 241.89	1	0	212

Compact Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 3" - 6" 150 psi
 Flanged 150 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricants.
 See Ball Valve Accessories & Repair Kits Section for Additional
 Options & Features

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.
 T-Handle option is more compact but will increase difficulty of
 operation.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005C 26.24	2132-005C 29.18	10	80	212
3/4	2122-007C 34.61	2132-007C 38.91	10	0	212
1	2122-010C 43.27	2132-010C 48.64	10	0	212
1-1/4	2122-012C 87.56	2132-012C 97.25	6	0	212
1-1/2	2122-015C 108.18	2132-015C 113.73	5	0	212
2	2122-020C 114.72	2132-020C 128.89	6	0	212
3	2122-030C 349.04	2132-030C 389.31	1	4	213
4	2122-040C 645.24	2132-040C 724.94	1	0	213
6 (Lever Handle)	2122-060C 1054.51	2132-060C 1123.62	1	0	213
6 (Tee Handle)	2122-060C 1054.51	2132-060C 1123.62	1	0	213
Threaded Ends					
1/2	2121-005C 26.24	2131-005C 29.18	10	80	212
3/4	2121-007C 34.61	2131-007C 38.91	10	0	212
1	2121-010C 43.27	2131-010C 48.64	10	0	212
1-1/4	2121-012C 87.56	2131-012C 97.25	6	0	212
1-1/2	2121-015C 108.18	2131-015C 113.73	5	0	212
2	2121-020C 114.72	2131-020C 128.89	6	0	212

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
3	2121-030C 349.04	2131-030C 389.31	1	4	213
4	2121-040C 645.24	2131-040C 724.94	1	0	213
Flanged Ends					
1/2	2123-005C 73.15	2133-005C 76.11	1	8	212
3/4	2123-007C 84.93	2133-007C 89.22	1	8	212
1	2123-010C 100.42	2133-010C 105.81	1	8	212
1-1/4	2123-012C 158.24	2133-012C 167.96	1	8	212
1-1/2	2123-015C 197.89	2133-015C 204.01	1	4	212
2	2123-020C 224.11	2133-020C 238.28	1	0	212
3	2123-030C 536.68	2133-030C 576.95	1	0	213
4	2123-040C 838.37	2133-040C 918.05	1	0	213
6 (Lever Handle)	2123-060C 1592.42	2133-060C 1708.33	1	0	213
6 (Tee Handle)	2123-060C 1592.42	2133-060C 1708.33	1	0	213



Schedule 80 CPVC Industrial Products & Accessories Utility Ball Valves & Lab Ball Valves

Utility Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 6" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

See Ball Valve Accessories & Repair Kits
Section for Additional Options and Features

CPVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
CPVC					
1/2	2621-005C 12.35	2622-005C 12.35	50	0	216
3/4	2621-007C 15.69	2622-007C 15.69	25	0	216
1	2621-010C 17.05	2622-010C 17.05	25	0	216

CPVC w/EPDM O-ring Seal (continued)

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
CPVC					
1-1/4	2621-012C 24.03	2622-012C 24.03	20	0	216
1-1/2	2621-015C 37.26	2622-015C 37.26	20	0	216
2	2621-020C 46.35	2622-020C 46.35	8	0	216

Lab Ball Valves



Socket/Threaded Valve Only

Pressure Rating @ 73°F (23°C),
Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings
Apply
Rated for Vacuum Service

Valve & Adapters includes:

- 1 - Threaded 1/4" Valve
- 2 - O-ring Sealed 1/4" MPT x Mipt Adapters
- 2 - EPDM or FKM O-rings (AS568-013 size)
- 1 - End Connector Wrench
- 2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
- 2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters



Valve & Adapters

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Valve & Adapters Threaded Ends

1/4X3/8T	1529-002C 30.91	1539-002C 31.51	1	25	219
1/4X1/4T	1529-002CA 30.91	1539-002CA 31.51	1	25	219

Valve only Threaded Ends

1/4	1521-002C 24.75	1531-002C 27.21	50	200	219
3/8	1521-003C 34.71	1531-003C 32.53	50	200	219

Valve only Socket Ends

1/4	1522-002C 24.75	1532-002C 29.45	50	200	219
3/8	1522-003C 34.71	1532-003C 38.53	50	200	219

Schedule 80 CPVC Industrial Products & Accessories
True Union 2000 Industrial Ball Check Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 4" 235 psi
 6" - 8" 150 psi
 All Flanged 150 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves assembled with Silicone-Free,
 Water Soluble Lubricant
 Contact Spears® for Pricing & Availability
 on Custom Elastomer Seals
 See Ball Valve Accessories & Repair Kits Section
 for Additional Options and Features

Socket Style

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005C 83.31	4539-005C 92.74	1	18	606
3/4	4529-007C 99.71	4539-007C 110.81	1	18	606
1	4529-010C 117.65	4539-010C 130.71	1	18	606
1-1/4	4529-012C 202.63	4539-012C 224.94	1	12	606
1-1/2	4529-015C 202.63	4539-015C 224.94	1	8	606
2	4529-020C 270.65	4539-020C 301.56	1	8	606

Socket Ends

2-1/2	4522-025C 567.14	4532-025C 630.13	1	0	607
3	4522-030C 753.47	4532-030C 820.66	1	0	607
4	4522-040C 1244.54	4532-040C 1383.69	1	0	607
6	4522-060C 2569.49	4532-060C 2854.63	1	0	559
8	4522-080C 3022.95	4532-080C 3805.11	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	4521-025C 567.14	4531-025C 630.13	1	0	607
3	4521-030C 751.23	4531-030C 841.78	1	0	607
4	4521-040C 1244.54	4531-040C 1383.69	1	0	607
6	4521-060C 2569.49	4531-060C 2854.63	1	0	559

SR Threaded Ends

1/2	4521-005CSR 84.42	4531-005CSR 93.87	1	18	606
3/4	4521-007CSR 102.44	4531-007CSR 113.51	1	18	606
1	4521-010CSR 120.35	4531-010CSR 133.43	1	18	606
1-1/4	4521-012CSR 208.03	4531-012CSR 233.68	1	12	606
1-1/2	4521-015CSR 208.03	4531-015CSR 233.68	1	8	606
2	4521-020CSR 280.11	4531-020CSR 311.02	1	8	606
2-1/2	4521-025CSR 591.64	4531-025CSR 654.32	1	0	607
3	4521-030CSR 591.64	4531-030CSR 881.74	1	0	607
4	4521-040CSR 1272.76	4531-040CSR 1411.94	1	0	607
6	4521-060CSR 2638.78	4531-060CSR 2923.92	1	0	559

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	4527-005C 83.31	4537-005C 92.74	1	18	606
3/4	4527-007C 99.71	4537-007C 110.81	1	18	606
1	4527-010C 117.65	4537-010C 130.71	1	12	606
1-1/4	4527-012C 202.63	4537-012C 224.94	1	12	606
1-1/2	4527-015C 230.09	4537-015C 224.94	1	8	606
2	4527-020C 270.65	4537-020C 301.56	1	8	606
2-1/2	4527-025C 567.14	4537-025C 630.13	1	0	607
3	4527-030C 737.00	4537-030C 815.96	1	0	607
4	4527-040C 1244.54	4537-040C 1383.69	1	0	607
6	4527-060C 2569.49	4537-060C 2854.63	1	0	559

Flanged Ends

1/2	4523-005C 103.44	4533-005C 129.26	1	8	606
3/4	4523-007C 123.41	4533-007C 156.22	1	8	606
1	4523-010C 147.36	4533-010C 181.67	1	8	606
1-1/4	4523-012C 248.55	4533-012C 308.19	1	8	606
1-1/2	4523-015C 265.54	4533-015C 331.81	1	4	606
2	4523-020C 469.52	4533-020C 503.37	1	0	606
2-1/2	4523-025C 850.66	4533-025C 920.31	1	0	607
3	4523-030C 949.84	4533-030C 1042.04	1	0	607
4	4523-040C 1571.47	4533-040C 1687.47	1	0	607
6	4523-060C 4190.15	4533-060C 4356.08	1	0	559
8	4523-080C 4823.25	4533-080C 5248.27	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.



Schedule 80 CPVC Industrial Products & Accessories True Union Ball Check Valves (Regular Style) & Foot Valve Screens

True Union Ball Check Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi

Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves assembled with Silicone-Free,
Water Soluble Lubricant

6" Venturied Valves are 4" Ball Check Valves equipped with
4x6 End Connectors.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of flow.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2229-005C 91.15	2239-005C 101.47	1	18	222
3/4	2229-007C 109.11	2239-007C 121.24	1	12	222
1	2229-010C 128.74	2239-010C 143.02	1	8	222
1-1/4	2229-012C 221.69	2239-012C 246.12	1	8	222
1-1/2	2229-015C 268.08	2239-015C 283.37	1	8	222
2	2229-020C 296.87	2239-020C 329.95	1	4	222

Socket Ends

2-1/2	2222-025C 620.52	2232-025C 689.44	1	0	222
3	2222-030C 1010.72	2232-030C 1106.06	1	0	222
4	2222-040C 1361.67	2232-040C 1513.93	1	0	222

Socket Venturied Ends

6 VENTURIED	2222-060C 1756.56	2232-060C 1968.07	1	0	223
--------------------	----------------------	----------------------	---	---	-----

Threaded Ends

2-1/2	2221-025C 620.52	2231-025C 689.44	1	0	222
3	2221-030C 1010.72	2231-030C 1106.06	1	0	222
4	2221-040C 1361.67	2231-040C 1513.93	1	0	222

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
1/2	2223-005C 113.18	2233-005C 141.42	6	0	222
3/4	2223-007C 135.02	2233-007C 170.94	5	0	222
1	2223-010C 161.22	2233-010C 198.76	5	0	222
1-1/4	2223-012C 271.95	2233-012C 337.19	2	0	222
1-1/2	2223-015C 290.53	2233-015C 363.03	3	0	222
2	2223-020C 513.69	2233-020C 550.75	2	0	222
2-1/2	2223-025C 817.39	2233-025C 930.72	1	0	222
3	2223-030C 1039.25	2233-030C 1140.12	1	0	222
4	2223-040C 1719.37	2233-040C 1846.29	1	0	222

Flanged Venturied Ends

6 VENTURIED	2223-060C 2072.75	2233-060C 2243.62	1	0	223
--------------------	----------------------	----------------------	---	---	-----

Foot Valve Screens

Convert Check Valve to Foot Valve using adapter - Fits all Socket Ball Check Valves
or any IPS fitting socket

Standard Foot Valve Screen



PVC/CPVC Spigot

Foot Valve Screens-Spigot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC					
FVS-005C	1/2	10	60	299	62.85
FVS-007C	3/4	10	60	299	67.80
FVS-010C	1	10	40	299	76.97
FVS-012C	1-1/4	5	30	299	118.87
FVS-015C	1-1/2	5	0	299	123.43
FVS-020C	2	5	0	299	136.26
FVS-025C	2-1/2	5	0	299	198.53

Foot Valve Screens-Spigot (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC					
FVS-030C	3	5	0	299	221.08
FVS-040C	4	5	0	299	315.98
FVS-060C	6	5	0	299	451.53

Schedule 80 CPVC Industrial Products & Accessories Y-Check Valves



True Union Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 150 psi
 3" - 4" 90 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005C 127.26	1632-005C 140.15	1	18	629
3/4	1622-007C 136.94	1632-007C 151.43	1	18	629
1	1622-010C 149.82	1632-010C 165.93	1	12	629
1-1/4	1622-012C 235.20	1632-012C 260.98	1	8	629
1-1/2	1622-015C 256.15	1632-015C 283.53	1	8	629
2	1622-020C 317.36	1632-020C 352.79	1	4	629
3	1622-030C 908.25	1632-030C 1016.27	1	0	629
4	1622-040C 1095.44	1632-040C 1217.88	1	0	629

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CSR 130.48	1631-005CSR 144.98	1	18	629
3/4	1621-007CSR 141.77	1631-007CSR 157.88	1	12	629
1	1621-010CSR 157.88	1631-010CSR 173.98	1	8	629
1-1/4	1621-012CSR 248.09	1631-012CSR 272.25	1	8	629
1-1/2	1621-015CSR 277.08	1631-015CSR 304.48	1	4	629
2	1621-020CSR 339.91	1631-020CSR 375.37	1	0	629
3	1621-030CSR 691.11	1631-030CSR 760.38	1	0	629
4	1621-040CSR 1158.28	1631-040CSR 1280.73	1	0	629

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005C 165.93	1633-005C 170.80	1	8	629
3/4	1623-007C 182.05	1633-007C 202.98	1	8	629
1	1623-010C 219.11	1633-010C 243.91	1	8	629
1-1/4	1623-012C 338.31	1633-012C 375.37	1	4	629
1-1/2	1623-015C 357.62	1633-015C 397.91	1	4	629
2	1623-020C 480.06	1633-020C 533.22	1	0	629
3	1623-030C 940.81	1633-030C 1045.52	1	0	629
4	1623-040C 1501.42	1633-040C 1668.97	1	0	629

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005C 138.55	163A-005C 153.04	1	12	629

CPVC - True Union Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	162A-007C 148.21	163A-007C 165.93	1	8	629
1	162A-010C 162.71	163A-010C 180.43	1	8	629
1-1/4	162A-012C 254.54	163A-012C 283.53	1	4	629
1-1/2	162A-015C 277.08	163A-015C 307.71	1	0	629
2	162A-020C 344.75	163A-020C 383.40	2	0	629
3	162A-030C 683.05	163A-030C 745.86	1	0	629
4	162A-040C 1190.51	163A-040C 1322.61	1	0	629

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005C 138.55	163B-005C 153.04	1	12	629
3/4	162B-007C 148.21	163B-007C 165.93	1	8	629
1	162B-010C 162.71	163B-010C 180.43	1	8	629
1-1/4	162B-012C 254.54	163B-012C 283.53	1	4	629
1-1/2	162B-015C 277.08	163B-015C 307.71	1	0	629
2	162B-020C 344.75	163B-020C 383.40	2	0	629
3	162B-030C 683.05	163B-030C 745.86	1	0	629
4	162B-040C 1190.51	163B-040C 1322.61	1	0	629

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CSR 141.77	163B-005CSR 156.26	1	12	629
3/4	162B-007CSR 154.66	163B-007CSR 170.76	1	8	629
1	162B-010CSR 170.76	163B-010CSR 188.48	1	8	629
1-1/4	162B-012CSR 269.02	163B-012CSR 296.42	1	4	629
1-1/2	162B-015CSR 301.25	163B-015CSR 330.23	1	0	629
2	162B-020CSR 370.52	163B-020CSR 407.57	1	0	629
3	162B-030CSR 750.72	163B-030CSR 824.83	1	0	629
4	162B-040CSR 1259.79	163B-040CSR 1391.89	1	0	629



Schedule 80 CPVC Industrial Products & Accessories Butterfly Check Valves



Wafer



Flanged



Spigot



Threaded



Grooved

Pressure Rating @ 73°F (23°C), Water

2" - 8" 150 psi

10" - 16" 100 psi

18" - 24" 50 psi

Maximum Service Temperature

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

General Installation Information: Butterfly Check Valve seating may be affected by normal system turbulence. Flow velocities should be limited to approximately 5 feet per second. Valves should be installed at least 5 pipe diameters away from any fitting, pump or other source of turbulence. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Wafer					
2	5420-020C 628.27	5430-020C 697.39	1	18	290
2-1/2	5420-025C 865.88	5430-025C 917.65	1	0	290
3	5420-030C 1107.55	5430-030C 1229.38	1	0	290
4	5420-040C 1506.29	5430-040C 1671.97	1	0	290
6	5420-060C 2283.56	5430-060C 2534.76	1	0	290
8	5420-080C 3874.39	5430-080C 4300.57	1	0	290
10	5420-100C 8332.34	5430-100C 9165.58	1	0	290
12	5420-120C 14674.37	5430-120C 16141.81	1	0	290

Flanged Ends

2	5423-020C 800.28	5433-020C 839.26	1	8	290
2-1/2	5423-025C 1280.98	5433-025C 1340.74	1	0	290
3	5423-030C 1369.32	5433-030C 1465.46	1	0	290
4	5423-040C 1603.17	5433-040C 1748.67	1	0	290
6	5423-060C 2826.99	5433-060C 3120.62	1	0	290
8	5423-080C 4528.92	5433-080C 5053.80	1	0	290
10	5423-100C 8558.96	5433-100C 9312.47	1	0	290
12	5423-120C 15415.98	5433-120C 16385.20	1	0	290
14	5423-140C 22022.45	5433-140C 23407.12	1	0	290
16	5423-160C 30585.05	5433-160C 32509.86	1	0	290
18	5423-180C 38231.29	5433-180C 40637.35	1	0	290
20	5423-200C 54615.94	5433-200C 58052.18	1	0	290
24	5423-240C 68268.40	5433-240C 72564.97	1	0	290

Spigot (Plain End)

2	5427-020C 420.93	5437-020C 459.91	1	12	290
2-1/2	5427-025C 569.05	5437-025C 628.79	1	12	290
3	5427-030C 579.44	5437-030C 674.71	1	8	290
4	5427-040C 727.53	5437-040C 873.05	1	4	290
6	5427-060C 1556.42	5437-060C 1850.04	1	0	290

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot (Plain End)					
8	5427-080C 2335.92	5437-080C 2860.78	1	0	290
10	5427-100C 5838.47	5437-100C 6592.03	1	0	290
12	5427-120C 9580.11	5437-120C 10548.42	1	0	290
14	5427-140C 10020.27	5437-140C 20928.65	1	0	290
16	5427-160C 13250.63	5437-160C 13755.01	1	0	290
18	5427-180C 20149.82	5437-180C 23126.81	1	0	290
20	5427-200C 25188.27	5437-200C 28905.66	1	0	290
24	5427-240C 26089.01	5437-240C 72564.97	1	0	290

Threaded Ends

2	5421A-020C 418.36	5431A-020C 483.31	1	12	290
2-1/2	5421A-025C 566.79	5431A-025C 627.07	1	8	290
3	5421A-030C 575.97	5431A-030C 672.09	1	8	290
4	5421A-040C 724.07	5431A-040C 869.58	1	4	290
6	5421A-060C 1544.27	5431A-060C 1837.02	1	0	290
8	5421A-080C 2325.16	5431A-080C 2850.04	1	0	290
10	5421A-100C 5829.28	5431A-100C 6582.83	1	0	290
12	5421A-120C 9564.84	5431A-120C 10534.04	1	0	290

Grooved Ends

2	542G-020C 444.34	543G-020C 514.68	1	12	290
2-1/2	542G-025C 589.82	543G-025C 649.60	1	8	290
3	542G-030C 599.33	543G-030C 695.48	1	8	290
4	542G-040C 769.11	543G-040C 915.29	1	4	290
6	542G-060C 1610.98	543G-060C 1904.60	1	0	290
8	542G-080C 2388.06	543G-080C 2912.93	1	0	290
10	542G-100C 5926.83	543G-100C 6680.34	1	0	290
12	542G-120C 9878.92	543G-120C 10848.08	1	0	290

Schedule 80 CPVC Industrial Products & Accessories Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
 3/4" - 4" 150 psi
 6" 100 psi
 8" 70 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up
 (Valve Shown with Arrow Indicator Option)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
3/4	4423-007C 774.01	4433-007C 860.13	1	12	109
1	4423-010C 892.53	4433-010C 992.43	1	4	109
1-1/4	4423-012C 1116.48	4433-012C 1239.96	1	0	109
1-1/2	4423-015C 1151.88	4433-015C 1565.51	1	0	109
2	4423-020C 1485.39	4433-020C 1650.42	1	0	109
2-1/2	4423-025C 2461.58	4433-025C 2921.09	1	0	111
3	4423-030C 3074.86	4433-030C 3308.52	1	0	111
4	4423-040C 3528.28	4433-040C 4161.00	1	0	111
6	4423-060C 7220.66	4433-060C 7908.09	1	0	111
8	4423-080C 12884.15	4433-080C 15066.75	1	0	111

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
1-1/4	4423CB-012C 1111.08	4433CB-012C 1526.17	1	0	109
1-1/2	4423CB-015C 1526.17	4433CB-015C 1764.87	1	0	109
2	4423CB-020C 1983.65	4433CB-020C 2148.72	1	0	109
2-1/2	4423CB-025C 2994.18	4433CB-025C 3453.78	1	0	111
3	4423CB-030C 3241.42	4433CB-030C 4294.28	1	0	111
4	4423CB-040C 4010.76	4433CB-040C 4718.82	1	0	111
6	4423CB-060C 7858.41	4433CB-060C 8545.80	1	0	111
8	4423CB-080C 13533.00	4433CB-080C 15715.46	1	0	111

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
3/4	4423I-007C 782.56	4433I-007C 868.15	1	12	109
1	4423I-010C 900.59	4433I-010C 1002.09	1	4	109
1-1/4	4423I-012C 1111.08	4433I-012C 1251.24	1	0	109
1-1/2	4423I-015C 1277.94	4433I-015C 1251.24	1	0	109
2	4423I-020C 1497.00	4433I-020C 1693.56	1	0	109
2-1/2	4423I-025C 2469.95	4433I-025C 2962.41	1	0	111
3	4423I-030C 2650.77	4433I-030C 3446.74	1	0	111
4	4423I-040C 3551.77	4433I-040C 4185.59	1	0	111
6	4423I-060C 7327.88	4433I-060C 7916.65	1	0	111
8	4423I-080C 12897.99	4433I-080C 15114.39	1	0	111

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
3/4	4423CB-007C 1201.33	4433CB-007C 1309.60	1	12	109
1	4423CB-010C 1303.47	4433CB-010C 1416.69	1	4	109



Schedule 80 CPVC Industrial Products & Accessories Diaphragm Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 100 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Santoprene™ TPE Seat

CPVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007C	3/4	15	0	004	117.00

CPVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007C	3/4	15	0	004	117.00

General Installation Information: Diaphragm Check Valves have "normally closed" operation with 1 - 1-1/2 psi opening pressure and can be mounted in any position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec.

Schedule 80 CPVC Industrial Products & Accessories Gate Valves



1/2" - 2" Socket/Threaded Style



2-1/2" - 3" Socket Style



4" Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 200 psi
 2-1/2" - 3" 150 psi
 4" 235 psi
 Flanged 150 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply

CPVC Gate-Wedge on CPVC Valve
 All Valves Assembled with Silicone-Free,
 Water Soluble Lubricant

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005C 70.80	2021-005C 78.63	2031-005C 86.54	12	0	202
3/4	2011-007C 76.56	2021-007C 85.04	2031-007C 93.56	12	0	202
1	2011-010C 83.92	2021-010C 93.25	2031-010C 102.54	12	0	202
1-1/4	2011-012C 147.39	2021-012C 163.79	2031-012C 180.17	6	0	202
1-1/2	2011-015C 161.11	2021-015C 179.51	2031-015C 197.47	6	0	202
2	2011-020C 186.39	2021-020C 207.06	2031-020C 227.77	6	0	202
2-1/2	2011-025C 694.04	2021-025C 748.94	2031-025C 813.25	1	0	203

SR Threaded Ends

3	2011-030CSR 931.87	2021-030CSR 1035.13	2031-030CSR 1150.16	1	0	203
4	2011-040CSR 1677.34	2021-040CSR 1863.68	2031-040CSR 2070.76	1	0	203

Socket Ends

1/2	2012-005C 70.80	2022-005C 78.63	2032-005C 86.54	12	0	202
3/4	2012-007C 76.56	2022-007C 85.04	2032-007C 93.56	12	0	202
1	2012-010C 83.92	2022-010C 93.25	2032-010C 102.54	12	0	202
1-1/4	2012-012C 147.39	2022-012C 163.79	2032-012C 180.17	6	0	202
1-1/2	2012-015C 161.11	2022-015C 179.51	2032-015C 197.47	6	0	202
2	2012-020C 186.39	2022-020C 207.06	2032-020C 227.77	6	0	202
2-1/2	2012-025C 694.04	2022-025C 748.94	2032-025C 813.25	1	0	203
3	2012-030C 931.87	2022-030C 1035.13	2032-030C 1150.16	1	0	203
4	2012-040C 1677.34	2022-040C 1863.68	2032-040C 2070.76	1	0	203

Flanged Ends

1/2	2013-005C 317.23	2023-005C 352.43	2033-005C 387.64	4	0	202
3/4	2013-007C 342.97	2023-007C 381.03	2033-007C 419.15	4	0	202
1	2013-010C 375.86	2023-010C 417.71	2033-010C 459.46	4	0	202
1-1/4	2013-012C 508.35	2023-012C 565.07	2033-012C 621.58	3	0	202
1-1/2	2013-015C 555.24	2023-015C 619.34	2033-015C 681.19	3	0	202

CPVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
2	2013-020C 642.97	2023-020C 714.39	2033-020C 785.85	2	0	202
2-1/2	2013-025C 840.07	2023-025C 1110.14	2033-025C 1245.37	1	0	203
3	2013-030C 1164.81	2023-030C 1294.24	2033-030C 1438.06	1	0	203
4	2013-040C 2096.67	2023-040C 2329.63	2033-040C 2588.49	1	0	203



Schedule 80 CPVC Industrial Products & Accessories Plug Gate Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 Flanged 150 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 Plug-Style PE Wedge on All Valves
 Rated for Vacuum Service
 All Valves Assembled with Silicone-Free,
 Water Soluble Lubricants

CPVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005C 70.80	5222-005C 78.63	5232-005C 86.54	12	0	202
3/4	5212-007C 76.56	5222-007C 85.04	5232-007C 93.56	12	0	202
1	5212-010C 83.92	5222-010C 93.25	5232-010C 102.54	12	0	202
1-1/4	5212-012C 147.39	5222-012C 163.79	5232-012C 180.17	6	0	202
1-1/2	5212-015C 161.11	5222-015C 179.51	5232-015C 197.47	6	0	202
2	5212-020C 186.39	5222-020C 207.06	5232-020C 227.77	6	0	202

CPVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005CSR 73.54	5221-005CSR 81.38	5231-005CSR 89.27	12	0	202
3/4	5211-007CSR 80.49	5221-007CSR 88.98	5231-007CSR 97.53	12	0	202
1	5211-010CSR 89.37	5221-010CSR 98.67	5231-010CSR 108.01	12	0	202
1-1/4	5211-012CSR 156.11	5221-012CSR 172.51	5231-012CSR 188.92	6	0	202
1-1/2	5211-015CSR 169.85	5221-015CSR 188.21	5231-015CSR 206.18	6	0	202
2	5211-020CSR 202.63	5221-020CSR 223.29	5231-020CSR 244.00	6	0	202

CPVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005C 317.23	5223-005C 352.43	5233-005C 387.64	4	0	202
3/4	5213-007C 342.97	5223-007C 381.03	5233-007C 419.15	4	0	202
1	5213-010C 375.86	5223-010C 417.71	5233-010C 459.46	4	0	202
1-1/4	5213-012C 508.35	5223-012C 565.07	5233-012C 620.94	3	0	202
1-1/2	5213-015C 555.24	5223-015C 619.34	5233-015C 681.19	3	0	202
2	5213-020C 642.97	5223-020C 714.39	5233-020C 785.85	2	0	202
6	---	5223-060C 2988.46	5233-060C 3893.84	1	0	203

Schedule 80 CPVC Industrial Products & Accessories

Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for
Additional Options and Features



Gear Operator Style

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	-----------	------------	--------------

Lever Handle

1-1/2	721311-015C 374.91	722311-015C 374.91	723311-015C 758.78	1	0	252
2	721311-020C 399.58	722311-020C 399.58	723311-020C 783.47	1	0	252
2-1/2	721311-025C 424.31	722311-025C 424.31	723311-025C 850.82	1	0	252
3	721311-030C 462.45	722311-030C 462.45	723311-030C 911.41	1	0	252
4	721311-040C 534.31	722311-040C 534.31	723311-040C 1140.39	1	0	252
6	721311-060C 790.21	722311-060C 790.21	723311-060C 1822.87	1	0	252
8	721311-080C 1342.43	722311-080C 1342.43	723311-080C 3084.48	1	0	252

Gear Operator

1-1/2	721321-015C 932.24	722321-015C 932.24	723321-015C 1273.06	1	0	252
2	721321-020C 963.64	722321-020C 963.64	723321-020C 1312.45	1	0	252
2-1/2	721321-025C 978.80	722321-025C 978.80	723321-025C 1379.19	1	0	252
3	721321-030C 992.23	722321-030C 992.23	723321-030C 1441.22	1	0	252
4	721321-040C 1064.07	722321-040C 1064.07	723321-040C 1670.20	1	0	252
6	721321-060C 1324.48	722321-060C 1324.48	723321-060C 2352.64	1	0	252
8	721321-080C 1872.21	722321-080C 1872.21	723321-080C 3614.27	1	0	252
10	721321-100C 2622.01	722321-100C 2622.01	723321-100C 6698.69	1	0	252
12	721321-120C 3704.03	722321-120C 3704.03	723321-120C 8707.85	1	0	252

Valve Only

1-1/2	721301-015C 350.20	722301-015C 350.20	723301-015C 704.92	1	0	252
2	721301-020C 374.91	722301-020C 374.91	723301-020C 720.59	1	0	252
2-1/2	721301-025C 390.60	722301-025C 390.60	723301-025C 752.04	1	0	252
3	721301-030C 422.05	722301-030C 422.05	723301-030C 821.62	1	0	252
4	721301-040C 489.38	722301-040C 489.38	723301-040C 1037.17	1	0	252
6	721301-060C 736.31	722301-060C 736.31	723301-060C 1674.66	1	0	252
8	721301-080C 1275.06	722301-080C 1275.06	723301-080C 2828.60	1	0	252
10	721301-100C 2550.19	722301-100C 2550.19	723301-100C 5670.57	1	0	252
12	721301-120C 3313.43	722301-120C 3313.43	723301-120C 7369.94	1	0	252



Schedule 80 CPVC Industrial Products & Accessories Lug Insert Butterfly Valves



Spears® Standard Butterfly Valve
with Lug Inserts Factory Assembled

Note: Lug (insert) Valves require attention to flow direction for dead-end service. Flange must be installed on side of valve *opposite* the hex nut recesses for Single-Side installation. See "True Lug Butterfly Valves," where dead-end service is required in either direction.

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply



CPVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Lever Handle

1-1/2	721311K-015C 582.12	722311K-015C 582.12	723311K-015C 811.27	1	0	252
2	721311K-020C 599.22	722311K-020C 599.22	723311K-020C 829.78	1	0	252
2-1/2	721311K-025C 607.75	722311K-025C 607.75	723311K-025C 849.72	1	0	252
3	721311K-030C 617.72	722311K-030C 617.72	723311K-030C 872.48	1	0	252
4	721311K-040C 1064.62	722311K-040C 1064.62	723311K-040C 1410.48	1	0	252
6	721311K-060C 1424.72	722311K-060C 1424.72	723311K-060C 1988.36	1	0	252
8	721311K-080C 1757.77	722311K-080C 1757.77	723311K-080C 2900.68	1	0	252

Gear Operator

1-1/2	721321K-015C 1147.19	722321K-015C 1147.19	723321K-015C 1421.86	1	0	252
2	721321K-020C 1168.54	722321K-020C 1168.54	723321K-020C 1453.18	1	0	252
2-1/2	721321K-025C 1184.18	722321K-025C 1184.18	723321K-025C 1475.95	1	0	252
3	721321K-030C 1192.74	722321K-030C 1192.74	723321K-030C 1512.96	1	0	252
4	721321K-040C 1773.41	722321K-040C 1773.41	723321K-040C 2183.33	1	0	252
6	721321K-060C 2163.41	722321K-060C 2163.41	723321K-060C 2904.95	1	0	252
8	721321K-080C 2542.00	722321K-080C 2542.00	723321K-080C 3988.07	1	0	252
10	721321K-100C 4467.73	722321K-100C 4467.73	723321K-100C 7164.86	1	0	252
12	721321K-120C 5139.53	722321K-120C 5139.53	723321K-120C 7862.28	1	0	252

Valve Only

1-1/2	721301K-015C 556.51	722301K-015C 556.51	723301K-015C 799.88	1	0	252
2	721301K-020C 576.44	722301K-020C 576.44	723301K-020C 818.40	1	0	252
2-1/2	721301K-025C 583.55	722301K-025C 583.55	723301K-025C 836.89	1	0	252
3	721301K-030C 592.08	722301K-030C 592.08	723301K-030C 846.85	1	0	252
4	721301K-040C 1014.81	722301K-040C 1014.81	723301K-040C 1377.75	1	0	252
6	721301K-060C 1407.64	722301K-060C 1407.64	723301K-060C 1974.11	1	0	252
8	721301K-080C 1722.18	722301K-080C 1722.18	723301K-080C 3099.96	1	0	252
10	721301K-100C 3512.68	722301K-100C 3512.68	723301K-100C 5899.57	1	0	252
12	721301K-120C 4052.12	722301K-120C 4052.12	723301K-120C 7687.22	1	0	252

CPVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Lever Handle

1-1/2	721311G-015C 694.56	722311G-015C 694.56	723311G-015C 979.23	1	0	252
2	721311G-020C 703.11	722311G-020C 703.11	723311G-020C 992.03	1	0	252
2-1/2	721311G-025C 713.08	722311G-025C 713.08	723311G-025C 1017.66	1	0	252
3	721311G-030C 727.31	722311G-030C 727.31	723311G-030C 1027.61	1	0	252
4	721311G-040C 1299.47	722311G-040C 1299.47	723311G-040C 1665.24	1	0	252
6	721311G-060C 1696.56	722311G-060C 1696.56	723311G-060C 2401.09	1	0	252
8	721311G-080C 2102.21	722311G-080C 2102.21	723311G-080C 3440.11	1	0	252

Gear Operator

1-1/2	721321G-015C 1379.18	722321G-015C 1379.18	723321G-015C 1709.38	1	0	252
2	721321G-020C 1389.14	722321G-020C 1389.14	723321G-020C 1729.31	1	0	252
2-1/2	721321G-025C 1394.81	722321G-025C 1394.81	723321G-025C 1747.80	1	0	252
3	721321G-030C 1419.02	722321G-030C 1419.02	723321G-030C 1841.75	1	0	252
4	721321G-040C 2043.86	722321G-040C 2043.86	723321G-040C 2564.77	1	0	252
6	721321G-060C 1670.95	722321G-060C 2524.94	723321G-060C 3423.03	1	0	252
8	721321G-080C 2919.18	722321G-080C 2919.18	723321G-080C 4615.76	1	0	252
10	721321G-100C 5269.05	722321G-100C 5269.05	723321G-100C 8531.23	1	0	252
12	721321G-120C 6088.85	722321G-120C 6088.85	723321G-120C 10501.07	1	0	252

Valve Only

1-1/2	721301G-015C 657.56	722301G-015C 657.56	723301G-015C 956.46	1	0	252
2	721301G-020C 676.06	722301G-020C 676.06	723301G-020C 964.98	1	0	252
2-1/2	721301G-025C 683.19	722301G-025C 683.19	723301G-025C 994.88	1	0	252
3	721301G-030C 697.41	722301G-030C 697.41	723301G-030C 1004.85	1	0	252
4	721301G-040C 1262.45	722301G-040C 1262.45	723301G-040C 1619.71	1	0	252
6	721301G-060C 1646.75	722301G-060C 1646.75	723301G-060C 2315.68	1	0	252
8	721301G-080C 2048.12	722301G-080C 2048.12	723301G-080C 3408.79	1	0	252
10	721301G-100C 4154.60	722301G-100C 4154.60	723301G-100C 6561.40	1	0	252
12	721301G-120C 4776.59	722301G-120C 4776.59	723301G-120C 8077.21	1	0	252

Schedule 80 CPVC Industrial Products & Accessories True Lug Butterfly Valves



Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits
Section for Additional Options and Features

CPVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	-----------	------------	--------------

Lever Handle

1-1/2	721311Z-015C 831.47	722311Z-015C 831.47	723311Z-015C 1160.59	1	0	252
2	721311Z-020C 855.23	722311Z-020C 855.23	723311Z-020C 1186.13	1	0	252
2-1/2	721311Z-025C 865.63	722311Z-025C 865.63	723311Z-025C 1215.89	1	0	252
3	721311Z-030C 883.83	722311Z-030C 883.83	723311Z-030C 1246.73	1	0	252
4	721311Z-040C 1521.24	722311Z-040C 1521.24	723311Z-040C 2014.87	1	0	252
6	721311Z-060C 2035.80	722311Z-060C 2035.80	723311Z-060C 2842.44	1	0	252
8	721311Z-080C 2512.91	722311Z-080C 2512.91	723311Z-080C 4145.80	1	0	252

Gear Operator

1-1/2	721321Z-015C 1351.15	722321Z-015C 1351.15	723321Z-015C 1675.05	1	0	252
2	721321Z-020C 1375.75	722321Z-020C 1375.75	723321Z-020C 1708.88	1	0	252
2-1/2	721321Z-025C 1392.52	722321Z-025C 1392.52	723321Z-025C 1737.09	1	0	252
3	721321Z-030C 1402.01	722321Z-030C 1402.01	723321Z-030C 1780.64	1	0	252
4	721321Z-040C 2087.35	722321Z-040C 2087.35	723321Z-040C 2570.33	1	0	252
6	721321Z-060C 2547.52	722321Z-060C 2547.52	723321Z-060C 3418.87	1	0	252
8	721321Z-080C 2992.95	722321Z-080C 2992.95	723321Z-080C 4693.09	1	0	252
10	721321Z-100C 5180.15	722321Z-100C 5180.15	723321Z-100C 8431.21	1	0	252
12	721321Z-120C 6047.79	722321Z-120C 6047.79	723321Z-120C 9250.78	1	0	252

Valve Only

1-1/2	721301Z-015C 796.82	722301Z-015C 796.82	723301Z-015C 1143.28	1	0	252
2	721301Z-020C 824.25	722301Z-020C 824.25	723301Z-020C 1170.71	1	0	252
2-1/2	721301Z-025C 833.03	722301Z-025C 833.03	723301Z-025C 1197.72	1	0	252
3	721301Z-030C 844.17	722301Z-030C 844.17	723301Z-030C 1211.07	1	0	252
4	721301Z-040C 1448.64	722301Z-040C 1448.64	723301Z-040C 1970.57	1	0	252
6	721301Z-060C 2012.74	722301Z-060C 2012.74	723301Z-060C 2821.35	1	0	252
8	721301Z-080C 2462.00	722301Z-080C 2462.00	723301Z-080C 4050.73	1	0	252
10	721301Z-100C 5020.88	722301Z-100C 5020.88	723301Z-100C 8050.56	1	0	252
12	721301Z-120C 5789.41	722301Z-120C 5789.41	723301Z-120C 8714.75	1	0	252

CPVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	-----------	------------	--------------

Lever Handle

1-1/2	721311L-015C 993.58	722311L-015C 993.58	723311L-015C 1400.85	1	0	252
2	721311L-020C 1005.03	722311L-020C 1005.03	723311L-020C 1418.92	1	0	252
2-1/2	721311L-025C 1020.14	722311L-025C 1020.14	723311L-025C 1453.58	1	0	252
3	721311L-030C 1038.93	722311L-030C 1038.93	723311L-030C 1469.16	1	0	252
4	721311L-040C 1857.78	722311L-040C 1857.78	723311L-040C 2380.64	1	0	252
6	721311L-060C 2426.68	722311L-060C 2426.68	723311L-060C 3430.73	1	0	252
8	721311L-080C 3005.44	722311L-080C 3005.44	723311L-080C 4915.85	1	0	252

Gear Operator

1-1/2	721321L-015C 1624.49	722321L-015C 1624.49	723321L-015C 2012.85	1	0	252
2	721321L-020C 1636.25	722321L-020C 1636.25	723321L-020C 2036.41	1	0	252
2-1/2	721321L-025C 1643.51	722321L-025C 1643.51	723321L-025C 2056.75	1	0	252
3	721321L-030C 1670.87	722321L-030C 1670.87	723321L-030C 2168.79	1	0	252
4	721321L-040C 2406.42	722321L-040C 2406.42	723321L-040C 3018.28	1	0	252
6	721321L-060C 2973.22	722321L-060C 2973.22	723321L-060C 4028.49	1	0	252
8	721321L-080C 3436.65	722321L-080C 3436.65	723321L-080C 5432.64	1	0	252
10	721321L-100C 6200.03	722321L-100C 6200.03	723321L-100C 10038.27	1	0	252
12	721321L-120C 7167.71	722321L-120C 7167.71	723321L-120C 12355.75	1	0	252

Valve Only

1-1/2	721301L-015C 939.91	722301L-015C 939.91	723301L-015C 1368.45	1	0	252
2	721301L-020C 966.72	722301L-020C 966.72	723301L-020C 1378.93	1	0	252
2-1/2	721301L-025C 976.86	722301L-025C 976.86	723301L-025C 1422.62	1	0	252
3	721301L-030C 996.75	722301L-030C 996.75	723301L-030C 1436.00	1	0	252
4	721301L-040C 1804.15	722301L-040C 1804.15	723301L-040C 2316.16	1	0	252
6	721301L-060C 2353.64	722301L-060C 2353.64	723301L-060C 3309.96	1	0	252
8	721301L-080C 2927.17	722301L-080C 2927.17	723301L-080C 4682.14	1	0	252
10	721301L-100C 5937.24	722301L-100C 5937.24	723301L-100C 9373.96	1	0	252
12	721301L-120C 6825.32	722301L-120C 6825.32	723301L-120C 11540.83	1	0	252



Schedule 80 CPVC Industrial Products & Accessories Large Diameter Butterfly Valves & Wafer Butterfly Valves

Large Diameter Butterfly Valves



Maximum Service Temperature
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50



CPVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140C 8296.33	723321-140C 20160.83	1	0	253

Polypropylene - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
18	722321-180P 27410.01	723321-180P 31405.12	1	0	257
20	722321-200P 30753.47	723321-200P 37381.61	1	0	257
24	722321-240P 34834.44	723321-240P 50252.52	1	0	257

Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
16	722321-160P 24883.37	723321-160P 26953.13	1	0	257

Wafer Butterfly Valves



Lever Handle

Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Wafer Butterfly Valve laying lengths will directly replace common Cast Iron valves
(matches Keystone Model 228 and Bray Series 30 Butterfly Valves).



Gear Operator

IMPORTANT NOTE

All PVC and CPVC valves have built-in Santoprene™ Thermoplastic Elastomer (TPE) Flange Gaskets for use with choice of Buna-N, EPDM, or FKM Seats on PVC valves and choice of EPDM or FKM Seats on CPVC valves.

CPVC

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle					
2	752311-020C 399.58	753311-020C 783.47	1	0	252
2-1/2	752311-025C 424.31	753311-025C 850.82	1	0	252
3	752311-030C 462.45	753311-030C 911.41	1	0	252
4	752311-040C 534.31	753311-040C 1140.39	1	0	252
6	752311-060C 790.21	753311-060C 1822.87	1	0	252
8	752311-080C 1342.43	753311-080C 3084.48	1	0	252

Gear Operator

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
2	752321-020C 963.64	753321-020C 1312.45	1	0	252
2-1/2	752321-025C 978.11	753321-025C 1379.19	1	0	252
3	752321-030C 992.23	753321-030C 1441.22	1	0	252
4	752321-040C 1064.07	753321-040C 1670.20	1	0	252
6	752321-060C 1324.48	753321-060C 2352.64	1	0	252

CPVC (continued)

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Gear Operator					
8	752321-080C 1872.21	753321-080C 3614.27	1	0	252
10	752321-100C 2622.01	753321-100C 6698.69	1	0	252
12	752321-120C 3704.03	753321-120C 8707.85	1	0	252

Valve Only

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
2	752301-020C 374.91	753301-020C 720.59	1	0	252
2-1/2	752301-025C 390.60	753301-025C 752.04	1	0	252
3	752301-030C 422.05	753301-030C 821.62	1	0	252
4	752301-040C 489.38	753301-040C 1037.17	1	0	252
6	752301-060C 736.31	753301-060C 1674.66	1	0	252
8	752301-080C 1275.06	753301-080C 2828.60	1	0	252
10	752301-100C 2550.19	753301-100C 5670.57	1	0	252
12	752301-120C 3313.43	753301-120C 7369.94	1	0	252



Globe Valves



Pressure Rating @ 73°F (23°C), Water
 2-1/2" - 6" 150 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free,
 Water Soluble Lubricant
 Suitable for Vacuum Service

Internal Repair Kit includes 1-Bonnet O-ring along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem/O-rings, Seat & Seal Carrier components. Install in valve using existing valve Bolts/Nuts/Washers, and Handle/Nut.

CPVC Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6023-025C 976.00	6033-025C 1025.04	1	0	622
3	6023-030C 1024.57	6033-030C 1138.97	1	0	622
4	6023-040C 1330.67	6033-040C 1462.78	1	0	622
6	6023-060C 2071.91	6033-060C 2089.43	1	0	622

CPVC Internal Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-ERK-025C 689.17	GL-VRK-025C 765.76	1	0	299
3	GL-ERK-030C 788.38	GL-VRK-030C 865.75	1	0	299
4	GL-ERK-040C 893.94	GL-VRK-040C 983.81	1	0	299
6	GL-ERK-060C 1276.81	GL-VRK-060C 1404.99	1	0	299

Needle Valves



Pressure Rating @ 73°F (23°C), Water
 CPVC 235 psi
 Maximum Service Temperature
 CPVC = 200°F (82°C)
 Solid PTFE Stem Seals
 No Elastomer or Lubricants used
 Valves include Panel Mounting Nut

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002C 83.94	5592-002C 83.94	---	1	18	219
3/8	5591-003C 83.94	5592-003C 83.94	---	1	18	219
1/2	5591-005C 88.77	5592-005C 88.77	5591-005CSR 91.04	1	18	219

Angle Pattern

1/4	5691-002C 83.94	5692-002C 83.94	---	1	18	219
3/8	5691-003C 83.94	5692-003C 83.94	---	1	18	219
1/2	5691-005C 88.77	5692-005C 88.77	5691-005CSR 91.04	1	18	219



Schedule 80 CPVC Industrial Products & Accessories

Diaphragm Valves



Socket/Threaded Style



Flanged Style



Spigot Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 1/2" - 4" Flanged
 & Valves w/PTFE 150 psi
 Diaphragms
 6" 100 psi
 8" 75 psi

Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 No Lubricants in Media Contact Area
 See Diaphragm Valve Repair Kits Section
 for Additional Options and Features

Contact Spears® for Pricing on
 Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings
 (for True Union Style Valves)

CPVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005C 244.62	2739-005C 313.51	2729T-005C 351.63	2739T-005C 378.55	2739VT-005C 418.69	1	12	272
3/4	2729-007C 272.25	2739-007C 334.25	2729T-007C 388.35	2739T-007C 405.93	2739VT-007C 448.98	1	8	272
1	2729-010C 314.22	2739-010C 406.44	2729T-010C 472.16	2739T-010C 492.53	2739VT-010C 540.93	1	8	272
1-1/4	2729-012C 471.96	2739-012C 561.55	2729T-012C 651.60	2739T-012C 674.64	2739VT-012C 733.86	1	4	272
1-1/2	2729-015C 485.93	2739-015C 568.46	2729T-015C 661.72	2739T-015C 699.96	2739VT-015C 756.38	1	4	272
2	2729-020C 517.58	2739-020C 648.78	2729T-020C 727.66	2739T-020C 806.34	2739VT-020C 891.86	1	0	272

CPVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005CSR 244.62	2731-005CSR 313.51	2721T-005CSR 351.63	2731T-005CSR 378.55	2731VT-005CSR 418.69	1	12	272
3/4	2721-007CSR 272.25	2731-007CSR 334.25	2721T-007CSR 388.35	2731T-007CSR 405.93	2731VT-007CSR 448.98	1	8	272
1	2721-010CSR 314.22	2731-010CSR 406.44	2721T-010CSR 472.16	2731T-010CSR 492.53	2731VT-010CSR 540.93	1	8	272
1-1/4	2721-012CSR 471.96	2731-012CSR 561.55	2721T-012CSR 651.60	2731T-012CSR 674.64	2731VT-012CSR 733.86	1	4	272
1-1/2	2721-015CSR 485.93	2731-015CSR 568.46	2721T-015CSR 661.72	2731T-015CSR 699.96	2731VT-015CSR 756.38	1	4	272
2	2721-020CSR 517.58	2731-020CSR 648.78	2721T-020CSR 727.66	2731T-020CSR 806.34	2731VT-020CSR 891.86	1	0	272

CPVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005C 238.46	2737-005C 303.65	2797T-005C 341.72	2797VT-005C 381.72	1	12	272
3/4	2727-007C 264.71	2737-007C 323.88	2797T-007C 376.61	2797VT-007C 416.62	1	8	272
1	2727-010C 307.49	2737-010C 395.07	2797T-010C 460.20	2797VT-010C 507.17	1	8	272
1-1/4	2727-012C 460.04	2737-012C 546.16	2797T-012C 634.12	2797VT-012C 702.56	1	4	272
1-1/2	2727-015C 470.28	2737-015C 551.86	2797T-015C 645.07	2797VT-015C 713.87	1	4	272
2	2727-020C 504.53	2737-020C 632.13	2797T-020C 709.15	2797VT-020C 783.86	1	0	272

CPVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005C 295.77	2733-005C 326.63	2793T-005C 426.35	2793VT-005C 472.87	4	0	272
3/4	2723-007C 330.71	2733-007C 365.27	2793T-007C 455.83	2793VT-007C 504.24	4	0	272
1	2723-010C 407.22	2733-010C 455.39	2793T-010C 560.14	2793VT-010C 621.29	4	0	272
1-1/4	2723-012C 520.28	2733-012C 596.04	2793T-012C 707.06	2793VT-012C 781.59	1	4	272
1-1/2	2723-015C 527.19	2733-015C 610.71	2793T-015C 844.60	2793VT-015C 930.33	1	4	272

Schedule 80 CPVC Industrial Products & Accessories
Diaphragm Valves



CPVC - Flanged Ends (continued)

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2	2723-020C 590.43	2733-020C 662.17	2793T-020C 938.46	2793VT-020C 1042.25	1	0	272
2-1/2	2723-025C 1072.56	2733-025C 1197.84	2793T-025C 1852.20	2793VT-025C 2190.55	1	0	273
3	2723-030C 1618.78	2733-030C 1798.63	2793T-030C 2436.57	2793VT-030C 2694.60	1	0	273
4	2723-040C 2223.06	2733-040C 2469.55	2793T-040C 3238.77	2793VT-040C 3455.46	1	0	273
6	2723-060C 4069.32	2733-060C 5834.95	2793T-060C 7122.09	2793VT-060C 9280.51	1	0	273
8	2723-080C 8133.81	2733-080C 10503.55	2793T-080C 10621.16	2793VT-080C 11800.37	1	0	273



Schedule 80 CPVC Industrial Products & Accessories Y-Pattern Valves



Socket Style



True Union Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 150 psi
 3" - 4" 90 psi
 Maximum Service Temperature
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005C 117.59	1732-005C 124.05	1	12	622
3/4	1722-007C 138.55	1732-007C 148.21	1	8	622
1	1722-010C 165.93	1732-010C 177.22	1	8	622
1-1/4	1722-012C 204.59	1732-012C 217.48	1	4	622
1-1/2	1722-015C 270.65	1732-015C 286.74	1	0	622
2	1722-020C 383.40	1732-020C 409.18	2	0	622
3	1722-030C 821.60	1732-030C 892.48	1	0	622
4	1722-040C 1393.48	1732-040C 1517.53	1	0	622

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005C 138.55	173A-005C 146.60	1	8	622
3/4	172A-007C 162.71	173A-007C 173.98	1	8	622
1	172A-010C 194.93	173A-010C 207.80	1	4	622
1-1/4	172A-012C 240.03	173A-012C 256.15	2	0	622
1-1/2	172A-015C 318.98	173A-015C 336.69	2	0	622
2	172A-020C 451.07	173A-020C 481.68	1	0	622
3	172A-030C 966.60	173A-030C 1050.37	1	0	622
4	172A-040C 1638.37	173A-040C 1784.97	1	0	622

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CSR 120.82	1731-005CSR 128.89	1	8	622
3/4	1721-007CSR 143.38	1731-007CSR 153.04	1	8	622
1	1721-010CSR 173.98	1731-010CSR 177.22	1	8	622
1-1/4	1721-012CSR 212.65	1731-012CSR 228.77	1	0	622
1-1/2	1721-015CSR 291.58	1731-015CSR 307.71	1	0	622
2	1721-020CSR 407.57	1731-020CSR 430.15	1	0	622
3	1721-030CSR 881.20	1731-030CSR 953.68	1	0	622
4	1721-040CSR 1388.65	1731-040CSR 1580.38	1	0	622

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005C 138.55	173B-005C 146.60	1	8	622
3/4	172B-007C 162.71	173B-007C 173.98	1	8	622
1	172B-010C 194.93	173B-010C 207.80	1	4	622
1-1/4	172B-012C 240.03	173B-012C 256.15	2	0	622
1-1/2	172B-015C 318.98	173B-015C 336.69	2	0	622
2	172B-020C 451.07	173B-020C 481.68	1	0	622
3	172B-030C 966.60	173B-030C 1050.37	1	0	622
4	172B-040C 1638.37	173B-040C 1784.97	1	0	622

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005C 193.32	1733-005C 199.76	1	8	622
3/4	1723-007C 220.71	1733-007C 230.36	1	8	622
1	1723-010C 267.41	1733-010C 278.69	1	4	622
1-1/4	1723-012C 320.58	1733-012C 331.87	1	0	622
1-1/2	1723-015C 433.36	1733-015C 449.46	1	0	622
2	1723-020C 552.57	1733-020C 578.35	1	0	622
3	1723-030C 1063.25	1733-030C 1135.74	1	0	622
4	1723-040C 1725.34	1733-040C 1834.91	1	0	622

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CSR 141.77	173B-005CSR 151.43	1	8	622
3/4	172B-007CSR 169.14	173B-007CSR 180.43	1	8	622
1	172B-010CSR 204.59	173B-010CSR 207.80	1	4	622
1-1/4	172B-012CSR 249.71	173B-012CSR 269.02	1	0	622
1-1/2	172B-015CSR 343.13	173B-015CSR 362.47	1	0	622
2	172B-020CSR 480.06	173B-020CSR 505.83	1	0	622
3	172B-030CSR 1035.85	173B-030CSR 1121.25	1	0	622
4	172B-040CSR 1633.53	173B-040CSR 1859.06	1	0	622

Schedule 80 CPVC Industrial Products & Accessories In-line Tee-Style Filters



Socket/Spigot

All Filters are 2-1/2"x 2-1/2"
Inlet/Outlet Connection

Note: 2-1/2" Socket is also a 3" Spigot

Pressure Rating @ 73°F (23°C), Water
200 psi

Mesh Size Codes

Mesh Size	Size Code
1/16" Holes	16
1/32" Holes	32
50 Mesh	50
76 Mesh	76
100 Mesh	100
150 Mesh	150
200 Mesh	200

Note: Standard flow filtration path is internal to external. Reverse-flow filtration flows from external to internal side of filter screen.

100 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Stainless Steel Screen

16	TF2-16C 934.36	TF3-16C 1003.79	1	0	296
32	TF2-32C 955.31	TF3-32C 1026.52	1	0	296
50	TF2-50C 1082.91	TF3-50C 1163.12	1	0	296
76	TF2-76C 1307.78	TF3-76C 1405.26	1	0	296
100	TF2-100C 1188.73	TF3-100C 1277.18	1	0	296
150	TF2-150C 1231.25	TF3-150C 1322.93	1	0	296
200	TF2-200C 1337.60	TF3-200C 1436.98	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Stainless Steel Screen

16	MTF2-16C 785.51	MTF3-16C 843.82	1	0	296
32	MTF2-32C 798.24	MTF3-32C 857.68	1	0	296
50	MTF2-50C 823.68	MTF3-50C 884.92	1	0	296
76	MTF2-76C 997.68	MTF3-76C 1071.94	1	0	296
100	MTF2-100C 870.24	MTF3-100C 934.85	1	0	296
150	MTF2-150C 912.93	MTF3-150C 979.63	1	0	296
200	MTF2-200C 1018.96	MTF3-200C 1094.81	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Stainless Steel Screen

16	TF2-16C 934.36	TF3-16C 1003.79	1	0	296
32	TF2-32C 955.31	TF3-32C 1026.52	1	0	296
50	TFR2-50C 1082.91	TFR3-50C 1163.12	1	0	296
76	TFR2-76C 1307.78	TFR3-76C 1405.26	1	0	296
100	TFR2-100C 1188.73	TFR3-100C 1277.18	1	0	296
150	TFR2-150C 1231.25	TFR3-150C 1322.93	1	0	296
200	TFR2-200C 1337.60	TFR3-200C 1436.98	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Stainless Steel Screen

16	MTF2-16C 785.51	MTF3-16C 843.82	1	0	296
32	MTF2-32C 798.24	MTF3-32C 857.68	1	0	296
50	MTFR2-50C 823.68	MTFR3-50C 884.92	1	0	296
76	MTFR2-76C 997.68	MTFR3-76C 1071.94	1	0	296
100	MTFR2-100C 870.24	MTFR3-100C 934.85	1	0	296
150	MTFR2-150C 912.93	MTFR3-150C 979.63	1	0	296
200	MTFR2-200C 1018.96	MTFR3-200C 1094.81	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FL-50-1	50 Mesh	3	0	020	479.42
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for TF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52



Schedule 80 CPVC Industrial Products & Accessories
In-line Tee-Style Filters

**100 GPM Reverse Flow Filter Replacement Screens for
TFR Filters (continued)**

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FLR-200-1	200 Mesh	3	0	020	474.62

**50 GPM Reverse Flow Filter Replacement Screens for
MTFR Filters**

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53



Socket



Flanged



SR Thread



True Union

Part numbers shown reflect a mesh size of 8. For different mesh sizes, substitute Mesh Code in part number as specified in chart below.

U.S. Standard Mesh Sieve No.	Sieve Opening Size (in.)	Part Number Mesh Code
8	0.094	8
12	0.062	12
20	0.033	20
30	0.024	30

Example: for 8 Mesh, specify

YS22C8-005C

Additional Mesh Sizes available on request.

Pressure Rating @ 73°F (23°C), Water

1/2" - 2" 150 psi

3" - 4" 90 psi

Maximum Service Temperature

CPVC = 200°F (93°C)

**Temperature/Pressure
De-ratings Apply**



Schedule 80 CPVC Industrial Products & Accessories Y-Strainers & True Union Y-Strainers

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22C8-005C 232.20	YS22S8-005C 319.13	YS32C8-005C 260.02	YS32S8-005C 358.72	1	18	104
3/4	YS22C8-007C 255.13	YS22S8-007C 362.93	YS32C8-007C 287.23	YS32S8-007C 407.93	1	18	104
1	YS22C8-010C 324.19	YS22S8-010C 448.89	YS32C8-010C 365.17	YS32S8-010C 503.75	1	12	104
1-1/4	YS22C8-012C 470.62	YS22S8-012C 647.68	YS32C8-012C 566.36	YS32S8-012C 685.83	1	8	104
1-1/2	YS22C8-015C 505.52	YS22S8-015C 669.04	YS32C8-015C 587.58	YS32S8-015C 748.02	1	8	104
2	YS22C8-020C 715.75	YS22S8-020C 838.72	YS32C8-020C 756.31	YS32S8-020C 914.78	1	4	104
3	YS22C8-030C 853.81	YS22S8-030C 1021.35	YS32C8-030C 900.54	YS32S8-030C 1098.69	1	0	104
4	YS22C8-040C 1478.88	YS22S8-040C 1691.52	YS32C8-040C 1590.03	YS32S8-040C 1818.78	1	0	104

CPVC - SR Threaded Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21C8-005CSR 240.65	YS21S8-005CSR 327.58	YS31C8-005CSR 268.48	YS31S8-005CSR 367.18	1	18	104
3/4	YS21C8-007CSR 264.18	YS21S8-007CSR 371.96	YS31C8-007CSR 296.27	YS31S8-007CSR 416.98	1	12	104
1	YS21C8-010CSR 344.92	YS21S8-010CSR 469.59	YS31C8-010CSR 385.91	YS31S8-010CSR 524.43	1	8	104
1-1/4	YS21C8-012CSR 491.91	YS21S8-012CSR 632.51	YS31C8-012CSR 587.65	YS31S8-012CSR 707.15	1	8	104
1-1/2	YS21C8-015CSR 530.17	YS21S8-015CSR 693.68	YS31C8-015CSR 667.73	YS31S8-015CSR 772.65	1	4	104
2	YS21C8-020CSR 750.85	YS21S8-020CSR 873.82	YS31C8-020CSR 841.61	YS31S8-020CSR 949.85	1	0	104
3	YS21C8-030CSR 897.31	YS21S8-030CSR 1064.85	YS31C8-030CSR 960.15	YS31S8-030CSR 1142.18	1	0	104
4	YS21C8-040CSR 1523.98	YS21S8-040CSR 1736.64	YS31C8-040CSR 1635.14	YS31S8-040CSR 1863.91	1	0	104

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23C8-005C 374.44	YS23S8-005C 459.72	YS33C8-005C 415.61	YS33S8-005C 512.87	1	8	104
3/4	YS23C8-007C 397.73	YS23S8-007C 489.04	YS33C8-007C 431.29	YS33S8-007C 545.78	1	8	104
1	YS23C8-010C 424.71	YS23S8-010C 543.37	YS33C8-010C 462.66	YS33S8-010C 605.78	1	8	104
1-1/4	YS23C8-012C 680.81	YS23S8-012C 838.08	YS33C8-012C 742.20	YS33S8-012C 933.22	1	4	104
1-1/2	YS23C8-015C 758.69	YS23S8-015C 931.21	YS33C8-015C 842.40	YS33S8-015C 1038.88	1	4	104
2	YS23C8-020C 953.87	YS23S8-020C 1164.35	YS33C8-020C 1046.67	YS33S8-020C 1218.31	1	0	104
3	YS23C8-030C 1303.27	YS23S8-030C 1472.44	YS33C8-030C 1300.05	YS33S8-030C 1583.59	1	0	104
4	YS23C8-040C 2086.21	YS23S8-040C 2298.85	YS33C8-040C 2244.07	YS33S8-040C 2472.85	1	0	104

CPVC - True Union Socket Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AC8-005C 244.43	YS2AS8-005C 335.93	YS3AC8-005C 273.74	YS3AS8-005C 377.59	1	12	104
3/4	YS2AC8-007C 268.56	YS2AS8-007C 382.03	YS3AC8-007C 302.35	YS3AS8-007C 429.40	1	8	104
1	YS2AC8-010C 341.25	YS2AS8-010C 472.54	YS3AC8-010C 384.40	YS3AS8-010C 530.24	1	8	104
1-1/4	YS2AC8-012C 495.39	YS2AS8-012C 681.77	YS3AC8-012C 596.15	YS3AS8-012C 722.96	1	4	104
1-1/2	YS2AC8-015C 532.13	YS2AS8-015C 704.24	YS3AC8-015C 618.54	YS3AS8-015C 787.38	1	0	104
2	YS2AC8-020C 753.41	YS2AS8-020C 882.85	YS3AC8-020C 796.12	YS3AS8-020C 962.93	1	0	104
3	YS2AC8-030C 898.74	YS2AS8-030C 1075.13	YS3AC8-030C 964.91	YS3AS8-030C 1156.51	1	0	104

Schedule 80 CPVC Industrial Products & Accessories
True Union Y-Strainers



CPVC - True Union Socket Ends (continued)

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
4	YS2AC8-040C 1556.71	YS2AS8-040C 1780.54	YS3AC8-040C 1673.73	YS3AS8-040C 1914.53	1	0	104

CPVC - True Union Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005C 244.43	YS2BS8-005C 335.93	YS3BC8-005C 273.74	YS3BS8-005C 377.59	1	12	104
3/4	YS2BC8-007C 268.56	YS2BS8-007C 382.03	YS3BC8-007C 302.35	YS3BS8-007C 429.40	1	8	104
1	YS2BC8-010C 341.25	YS2BS8-010C 472.54	YS3BC8-010C 384.40	YS3BS8-010C 530.24	1	8	104
1-1/4	YS2BC8-012C 495.39	YS2BS8-012C 681.77	YS3BC8-012C 596.15	YS3BS8-012C 721.94	1	4	104
1-1/2	YS2BC8-015C 532.13	YS2BS8-015C 704.24	YS3BC8-015C 618.54	YS3BS8-015C 787.38	1	0	104
2	YS2BC8-020C 753.41	YS2BS8-020C 882.85	YS3BC8-020C 796.12	YS3BS8-020C 962.93	1	0	104
3	YS2BC8-030C 898.74	YS2BS8-030C 1075.13	YS3BC8-030C 950.39	YS3BS8-030C 1156.51	1	0	104
4	YS2BC8-040C 1556.71	YS2BS8-040C 1780.54	YS3BC8-040C 1673.73	YS3BS8-040C 1914.53	1	0	104

CPVC - True Union SR Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005CSR 253.34	YS2BS8-005CSR 344.79	YS3BC8-005CSR 282.61	YS3BS8-005CSR 386.51	1	12	104
3/4	YS2BC8-007CSR 278.08	YS2BS8-007CSR 391.52	YS3BC8-007CSR 311.87	YS3BS8-007CSR 438.93	1	12	104
1	YS2BC8-010CSR 363.05	YS2BS8-010CSR 494.27	YS3BC8-010CSR 406.20	YS3BS8-010CSR 552.33	1	8	104
1-1/4	YS2BC8-012CSR 517.78	YS2BS8-012CSR 665.80	YS3BC8-012CSR 618.56	YS3BS8-012CSR 744.35	1	4	104
1-1/2	YS2BC8-015CSR 558.05	YS2BS8-015CSR 730.19	YS3BC8-015CSR 702.85	YS3BS8-015CSR 813.32	1	0	104
2	YS2BC8-020CSR 790.38	YS2BS8-020CSR 919.80	YS3BC8-020CSR 885.91	YS3BS8-020CSR 999.85	1	0	104
3	YS2BC8-030CSR 944.55	YS2BS8-030CSR 1120.91	YS3BC8-030CSR 1010.67	YS3BS8-030CSR 1202.29	1	0	104
4	YS2BC8-040CSR 1604.18	YS2BS8-040CSR 1828.04	YS3BC8-040CSR 1721.20	YS3BS8-040CSR 1961.98	1	0	104



Schedule 80 CPVC Industrial Products & Accessories Basket Strainers



Pressure Rating
@ 73°F (23°C), Water

1/2"-8"	150 psi
10"-12"	50 psi

Maximum Service
Temperature

CPVC = 200°F (93°C)

Temperature/Pressure
De-ratings Apply

Important Ordering Information - Column headings indicate Elastomer seal type and Strainer Basket screen material. All Part Numbers shown designate 1/8" perforated (#6 Mesh Code) Strainer Basket Screens. To order other screen perforation sizing, replace the number "6" preceding the dash-separator with the corresponding Mesh Code from chart. Pricing is the same for all listed Mesh Codes.

Perforation Size	Mesh Code
1/16"	12
3/32"	8
1/8"	6
3/16"	4
1/4"	3
3/8"	2

Example: To order a 1/16" screen perforation in listed part number BS22P6-020, change the part number to BS22P12-020

Contact Spears® for additional perforations & wire mesh sizes

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22C6-005C 634.49	BS22S6-005C 878.39	BS32C6-005C 666.55	BS32S6-005C 910.46	1	2	297
3/4	BS22C6-007C 634.49	BS22S6-007C 878.39	BS32C6-007C 666.55	BS32S6-007C 910.46	1	2	297
1	BS22C6-010C 634.49	BS22S6-010C 878.39	BS32C6-010C 666.55	BS32S6-010C 910.46	1	2	297
1-1/4	BS22C6-012C 1197.36	BS22S6-012C 1522.57	BS32C6-012C 1345.85	BS32S6-012C 1710.55	1	0	297
1-1/2	BS22C6-015C 1197.36	BS22S6-015C 1522.57	BS32C6-015C 1345.85	BS32S6-015C 1710.55	1	0	297
2	BS22C6-020C 1197.36	BS22S6-020C 1522.57	BS32C6-020C 1345.85	BS32S6-020C 1710.55	1	0	297
2-1/2	BS22C6-025C 1961.57	BS22S6-025C 2522.36	BS32C6-025C 2203.87	BS32S6-025C 2834.37	1	0	297
3	BS22C6-030C 2543.26	BS22S6-030C 3106.03	BS32C6-030C 2857.67	BS32S6-030C 3489.79	1	0	297
4	BS22C6-040C 3379.36	BS22S6-040C 4019.18	BS32C6-040C 3797.74	BS32S6-040C 4515.97	1	0	297
6	BS22C6-060C 4466.31	BS22S6-060C 5587.52	BS32C6-060C 5018.38	BS32S6-060C 6277.95	1	0	297
8	BS22C6-080C 6375.84	BS22S6-080C 7897.74	BS32C6-080C 7163.94	BS32S6-080C 8873.88	1	0	297
10	BS22C6-100C 11192.03	BS22S6-100C 13364.49	BS32C6-100C 12575.39	BS32S6-100C 15016.73	1	0	297
12	BS22C6-120C 14212.40	BS22S6-120C 17107.55	BS32C6-120C 15968.94	BS32S6-120C 19222.87	1	0	297

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23C6-005C 694.41	BS23S6-005C 938.31	BS33C6-005C 730.83	BS33S6-005C 974.74	1	0	297
3/4	BS23C6-007C 694.41	BS23S6-007C 938.31	BS33C6-007C 730.83	BS33S6-007C 974.74	1	0	297
1	BS23C6-010C 694.41	BS23S6-010C 938.31	BS33C6-010C 730.83	BS33S6-010C 974.74	1	0	297
1-1/4	BS23C6-012C 1350.35	BS23S6-012C 1673.28	BS33C6-012C 1517.06	BS33S6-012C 1880.14	1	0	297
1-1/2	BS23C6-015C 1350.35	BS23S6-015C 1673.28	BS33C6-015C 1517.06	BS33S6-015C 1880.14	1	0	297
2	BS23C6-020C 1350.35	BS23S6-020C 1673.28	BS33C6-020C 1517.06	BS33S6-020C 1880.14	1	0	297
2-1/2	BS23C6-025C 2562.92	BS23S6-025C 3124.68	BS33C6-025C 2878.96	BS33S6-025C 3511.07	1	2	297

Schedule 80 CPVC Industrial Products & Accessories
Basket Strainers



CPVC - Flanged Ends (continued)

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
3	BS23C6-030C 3047.31	BS23S6-030C 3810.92	BS33C6-030C 3423.96	BS33S6-030C 4056.04	1	0	297
4	BS23C6-040C 3990.21	BS23S6-040C 8240.56	BS33C6-040C 4483.56	BS33S6-040C 9258.82	1	0	297
6	BS23C6-060C 7662.95	BS23S6-060C 8783.12	BS33C6-060C 8610.48	BS33S6-060C 9868.63	1	0	297
8	BS23C6-080C 9913.23	BS23S6-080C 11435.37	BS33C6-080C 11138.97	BS33S6-080C 12848.89	1	0	297
10	BS23C6-100C 13460.75	BS23S6-100C 15632.63	BS33C6-100C 15124.09	BS33S6-100C 17565.43	1	0	297
12	BS23C6-120C 18415.33	BS23S6-120C 21309.48	BS33C6-120C 20691.55	BS33S6-120C 23946.35	1	0	297

CPVC - Spigot Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27C6-005C 634.49	BS27S6-005C 878.39	BS37C6-005C 666.55	BS37S6-005C 910.46	1	0	297
3/4	BS27C6-007C 634.49	BS27S6-007C 878.39	BS37C6-007C 666.55	BS37S6-007C 910.46	1	0	297
1	BS27C6-010C 634.49	BS27S6-010C 878.39	BS37C6-010C 666.55	BS37S6-010C 910.46	1	0	297
1-1/4	BS27C6-012C 1197.36	BS27S6-012C 1522.57	BS37C6-012C 1345.85	BS37S6-012C 1710.55	1	0	297
1-1/2	BS27C6-015C 1197.36	BS27S6-015C 1522.57	BS37C6-015C 1345.85	BS37S6-015C 1710.55	1	0	297
2	BS27C6-020C 1197.36	BS27S6-020C 1522.57	BS37C6-020C 1345.85	BS37S6-020C 1710.55	1	0	297
2-1/2	BS27C6-025C 1961.57	BS27S6-025C 2522.36	BS37C6-025C 2203.87	BS37S6-025C 2834.37	1	0	297
3	BS27C6-030C 2543.26	BS27S6-030C 3106.03	BS37C6-030C 2857.67	BS37S6-030C 3489.79	1	0	297
4	BS27C6-040C 3379.36	BS27S6-040C 4019.18	BS37C6-040C 3797.74	BS37S6-040C 4515.97	1	0	297
6	BS27C6-060C 4466.31	BS27S6-060C 5587.52	BS37C6-060C 5018.38	BS37S6-060C 6277.95	1	0	297
8	BS27C6-080C 6375.84	BS27S6-080C 7897.74	BS37C6-080C 7163.94	BS37S6-080C 8873.88	1	0	297
10	BS27C6-100C 11192.03	BS27S6-100C 13364.49	BS37C6-100C 12575.39	BS37S6-100C 15016.73	1	0	297
12	BS27C6-120C 14212.40	BS27S6-120C 17107.55	BS37C6-120C 15968.75	BS37S6-120C 19222.87	1	0	297



Schedule 80 CPVC Industrial Products & Accessories Duplex Basket Strainers

Custom configured and produced to order, Spears® Duplex Basket Strainer provides individual isolation of strainers for servicing and cleaning without shutting down the line. A center handle on the Duplex unit control valves allows selection of either strainer unit for isolation. Each Basket Strainer features a convenient quick release clamp cap equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit.



Multi-Featured Options:

- No Flow Shutdown Required
- Sizes 1/2" - 4" Constructed from Corrosion Resistant PVC or CPVC
- True Union Socket, Thread, or Flanged Connections
- Uses Spears® Standard Basket Strainers Configurations
- Simple Single-Throw Lever Operation
- Select EPDM or FKM Seal Options
- Multiple Strainer Mesh Options in Plastic or Stainless Steel
(see Industrial Basket Strainer options in this catalog)

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR ADDITIONAL CUSTOM OPTIONS, SELECTION ASSISTANCE & PRICING



TRANSITION FITTINGS OVERVIEW

Spears® Transition fittings are designed primarily for adapting plastic-to-metal systems. These fittings, especially the Special Reinforced (SR) Female Plastic Thread style, can also be used for superior strength in make-up of plastic threaded joints. Spears® offers a variety of transition adapter fittings specified below. All have standard ASTM socket sizes for IPS pipe and NPT threads, except for the Gasket Sealed style that uses a straight thread with elastomer seal. All other threads should be assembled with a quality grade thread sealant that is compatible with plastics.

Warning: Some pipe joint compounds or PTFE pastes may contain substances that could cause stress cracking in thermoplastic materials. Spears® recommends the use of Spears® **BLUE 75™** thread sealant that has been tested for compatibility with Spears® products. Choice of any other appropriate thread sealant is at the discretion of the installer.

Special Reinforced (SR) Thread Fittings: This patented fitting features all-plastic female thread construction that reduces problems associated with over-tightening of female plastic pipe threads. The external reinforcing collar is not just an added reinforcement ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is reduced in normal installations and contained in severe over-tightening situations. The all-plastic internal construction provides for the maximum in chemical and corrosion benefits. Its solid construction and reliability make the SR our best transition design for all applications.

Brass Thread Fitting: This patented fitting features a molded-in-place brass thread with external reinforcing collar as an integral part of each fitting for superior strength. An internal form-compressed O-ring seal compensates for expansion and contraction variations between materials. Excellent as a metal-to-plastic transition adapter fitting.

Male Brass Thread Fitting: Developed for Copper Tube Size (CTS) hot-and-cold water distribution systems, this male brass thread alternative is the only metal thread design of its type that has the metal component lined with plastic for improved fitting construction and minimal exposure. Excellent for transition to female metal threads in a CTS system.

Gasket Sealed Thread Fittings: Also developed for Copper Tube Size (CTS) hot-and-cold water distribution systems, this female threaded fitting features all plastic internal construction for maximum corrosion resistance. The fitting incorporates straight-threads for mechanical connection, while sealing is accomplished through an internal elastomer gasket or O-ring against the pipe face. No sealants are used.

APPROVALS

Except where otherwise specified, Spears® Transition Fittings/Materials are approved for use in potable water systems by NSF® International under ANSI/NSF® Standard 61, Drinking Water System Components - Health Effects.

CPVC Orange Fittings in this price schedule (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these system, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Manual*, and local codes. However, these fittings can also be used in many other types of installations. CPVC fittings may also be used on PVC pipe when installed using a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride)(CPVC) Plastic Pipe and Fittings.



Transition Fittings & Adapters PVC White Special Reinforced (SR) Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Female Adapter Soc x SR Fipt - Stainless Steel Collar



435-002SR	1/4	25	450	046	5.59
435-003SR	3/8	25	300	046	5.59
435-005SR	1/2	25	300	046	3.11
435-007SR	3/4	25	300	046	4.52
435-010SR	1	25	200	046	6.72
435-012SR	1-1/4	10	60	046	10.86
435-015SR	1-1/2	10	80	046	13.37
435-020SR	2	10	0	046	23.32
435-025SR	2-1/2	5	0	046	36.79
435-030SR	3	10	0	046	41.45
435-040SR	4	5	0	046	71.24

Special Reinforced Tee Soc x SR Fipt - Stainless Steel Collar



402-005SR	1/2	25	200	046	8.06
402-012SR	1-1/4	25	0	046	15.85

Special Reinforced Reducing Tee Soc x SR Fipt - Stainless Steel Collar



402-072SR	1/2X1/4	25	150	046	8.06
402-098SR	3/4X1/4	25	100	046	10.47
402-101SR	3/4X1/2	50	0	046	10.47
402-166SR	1-1/4X1/2	15	0	046	17.52
402-168SR	1-1/4X1	10	0	046	17.87
402-212SR	1-1/2X1-1/4	10	0	046	19.35
402-287SR	2-1/2X1/2	10	0	046	23.55
402-288SR	2-1/2X3/4	10	0	046	24.88
402-289SR	2-1/2X1	10	0	046	25.13
402-290SR	2-1/2X1-1/4	10	0	046	24.74
402-291SR	2-1/2X1-1/2	10	0	046	25.72
402-292SR	2-1/2X2	10	0	046	25.93
402-333SR	3X1/2	10	0	046	31.40
402-334SR	3X3/4	10	0	046	31.40
402-335SR	3X1	10	0	046	32.03
402-336SR	3X1-1/4	10	0	046	32.78
402-337SR	3X1-1/2	10	0	046	32.49
402-338SR	3X2	6	0	046	34.42
402-417SR	4X1	6	0	046	41.59
402-419SR	4X1-1/2	10	0	046	45.68
402-420SR	4X2	10	0	046	47.17
402-422SR	4X3	6	0	046	74.11

Special Reinforced Reducing Tee Soc x SR Fipt-Stainless Steel Collar x Soc



403-095SR	3/4X1/2X3/4	50	0	046	2.73
-----------	-------------	----	---	-----	------

Special Reinforced 90° Ell & Reducing 90° Ell Soc x SR Fipt - Stainless Steel Collar



407-005SR	1/2	50	400	046	7.15
407-007SR	3/4	75	0	046	9.18
407-010SR	1	50	0	046	9.28
407-012SR	1-1/4	25	0	046	11.22
407-131SR	1X3/4	50	0	046	3.94
407-168SR ¹	1-1/4X1	25	0	046	15.55
407-249SR	2X1	10	0	046	17.68
407-251SR	2X1-1/2	10	0	046	18.65

Sized with SR Adapter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Coupling SR Fipt - Stainless Steel Collar



430-005SR	1/2	25	300	046	3.69
430-007SR	3/4	25	300	046	5.25
430-010SR	1	25	200	046	5.61
430-012SR	1-1/4	10	120	046	6.99
430-015SR	1-1/2	10	60	046	15.47
430-020SR	2	10	0	046	16.22

Special Reinforced Reducer Coupling SR Fipt - Stainless Steel Collar



430-101SR	3/4X1/2	50	200	046	7.96
-----------	---------	----	-----	-----	------

Special Reinforced Spigot Female Adapter Spig x SR Fipt - Stainless Steel Collar



478-005SR	1/2	50	600	046	4.08
478-007SR	3/4	25	300	046	4.81
478-010SR	1	50	0	046	7.41
478-012SR	1-1/4	25	0	046	11.80
478-015SR	1-1/2	25	0	046	14.15
478-020SR	2	15	0	046	23.55
478-030SR	3	5	0	046	43.28
478-040SR	4	5	0	046	66.85

Special Reinforced Reducing Spigot Female Adapter Spig x SR Fipt - Stainless Steel Collar



478-072SR	1/2X1/4	25	450	046	11.35
478-098SR	3/4X1/4	50	300	046	16.53
478-128SR	1X1/4	50	400	046	17.04

Spears® SR Series reinforced spigot adapters can be user-installed in a variety of socket type tees, elbows and reducer bushings for superior thread reinforcement demanding applications.

Special Reinforced Reducing Female Adapter Soc x SR Fipt - Stainless Steel Collar



435-072SR	1/2X1/4	50	600	046	4.06
435-074SR	1/2X3/4	50	400	046	4.52
435-101SR	3/4X1/2	50	400	046	4.52
435-102SR	3/4X1	50	0	046	6.72
435-130SR	1X1/2	50	0	046	6.72
435-131SR	1X3/4	25	200	046	6.72

Special Reinforced Reducer Bushing Flush Style Spig x SR Fipt - Stainless Steel Collar



438-128SR	1X1/4	25	150	046	3.31
438-166SR	1-1/4X1/2	25	100	046	6.04
438-207SR	1-1/2X1/4	25	100	046	8.43
438-209SR	1-1/2X1/2	25	100	046	8.43
438-210SR	1-1/2X3/4	25	100	046	8.43
438-247SR	2X1/2	10	80	046	10.32
438-248SR	2X3/4	10	80	046	10.32
438-249SR	2X1	10	80	046	10.32
438-334SR	3X3/4	10	0	046	40.38
438-335SR	3X1	10	0	046	40.38
438-336SR	3X1-1/4	10	0	046	40.38
438-337SR	3X1-1/2	10	0	046	40.38
438-420SR	4X2	6	0	046	62.07
438-421SR	4X2-1/2	6	0	046	69.86
438-528SR	6X2	5	0	046	71.48
438-530SR	6X3	5	0	046	64.35

Transition Fittings & Adapters
PVC White Special Reinforced (SR) Fittings & PVC White Brass Thread Fittings



PVC White Special Reinforced (SR) Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Reducer Bushing Flush Style

(continued)

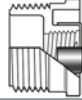
Spig x SR Fipt - Stainless Steel Collar

438-532SR	6X4	5	0	046	71.48
-----------	------------	---	---	-----	-------

Special Reinforced Reducer Bushing Flush Style

Mipt X SR Fipt - Stainless Steel Collar

439-209SR	1-1/2X1/2	25	300	046	8.74
439-248SR	2X3/4	10	60	046	7.91
439-249SR	2X1	10	120	046	12.83



Special Reinforced Cap

SR Fipt - Stainless Steel Collar

448-012SR	1-1/4	25	100	046	6.74
-----------	--------------	----	-----	-----	------



Special Reinforced Union

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar

235 psi @ 73°F (23°C)

459-002SR	1/4	25	150	046	15.32
459-003SR	3/8	25	100	046	15.32
459-005SR	1/2	10	60	046	8.32
459-007SR	3/4	10	40	046	11.45
459-010SR	1	10	40	046	15.24



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

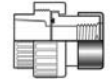
Special Reinforced Union (continued)

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar

459-012SR	1-1/4	5	20	046	29.09
459-015SR	1-1/2	5	0	046	36.01
459-020SR	2	5	0	046	55.46
459-030SR	3	5	0	046	130.95
459-040SR	4	4	0	046	150.35
459-060SR	6	1	0	046	334.11

Special Reinforced Union

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi @ 73°F (23°C)

499-002SR	1/4	25	150	046	16.82
499-003SR	3/8	25	100	046	16.82
499-005SR	1/2	10	60	046	9.14
499-007SR	3/4	10	40	046	12.59
499-010SR	1	10	40	046	16.73
499-012SR	1-1/4	5	20	046	31.97
499-015SR	1-1/2	5	0	046	39.58
499-020SR	2	5	0	046	60.95
499-030SR	3	5	0	046	143.91
499-040SR	4	4	0	046	165.21
499-060SR	6	1	0	046	367.16

PVC White Brass Thread Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Transition Union

Soc x Fipt with Brass Thread Insert & Buna-N O-ring Seal



235 psi @ 73°F (23°C)

459-010BR	1	10	0	046	64.74
459-012BR	1-1/4	5	20	046	108.76
459-015BR	1-1/2	5	0	046	143.89
459-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Union

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi @ 73°F (23°C)

499-010BR	1	10	0	046	64.74
499-012BR	1-1/4	5	20	046	108.76
499-015BR	1-1/2	5	0	046	143.89
499-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

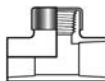


Transition Fittings & Adapters PVC Gray Special Reinforced (SR) Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Tee

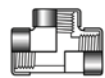
Soc x SR Fipt - Stainless Steel Collar



802-005SR	1/2	25	200	086	8.06
802-007SR	3/4	15	120	086	11.40
802-010SR	1	15	0	086	13.39
802-012SR	1-1/4	25	0	086	15.93
802-015SR	1-1/2	10	0	086	16.83
802-020SR	2	10	0	086	32.93
802-030SR	3	5	0	086	71.16
802-040SR	4	5	0	086	133.45

Special Reinforced Tee

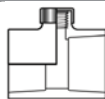
SR Fipt - Stainless Steel Collar



805-002SR	1/4	25	150	086	9.38
805-003SR	3/8	25	150	086	9.38
805-005SR	1/2	25	150	086	9.68
805-007SR	3/4	25	100	086	10.64
805-010SR	1	15	0	086	25.29
805-015SR	1-1/2	10	0	086	29.60
805-020SR	2	10	0	086	31.12

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar



802-072SR	1/2X1/4	25	150	086	8.06
802-098SR	3/4X1/4	25	100	086	10.47
802-101SR	3/4X1/2	50	0	086	10.47
802-128SR ¹	1X1/4	10	80	086	24.79
802-130SR	1X1/2	50	0	086	12.92
802-131SR	1X3/4	15	0	086	24.79
802-164SR ¹	1-1/4X1/4	5	0	086	26.43
802-166SR	1-1/4X1/2	25	0	086	17.52
802-168SR	1-1/4X1	10	0	086	17.87
802-207SR ¹	1-1/2X1/4	10	0	086	30.84
802-211SR	1-1/2X1	10	0	086	19.35
802-212SR	1-1/2X1-1/4	10	0	086	19.35
802-245SR ¹	2X1/4	10	0	086	35.62
802-247SR	2X1/2	10	0	086	35.62
802-248SR	2X3/4	10	0	086	35.62
802-287SR	2-1/2X1/2	10	0	086	26.25
802-331SR ¹	3X1/4	5	0	086	68.00
802-333SR ¹	3X1/2	5	0	086	69.97
802-413SR ¹	4X1/4	5	0	086	93.64
802-415SR ¹	4X1/2	5	0	086	101.77

¹ Sized with Bushing

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar x Soc

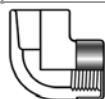


(See also Gauge & Instrument Fittings for additional configurations)

803-095SR	3/4X1/2X3/4	15	0	086	13.19
-----------	-------------	----	---	-----	-------

Special Reinforced 90° Ell

Soc x SR Fipt - Stainless Steel Collar

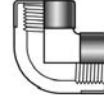


807-005SR	1/2	20	240	086	7.72
807-007SR	3/4	75	0	086	9.18
807-010SR	1	50	0	086	9.28
807-012SR	1-1/4	25	0	086	12.47
807-015SR	1-1/2	10	0	086	15.41
807-020SR	2	10	0	086	17.68
807-030SR	3	5	0	086	44.89
807-040SR	4	5	0	086	79.32

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced 90° Ell

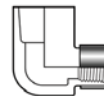
SR Fipt - Stainless Steel Collar



808-003SR	3/8	25	150	086	4.51
808-005SR	1/2	20	120	086	4.51
808-007SR	3/4	20	120	086	5.67
808-010SR	1	50	0	086	6.60
808-012SR	1-1/4	25	0	086	7.05
808-015SR	1-1/2	10	0	086	11.00
808-020SR	2	10	0	086	12.39

Special Reinforced Reducing 90° Ell

Soc x SR Fipt - Stainless Steel Collar



807-101SR	3/4X1/2	50	0	086	9.16
807-130SR	1X1/2	50	0	086	10.28

Special Reinforced 45° Ell

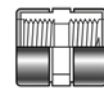
SR Fipt - Stainless Steel Collar



819-007SR	3/4	10	120	086	7.76
-----------	-----	----	-----	-----	------

Special Reinforced Coupling

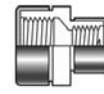
SR Fipt - Stainless Steel Collar



830-005SR	1/2	25	150	086	3.69
830-007SR	3/4	25	150	086	5.25
830-010SR	1	25	200	086	5.61
830-012SR	1-1/4	10	120	086	6.99
830-015SR	1-1/2	10	80	086	15.47
830-020SR	2	10	0	086	16.22

Special Reinforced Reducer Coupling

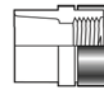
SR Fipt - Stainless Steel Collar



830-101SR	3/4X1/2	50	200	086	4.78
830-130SR	1X1/2	50	0	086	7.09
830-131SR	1X3/4	25	200	086	7.09
830-168SR	1-1/4X1	25	0	086	15.22
830-210SR	1-1/2X3/4	25	0	086	22.59
830-211SR	1-1/2X1	10	80	086	22.59
830-212SR	1-1/2X1-1/4	10	80	086	22.59
830-249SR	2X1	25	0	086	29.94
830-251SR	2X1-1/2	10	0	086	29.94

Special Reinforced Female Adapter

Soc x SR Fipt - Stainless Steel Collar

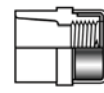


835-002SR	1/4	25	450	086	5.59
835-003SR	3/8	25	300	086	5.59
835-005SR	1/2	25	300	086	3.11
835-007SR	3/4	25	300	086	4.52
835-010SR	1	25	200	086	6.72
835-012SR	1-1/4	10	60	086	10.86
835-015SR	1-1/2	10	80	086	13.37
835-020SR	2	10	0	086	23.32
835-025SR	2-1/2	5	0	086	36.79
835-030SR	3	15	0	086	41.45
835-040SR	4	5	0	086	71.24
835-060SR	6	6	0	086	92.56

Encapsulated Special Reinforced Female

Adapter

Soc x ESR Fipt



835-002ESR	1/4	25	450	086	8.09
------------	-----	----	-----	-----	------

Transition Fittings & Adapters
PVC Gray Special Reinforced (SR) Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

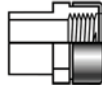
Encapsulated Special Reinforced Female Adapter

(continued)
Soc x ESR Fipt

835-003ESR	3/8	25	300	086	8.09
835-005ESR	1/2	25	300	086	5.02
835-007ESR	3/4	25	300	086	7.41
835-010ESR	1	25	200	086	9.81
835-012ESR	1-1/4	10	80	086	15.83
835-015ESR	1-1/2	10	80	086	22.87
835-020ESR	2	10	0	086	34.00

Special Reinforced Spigot Female Adapter

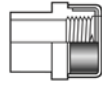
Spig x SR Fipt - Stainless Steel Collar



878-005SR	1/2	50	600	086	4.08
878-007SR	3/4	25	300	086	4.81
878-010SR	1	50	0	086	7.41
878-012SR	1-1/4	25	0	086	11.80
878-015SR	1-1/2	25	0	086	14.15
878-020SR	2	15	0	086	23.55
878-030SR	3	5	0	086	43.28
878-040SR	4	5	0	086	73.48

Encapsulated Special Reinforced Spigot Female Adapter

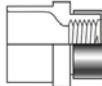
Spig x ESR Fipt



878-005ESR	1/2	50	600	086	5.57
878-007ESR	3/4	25	300	086	7.67
878-010ESR	1	50	0	086	10.53
878-012ESR	1-1/4	25	0	086	16.20
878-015ESR	1-1/2	25	0	086	23.00
878-020ESR	2	15	0	086	34.66

Special Reinforced Reducing Female Adapter

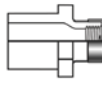
Soc x SR Fipt - Stainless Steel Collar



835-074SR	1/2X3/4	50	400	086	4.52
835-101SR	3/4X1/2	50	400	086	4.52
835-102SR	3/4X1	50	0	086	6.72
835-130SR	1X1/2	50	0	086	6.72
835-131SR	1X3/4	25	200	086	6.72

Special Reinforced Reducing Spigot Female Adapter

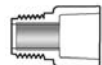
Spig x SR Fipt - Stainless Steel Collar



878-072SR	1/2X1/4	25	450	086	11.35
878-098SR	3/4X1/4	50	400	086	15.64
878-128SR	1X1/4	50	400	086	16.13

Reinforced Male Adapter

R Mipt x Soc - Stainless Steel Sleeve



836-005R	1/2	25	150	086	3.84
836-007R	3/4	25	300	086	4.21
836-010R	1	10	60	086	7.38

Special Reinforced Reducer Bushing

Mipt x SR Fipt - Stainless Steel Collar



839-128SR	1X1/4	25	150	086	5.98
839-209SR	1-1/2X1/2	25	300	086	8.74
839-210SR	1-1/2X3/4	25	300	086	8.74
839-247SR	2X1/2	10	60	086	12.83
839-248SR	2X3/4	10	60	086	12.83
839-249SR	2X1	10	120	086	12.83
839-420SR	4X2	6	0	086	48.59

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Reducer Bushing Flush Style



Spig x SR Fipt - Stainless Steel Collar

838-128SR	1X1/4	25	150	086	3.31
838-166SR	1-1/4X1/2	25	100	086	6.04
838-207SR	1-1/2X1/4	25	200	086	8.43
838-209SR	1-1/2X1/2	10	60	086	8.43
838-210SR	1-1/2X3/4	25	200	086	8.43
838-247SR	2X1/2	10	80	086	10.32
838-248SR	2X3/4	10	80	086	10.32
838-249SR	2X1	10	80	086	10.32
838-334SR	3X3/4	10	0	086	40.38
838-335SR	3X1	10	0	086	40.38
838-336SR	3X1-1/4	10	0	086	40.38
838-337SR	3X1-1/2	10	0	086	40.38
838-528SR	6X2	5	0	086	71.48
838-530SR	6X3	5	0	086	64.35
838-532SR	6X4	5	0	086	71.48

Special Reinforced Cap

SR Fipt - Stainless Steel Collar



848-002SR	1/4	25	500	086	4.03
848-003SR	3/8	25	450	086	4.03
848-005SR	1/2	50	300	086	4.41
848-007SR	3/4	25	300	086	5.65
848-030SR	3	5	0	086	34.84

Special Reinforced Union 2000

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005SR	1/2	20	160	086	8.00
8099-007SR	3/4	20	80	086	11.40
8099-010SR	1	15	90	086	14.71
8099-012SR	1-1/4	10	0	086	25.58
8099-015SR	1-1/2	10	0	086	33.15
8099-020SR	2	5	0	086	53.35
8099-025SR	2-1/2	5	0	086	114.12
8099-030SR	3	5	0	086	127.04
8099-040SR	4	4	0	086	144.99
8099-060SR	6	1	0	086	322.21

Special Reinforced Union 2000

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005SR	1/2	20	160	086	8.32
8059-007SR	3/4	20	80	086	11.45
8059-010SR	1	15	90	086	14.88
8059-012SR	1-1/4	10	0	086	28.44
8059-015SR	1-1/2	10	0	086	35.09
8059-020SR	2	5	0	086	53.59
8059-025SR	2-1/2	5	0	086	115.19
8059-030SR	3	5	0	086	130.95
8059-040SR	4	4	0	086	150.35
8059-060SR	6	1	0	086	334.11

Special Reinforced Union 2000

SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure rating @ 73°F (23°C)

8098-005SR	1/2	20	120	086	8.43
8098-007SR	3/4	20	80	086	11.48
8098-010SR	1	15	90	086	15.20



Transition Fittings & Adapters PVC Gray Special Reinforced (SR) Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Union 2000 (continued)

SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

8098-012SR	1-1/4	10	0	086	28.26
8098-015SR	1-1/2	10	0	086	35.55
8098-020SR	2	5	0	086	55.86
8098-025SR	2-1/2	5	0	086	112.75
8098-030SR	3	5	0	086	132.97
8098-040SR	4	4	0	086	152.65
8098-060SR	6	1	0	086	339.26



Special Reinforced Union 2000

SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005SR	1/2	20	120	086	8.56
8058-007SR	3/4	20	80	086	11.59
8058-010SR	1	15	90	086	15.51
8058-012SR	1-1/4	10	0	086	29.54
8058-015SR	1-1/2	10	0	086	36.35
8058-020SR	2	5	0	086	56.44
8058-025SR	2-1/2	5	0	086	118.02
8058-030SR	3	5	0	086	134.25
8058-040SR	4	4	0	086	158.04
8058-060SR	6	1	0	086	351.19

Special Reinforced Union (Old Style)

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002SR	1/4	25	150	086	15.11
899-003SR	3/8	25	100	086	15.11
899-005SR	1/2	10	60	086	8.00
899-007SR	3/4	10	40	086	11.40
899-010SR	1	10	40	086	14.71
899-012SR	1-1/4	5	20	086	25.58
899-015SR	1-1/2	5	0	086	33.15
899-020SR	2	5	0	086	53.35
899-030SR	3	5	0	086	127.04
899-040SR	4	4	0	086	144.99



Special Reinforced Union (Old Style)

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-005SR	1/2	10	60	086	8.32
859-007SR	3/4	10	40	086	11.45
859-010SR	1	10	40	086	14.88
859-012SR	1-1/4	5	20	086	28.44
859-015SR	1-1/2	5	0	086	35.09
859-020SR	2	5	0	086	53.59
859-030SR	3	5	0	086	130.95
859-040SR	4	4	0	086	150.35



Special Reinforced Flange One Piece

Threaded

SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005SR	1/2	25	0	086	11.91
852-007SR	3/4	25	0	086	13.99
852-010SR	1	15	0	086	15.29
852-012SR	1-1/4	15	0	086	21.07
852-015SR	1-1/2	15	0	086	23.06
852-020SR	2	10	0	086	23.62
852-025SR	2-1/2	10	0	086	54.09
852-030SR	3	10	0	086	55.69
852-040SR	4	5	0	086	104.69



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC New Style Special Reinforced (SR)

Threaded Tank Adapters with Neoprene

Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002SR	1/4	25	150	100	35.58
8171-003SR	3/8	25	200	100	35.58
8171-005SR	1/2	25	0	100	35.58
8171-007SR	3/4	25	0	100	41.22
8171-010SR	1	25	0	100	46.42
8171-012SR	1-1/4	20	0	100	57.06
8171-015SR	1-1/2	20	0	100	65.49
8171-020SR	2	15	0	100	93.86
8171-025SR	2-1/2	4	0	100	151.13
8171-030SR	3	4	0	100	179.89
8171-040SR	4	2	0	100	332.76
8171-060SR	6	1	0	100	622.77



PVC New Style Special Reinforced (SR)

Threaded Tank Adapters with EPDM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002SR	1/4	25	150	100	36.83
8171E-003SR	3/8	25	200	100	36.83
8171E-005SR	1/2	25	0	100	36.83
8171E-007SR	3/4	25	0	100	42.00
8171E-010SR	1	25	0	100	51.06
8171E-012SR	1-1/4	20	0	100	61.86
8171E-015SR	1-1/2	20	0	100	70.31
8171E-020SR	2	15	0	100	100.36
8171E-025SR	2-1/2	4	0	100	156.03
8171E-030SR	3	4	0	100	185.76
8171E-040SR	4	2	0	100	340.58
8171E-060SR	6	1	0	100	644.19



PVC New Style Special Reinforced (SR)

Threaded Tank Adapters with FKM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002SR	1/4	25	150	100	59.79
8171V-003SR	3/8	25	200	100	59.79
8171V-005SR	1/2	25	0	100	59.79
8171V-007SR	3/4	25	0	100	65.61
8171V-010SR	1	25	0	100	80.87
8171V-012SR	1-1/4	20	0	100	90.56
8171V-015SR	1-1/2	20	0	100	102.08
8171V-020SR	2	15	0	100	156.33
8171V-025SR	2-1/2	4	0	100	238.00
8171V-030SR	3	4	0	100	283.32
8171V-040SR	4	2	0	100	680.71
8171V-060SR	6	2	0	100	1206.42



PVC New Style Special Reinforced (SR)

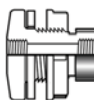
Threaded Tank Adapters with Neoprene

Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002SR	1/4	25	150	100	47.57
8172-003SR	3/8	25	200	100	47.57
8172-005SR	1/2	25	0	100	47.57
8172-007SR	3/4	25	0	100	52.66
8172-010SR	1	25	0	100	58.24
8172-012SR	1-1/4	20	0	100	78.43
8172-015SR	1-1/2	20	0	100	88.39
8172-020SR	2	15	0	100	114.53
8172-025SR	2-1/2	4	0	100	174.37



Transition Fittings & Adapters
PVC Gray Special Reinforced (SR) Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

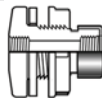
PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

8172-030SR	3	4	0	100	207.59
8172-040SR	4	2	0	100	369.57
8172-060SR	6	1	0	100	714.88

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

Fipt x SR Fipt - Stainless Steel Collar

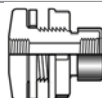


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002SR	1/4	25	150	100	48.94
8172E-003SR	3/8	25	200	100	48.94
8172E-005SR	1/2	25	0	100	48.94
8172E-007SR	3/4	25	0	100	53.65
8172E-010SR	1	25	0	100	64.19
8172E-012SR	1-1/4	20	0	100	85.21
8172E-015SR	1-1/2	20	0	100	95.06
8172E-020SR	2	15	0	100	122.60
8172E-025SR	2-1/2	4	0	100	180.17
8172E-030SR	3	4	0	100	214.46
8172E-040SR	4	2	0	100	378.38
8172E-060SR	6	1	0	100	739.66

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

Fipt x SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002SR	1/4	25	150	100	72.79
8172V-003SR	3/8	25	200	100	72.79
8172V-005SR	1/2	25	0	100	72.79
8172V-007SR	3/4	25	0	100	78.15
8172V-010SR	1	25	0	100	89.78
8172V-012SR	1-1/4	20	0	100	103.21
8172V-015SR	1-1/2	20	0	100	120.48
8172V-020SR	2	15	0	100	175.36
8172V-025SR	2-1/2	4	0	100	257.49
8172V-030SR	3	4	0	100	306.62
8172V-040SR	4	2	0	100	714.88
8172V-060SR	6	2	0	100	1349.89

PVC Elastomer Expansion Joint

with Neoprene Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ01-007SR	3/4	10	0	085	200.62
EJ01-010SR	1	10	0	085	228.47
EJ01-012SR	1-1/4	15	0	085	248.49
EJ01-015SR	1-1/2	10	0	085	317.23
EJ01-020SR	2	8	0	085	381.13
EJ01-025SR	2-1/2	4	0	085	555.41
EJ01-030SR	3	2	0	085	746.94

PVC Elastomer Expansion Joint

with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

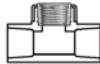
EJ21-007SR	3/4	10	0	085	204.69
EJ21-010SR	1	10	0	085	233.14
EJ21-012SR	1-1/4	15	0	085	253.59
EJ21-015SR	1-1/2	10	0	085	323.68
EJ21-020SR	2	8	0	085	388.92
EJ21-025SR	2-1/2	4	0	085	563.59
EJ21-030SR	3	2	0	085	762.18



Transition Fittings & Adapters PVC Gray Brass Thread Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Transition Tee Soc x Fipt With Brass Thread Insert



802-005BR	1/2	20	160	086	32.92
802-007BR	3/4	20	80	086	65.97

Not intended to convey or dispense water for human consumption through drinking or cooking

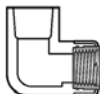
Transition Reducing Tee Soc x Fipt With Brass Thread Insert



802-101BR	3/4X1/2	50	0	086	41.08
-----------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

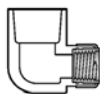
Transition 90° Ell Soc x Fipt With Brass Thread Insert



807-005BR	1/2	20	240	086	28.92
807-007BR	3/4	20	160	086	51.19

Not intended to convey or dispense water for human consumption through drinking or cooking

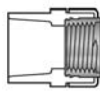
Transition Reducing 90° Ell Soc x Fipt With Brass Thread Insert



807-101BR	3/4X1/2	20	120	086	36.09
-----------	---------	----	-----	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

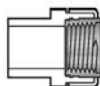
Transition Female Adapter Soc x Fipt With Brass Thread Insert



835-005BR	1/2	25	150	086	24.97
835-007BR	3/4	25	150	086	35.86
835-010BR	1	15	90	086	61.80
835-012BR	1-1/4	15	60	086	101.77
835-015BR	1-1/2	10	40	086	133.69
835-020BR	2	8	32	086	165.59

Not intended to convey or dispense water for human consumption through drinking or cooking

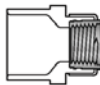
Transition Female Adapter Spig x Fipt With Brass Thread Insert



878-005BR	1/2	25	150	086	21.00
878-010BR	1	15	90	086	66.81

Not intended to convey or dispense water for human consumption through drinking or cooking

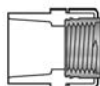
Transition Reducing Female Adapter Soc x Fipt With Brass Thread Insert



835-101BR	3/4X1/2	50	0	086	37.07
-----------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

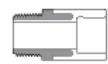
Transition Female Adapter Soc x Fipt With 316 Stainless Steel Thread Insert



835-005SS	1/2	25	300	086	48.93
835-007SS	3/4	15	90	086	70.32
835-010SS	1	15	90	086	119.65
835-012SS	1-1/4	15	60	086	199.83
835-015SS	1-1/2	10	40	086	261.04
835-020SS	2	8	32	086	334.87

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

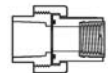
Transition Male Adapter w/ Brass Thread Brass Mipt x Socket



836-005BR	1/2	40	160	086	27.48
836-007BR	3/4	40	160	086	41.44
836-010BR	1	10	60	086	67.39
836-012BR	1-1/4	10	60	086	113.52
836-015BR	1-1/2	10	40	086	150.63
836-020BR	2	8	32	086	187.13

Union

Soc x Fipt with Brass Thread Insert & FKM O-ring Seal



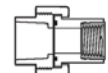
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-007BR	3/4	10	40	086	53.19
859-010BR	1	10	0	086	65.64
859-012BR	1-1/4	5	20	086	113.29
859-015BR	1-1/2	5	0	086	149.94
859-020BR	2	5	0	086	199.26

Not intended to convey or dispense water for human consumption through drinking or cooking

Union

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-007BR	3/4	10	40	086	47.96
899-010BR	1	10	0	086	64.68
899-012BR	1-1/4	5	20	086	108.77
899-015BR	1-1/2	5	0	086	143.96
899-020BR	2	5	0	086	191.89

Not intended to convey or dispense water for human consumption through drinking or cooking

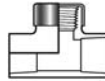
Transition Fittings & Adapters
CPVC Gray Special Reinforced (SR) Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Tee

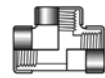
Soc x SR Fipt - Stainless Steel Collar



802-005CSR	1/2	50	0	096	19.67
802-007CSR	3/4	15	120	096	28.75
802-010CSR	1	15	0	096	36.17
802-012CSR	1-1/4	15	0	096	41.96
802-015CSR	1-1/2	10	0	096	41.96
802-020CSR	2	10	0	096	68.59
802-030CSR	3	5	0	096	98.78
802-040CSR	4	5	0	096	186.09

Special Reinforced Tee

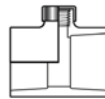
SR Fipt - Stainless Steel Collar



805-002CSR	1/4	20	160	096	17.60
805-003CSR	3/8	25	150	096	17.60
805-005CSR	1/2	25	150	096	23.55
805-007CSR	3/4	25	100	096	26.98
805-010CSR	1	15	0	096	40.29
805-015CSR	1-1/2	10	0	096	42.78
805-020CSR	2	10	0	096	50.94

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar



802-072CSR	1/2X1/4	25	200	096	19.67
802-098CSR	3/4X1/4	25	100	096	26.29
802-101CSR	3/4X1/2	50	0	096	26.29
802-128CSR ¹	1X1/4	15	0	096	40.60
802-130CSR	1X1/2	50	0	096	16.06
802-131CSR	1X3/4	15	0	096	40.60
802-164CSR ¹	1-1/4X1/4	5	0	096	53.99
802-166CSR	1-1/4X1/2	15	0	096	42.77
802-168CSR	1-1/4X1	10	0	096	43.64
802-207CSR ¹	1-1/2X1/4	15	0	096	77.31
802-211CSR	1-1/2X1	10	0	096	51.24
802-212CSR	1-1/2X1-1/4	10	0	096	51.24
802-245CSR ¹	2X1/4	10	0	096	88.80
802-247CSR	2X1/2	10	0	096	79.93
802-248CSR	2X3/4	10	0	096	88.80
802-287CSR	2-1/2X1/2	10	0	096	61.07
802-331CSR ¹	3X1/4	5	0	096	169.62
802-413CSR ¹	4X1/4	5	0	096	184.06

¹ Sized with Bushing

Special Reinforced Reducing Tee

Soc x SR Fipt - Stainless Steel Collar x Soc

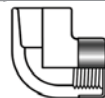


(See also Gauge & Instrument Fittings for additional configurations)

803-095CSR	3/4X1/2X3/4	15	0	096	16.20
------------	-------------	----	---	-----	-------

Special Reinforced 90° Ell

Soc x SR Fipt - Stainless Steel Collar

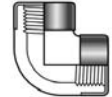


807-005CSR	1/2	20	240	096	9.55
807-007CSR	3/4	75	0	096	11.22
807-010CSR	1	50	0	096	13.51
807-012CSR	1-1/4	25	0	096	27.89
807-015CSR	1-1/2	10	0	096	33.53
807-020CSR	2	10	0	096	41.95

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced 90° Ell

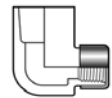
SR Fipt - Stainless Steel Collar



808-003CSR	3/8	25	150	096	5.77
808-005CSR	1/2	20	120	096	5.77
808-007CSR	3/4	20	160	096	8.45
808-010CSR	1	50	0	096	10.83
808-012CSR	1-1/4	25	0	096	20.84
808-015CSR	1-1/2	10	0	096	24.54
808-020CSR	2	10	0	096	32.87

Special Reinforced Reducing 90° Ell

Soc x SR Fipt - Stainless Steel Collar



807-101CSR	3/4X1/2	50	0	096	12.17
807-130CSR	1X1/2	50	0	096	13.12

Special Reinforced 45° Ell

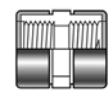
SR Fipt - Stainless Steel Collar



819-007CSR	3/4	10	120	096	13.19
------------	-----	----	-----	-----	-------

Special Reinforced Coupling

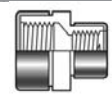
SR Fipt - Stainless Steel Collar



830-005CSR	1/2	25	300	096	9.31
830-007CSR	3/4	25	300	096	15.04
830-010CSR	1	25	200	096	17.08
830-012CSR	1-1/4	10	120	096	18.15
830-015CSR	1-1/2	10	80	096	19.46
830-020CSR	2	10	0	096	23.00

Special Reinforced Reducer Coupling

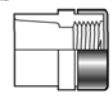
SR Fipt - Stainless Steel Collar



830-101CSR	3/4X1/2	50	200	096	16.68
830-130CSR	1X1/2	50	0	096	20.14
830-131CSR	1X3/4	25	200	096	20.14
830-168CSR	1-1/4X1	25	0	096	27.39
830-210CSR	1-1/2X3/4	25	0	096	39.17
830-211CSR	1-1/2X1	10	80	096	39.17
830-212CSR	1-1/2X1-1/4	10	80	096	39.17
830-249CSR	2X1	25	0	096	96.42
830-251CSR	2X1-1/2	15	0	096	96.42

Special Reinforced Female Adapter

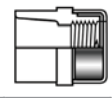
Soc x SR Fipt - Stainless Steel Collar



835-002CSR	1/4	25	450	096	13.06
835-003CSR	3/8	25	300	096	13.06
835-005CSR	1/2	25	300	096	5.61
835-007CSR	3/4	25	150	096	6.06
835-010CSR	1	25	200	096	13.82
835-012CSR	1-1/4	10	60	096	14.18
835-015CSR	1-1/2	10	80	096	16.46
835-020CSR	2	10	0	096	23.39
835-025CSR	2-1/2	5	0	096	54.39
835-030CSR	3	15	0	096	111.75
835-040CSR	4	5	0	096	185.99
835-060CSR	6	6	0	096	290.55

Encapsulated Special Reinforced (SR) Female Adapter

Soc x ESR Fipt



835-002CESR	1/4	25	450	096	16.57
-------------	-----	----	-----	-----	-------



Transition Fittings & Adapters CPVC Gray Special Reinforced (SR) Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

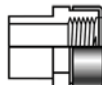
Encapsulated Special Reinforced (SR) Female Adapter

(continued)
Soc x ESR Fipt

835-003CESR	3/8	25	300	096	16.57
835-005CESR	1/2	25	300	096	8.60
835-007CESR	3/4	25	300	096	9.08
835-010CESR	1	25	200	096	20.01
835-012CESR	1-1/4	10	80	096	20.48
835-015CESR	1-1/2	10	0	096	26.52
835-020CESR	2	10	0	096	41.22

Special Reinforced Spigot Female Adapter

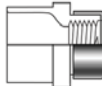
Spig x SR Fipt - Stainless Steel Collar



878-005CSR	1/2	50	600	096	5.98
878-007CSR	3/4	25	300	096	6.31
878-010CSR	1	50	0	096	14.19
878-012CSR	1-1/4	25	0	096	14.68
878-015CSR	1-1/2	25	0	096	17.04
878-020CSR	2	15	0	096	31.04
878-030CSR	3	5	0	096	113.15
878-040CSR	4	5	0	096	189.95

Special Reinforced Reducing Female Adapter

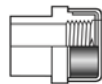
Soc x SR Fipt - Stainless Steel Collar



835-074CSR	1/2X3/4	50	400	096	6.06
835-101CSR	3/4X1/2	50	400	096	6.06
835-102CSR	3/4X1	50	0	096	13.82
835-130CSR	1X1/2	50	0	096	13.82
835-131CSR	1X3/4	25	200	096	13.82

Encapsulated Special Reinforced (SR) Female Adapter

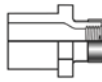
Spig x ESR Fipt



878-005CESR	1/2	50	600	096	8.85
878-007CESR	3/4	25	300	096	9.42
878-010CESR	1	50	0	096	20.20
878-012CESR	1-1/4	25	0	096	20.75
878-015CESR	1-1/2	25	0	096	27.05
878-020CESR	2	15	0	096	41.81

Special Reinforced Reducing Spigot Female Adapter

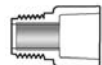
Spig x SR Fipt - Stainless Steel Collar



878-072CSR	1/2X1/4	25	450	096	17.14
878-098CSR	3/4X1/4	50	400	096	19.95
878-128CSR	1X1/4	50	400	096	22.33

Reinforced Male Adapter

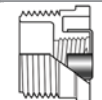
R Mipt x Soc - Stainless Steel Sleeve



836-005CR	1/2	25	150	096	8.62
836-007CR	3/4	25	300	096	9.87
836-010CR	1	10	120	096	11.71

Special Reinforced Reducing Bushing

Mipt x SR Fipt - Stainless Steel Collar



839-209CSR	1-1/2X1/2	25	300	096	22.11
839-210CSR	1-1/2X3/4	25	300	096	22.11
839-247CSR	2X1/2	10	60	096	24.43
839-248CSR	2X3/4	10	60	096	24.43
839-249CSR	2X1	10	120	096	24.43
839-420CSR	4X2	6	0	096	135.66

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Reducer Bushing

Spig x SR Fipt - Stainless Steel Collar



838-128CSR	1X1/4	25	150	096	12.74
838-207CSR	1-1/2X1/4	25	200	096	21.55
838-209CSR	1-1/2X1/2	10	120	096	22.46
838-210CSR	1-1/2X3/4	10	120	096	22.46
838-247CSR	2X1/2	10	80	096	30.86
838-248CSR	2X3/4	10	80	096	30.86
838-249CSR	2X1	10	80	096	30.86
838-334CSR	3X3/4	10	0	096	130.68
838-335CSR	3X1	10	0	096	130.68
838-336CSR	3X1-1/4	10	0	096	130.68
838-337CSR	3X1-1/2	10	0	096	130.68
838-528CSR	6X2	5	0	096	449.27
838-530CSR	6X3	5	0	096	449.27

Special Reinforced Cap

SR Fipt - Stainless Steel Collar



848-002CSR	1/4	25	500	096	7.06
848-003CSR	3/8	25	450	096	7.06
848-007CSR	3/4	25	300	096	11.00
848-030CSR	3	5	0	096	122.80

Special Reinforced Union 2000

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005CSR	1/2	20	160	096	15.81
8099-007CSR	3/4	20	160	096	28.07
8099-010CSR	1	15	90	096	38.87
8099-012CSR	1-1/4	10	0	096	73.64
8099-015CSR	1-1/2	10	0	096	80.09
8099-020CSR	2	5	0	096	84.34
8099-025CSR	2-1/2	5	0	096	144.66
8099-030CSR	3	5	0	096	234.95
8099-040CSR	4	4	0	096	275.93
8099-060CSR	6	1	0	096	613.20

Special Reinforced Union 2000

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005CSR	1/2	25	200	096	16.13
8059-007CSR	3/4	20	160	096	28.45
8059-010CSR	1	15	90	096	39.20
8059-012CSR	1-1/4	10	0	096	74.74
8059-015CSR	1-1/2	10	0	096	81.24
8059-020CSR	2	5	0	096	84.58
8059-030CSR	3	5	0	096	237.94
8059-040CSR	4	4	0	096	277.60

Special Reinforced Union 2000

SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005CSR	1/2	20	160	096	16.55
8058-007CSR	3/4	20	80	096	28.85
8058-010CSR	1	15	90	096	39.65
8058-012CSR	1-1/4	10	0	096	74.74
8058-015CSR	1-1/2	10	0	096	81.56
8058-020CSR	2	5	0	096	85.94
8058-030CSR	3	5	0	096	242.85
8058-040CSR	4	4	0	096	284.51

Transition Fittings & Adapters
CPVC Gray Special Reinforced (SR) Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Special Reinforced Union 2000 (continued)

SR Fipt with FKM O-ring Seal - Stainless Steel Collar

8058-060CSR	6	1	0	096	640.73
-------------	---	---	---	-----	--------

Special Reinforced Union 2000

SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8098-005CSR	1/2	20	160	096	16.00
8098-007CSR	3/4	20	80	096	28.59
8098-010CSR	1	15	90	096	39.20
8098-012CSR	1-1/4	10	0	096	74.01
8098-015CSR	1-1/2	10	0	096	80.93
8098-020CSR	2	5	0	096	85.09
8098-025CSR	2-1/2	5	0	096	147.05
8098-030CSR	3	5	0	096	239.09
8098-040CSR	4	4	0	096	276.79
8098-060CSR	6	1	0	096	615.09

Special Reinforced Union (Old Style)

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002CSR	1/4	25	150	096	25.21
899-003CSR	3/8	25	100	096	25.21
899-005CSR	1/2	10	60	096	15.81
899-007CSR	3/4	10	40	096	28.07
899-010CSR	1	10	40	096	38.87
899-012CSR	1-1/4	5	20	096	73.64
899-015CSR	1-1/2	5	0	096	80.09
899-020CSR	2	5	0	096	84.34
899-030CSR	3	5	0	096	234.95
899-040CSR	4	4	0	096	275.93

Special Reinforced Union (Old Style)

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002CSR	1/4	25	150	096	25.38
859-003CSR	3/8	25	100	096	25.38
859-005CSR	1/2	10	60	096	16.13
859-007CSR	3/4	10	40	096	28.45
859-010CSR	1	10	40	096	39.20
859-012CSR	1-1/4	5	20	096	74.74
859-015CSR	1-1/2	5	0	096	81.24
859-020CSR	2	5	0	096	84.58
859-030CSR	3	5	0	096	237.94
859-040CSR	4	4	0	096	277.60

Special Reinforced Flange One Piece Threaded

SR Fipt - Stainless Steel Collar

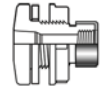


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005CSR	1/2	25	0	096	20.65
852-007CSR	3/4	25	0	096	25.05
852-010CSR	1	15	0	096	27.41
852-012CSR	1-1/4	15	0	096	37.93
852-015CSR	1-1/2	15	0	096	40.21
852-020CSR	2	10	0	096	41.19
852-025CSR	2-1/2	10	0	096	66.27
852-030CSR	3	10	0	096	65.76
852-040CSR	4	5	0	096	123.22

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets

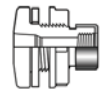


Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002CSR	1/4	25	150	101	49.80
8171-003CSR	3/8	25	200	101	49.80
8171-005CSR	1/2	25	0	101	49.80
8171-007CSR	3/4	25	0	101	59.60
8171-010CSR	1	25	0	101	67.42
8171-012CSR	1-1/4	20	0	101	86.97
8171-015CSR	1-1/2	20	0	101	97.64
8171-020CSR	2	15	0	101	135.02
8171-025CSR	2-1/2	4	0	101	205.39
8171-030CSR	3	4	0	101	244.46
8171-040CSR	4	2	0	101	392.88
8171-060CSR	6	1	0	101	1037.65

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

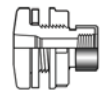


Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002CSR	1/4	25	150	101	56.44
8171E-003CSR	3/8	25	200	101	56.44
8171E-005CSR	1/2	25	0	101	56.44
8171E-007CSR	3/4	25	0	101	63.79
8171E-010CSR	1	25	0	101	76.27
8171E-012CSR	1-1/4	20	0	101	95.32
8171E-015CSR	1-1/2	20	0	101	103.13
8171E-020CSR	2	15	0	101	145.79
8171E-025CSR	2-1/2	4	0	101	214.24
8171E-030CSR	3	4	0	101	255.05
8171E-040CSR	4	2	0	101	408.93
8171E-060CSR	6	2	0	101	1079.93

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

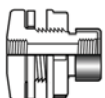


Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002CSR	1/4	25	150	101	73.54
8171V-003CSR	3/8	25	200	101	73.54
8171V-005CSR	1/2	25	0	101	73.54
8171V-007CSR	3/4	25	0	101	85.01
8171V-010CSR	1	25	0	101	98.89
8171V-012CSR	1-1/4	20	0	101	122.59
8171V-015CSR	1-1/2	20	0	101	130.91
8171V-020CSR	2	15	0	101	194.93
8171V-025CSR	2-1/2	4	0	101	287.26
8171V-030CSR	3	4	0	101	342.05
8171V-040CSR	4	2	0	101	730.36
8171V-060CSR	6	2	0	101	1803.22

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002CSR	1/4	25	150	101	65.97
8172-003CSR	3/8	25	200	101	65.97
8172-005CSR	1/2	25	0	101	65.97
8172-007CSR	3/4	25	0	101	76.61
8172-010CSR	1	25	0	101	84.41
8172-012CSR	1-1/4	20	0	101	119.75
8172-015CSR	1-1/2	20	0	101	133.78
8172-020CSR	2	15	0	101	165.40
8172-025CSR	2-1/2	4	0	101	240.05



Transition Fittings & Adapters CPVC Gray Special Reinforced (SR) Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

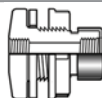
CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

8172-030CSR	3	4	0	101	285.78
8172-040CSR	4	2	0	101	438.93
8172-060CSR	6	2	0	101	1175.97

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

Fipt x SR Fipt - Stainless Steel Collar

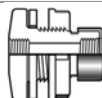


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002CSR	1/4	25	150	101	68.55
8172E-003CSR	3/8	25	200	101	68.55
8172E-005CSR	1/2	25	0	101	68.55
8172E-007CSR	3/4	25	0	101	81.17
8172E-010CSR	1	25	0	101	88.12
8172E-012CSR	1-1/4	20	0	101	124.38
8172E-015CSR	1-1/2	20	0	101	144.60
8172E-020CSR	2	15	0	101	177.48
8172E-025CSR	2-1/2	4	0	101	267.74
8172E-030CSR	3	4	0	101	318.73
8172E-040CSR	4	2	0	101	515.99
8172E-060CSR	6	2	0	101	1193.37

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

Fipt x SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002CSR	1/4	25	150	101	105.26
8172V-003CSR	3/8	25	200	101	105.26
8172V-005CSR	1/2	25	0	101	105.26
8172V-007CSR	3/4	25	0	101	119.08
8172V-010CSR	1	25	0	101	137.53
8172V-012CSR	1-1/4	20	0	101	169.80
8172V-015CSR	1-1/2	20	0	101	178.83
8172V-020CSR	2	15	0	101	274.84
8172V-025CSR	2-1/2	4	0	101	397.14
8172V-030CSR	3	4	0	101	472.79
8172V-040CSR	4	2	0	101	1206.41
8172V-060CSR	6	2	0	101	2190.53

CPVC Elastomer Expansion Joint with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

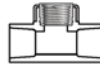
EJ21-007CSR	3/4	10	0	085	208.22
EJ21-010CSR	1	10	0	085	239.45
EJ21-012CSR	1-1/4	15	0	085	264.60
EJ21-015CSR	1-1/2	10	0	085	337.27
EJ21-020CSR	2	8	0	085	445.81
EJ21-025CSR	2-1/2	4	0	085	619.13
EJ21-030CSR	3	2	0	085	824.60

Transition Fittings & Adapters CPVC Gray Brass Thread Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

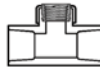
Transition Tee Soc x Fipt With Brass Thread Insert



802-005CBR	1/2	20	160	096	58.38
802-007CBR	3/4	25	0	096	116.75

Not intended to convey or dispense water for human consumption through drinking or cooking

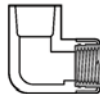
Transition Reducing Tee Soc x Fipt With Brass Thread Insert



802-101CBR	3/4X1/2	50	0	096	72.36
------------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

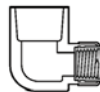
Transition 90° Ell Soc x Fipt With Brass Thread Insert



807-005CBR	1/2	20	240	096	51.33
807-007CBR	3/4	20	160	096	89.61

Not intended to convey or dispense water for human consumption through drinking or cooking

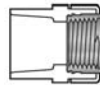
Transition Reducing 90° Ell Soc x Fipt With Brass Thread Insert



807-101CBR	3/4X1/2	20	120	096	64.19
------------	---------	----	-----	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

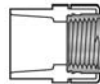
Transition Female Adapter Soc x Fipt With Brass Thread Insert



835-005CBR	1/2	25	150	096	31.64
835-007CBR	3/4	15	90	096	65.48
835-010CBR	1	15	90	096	114.92
835-012CBR	1-1/4	15	60	096	187.47
835-015CBR	1-1/2	10	80	096	247.18
835-020CBR	2	8	32	096	308.72

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Female Adapter Soc x Fipt With Type 316 Stainless Steel Thread Insert



835-005CSS	1/2	25	150	096	62.13
835-007CSS	3/4	15	90	096	86.74
835-010CSS	1	15	90	096	151.81
835-012CSS	1-1/4	15	0	096	246.72
835-015CSS	1-1/2	10	60	096	321.87
835-020CSS	2	8	32	096	376.68

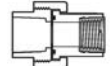
Transition Male Adapter w/Brass Thread Brass Mipt x Socket



836-005CBR	1/2	40	160	096	70.14
836-007CBR	3/4	40	160	096	98.75
836-010CBR	1	10	60	096	171.99
836-012CBR	1-1/4	10	60	096	279.76
836-015CBR	1-1/2	10	40	096	363.71
836-020CBR	2	8	32	096	426.20

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Union Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

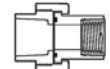


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-007CBR	3/4	10	20	096	146.17
859-010CBR	1	10	0	096	162.80
859-012CBR	1-1/4	5	0	096	272.91
859-015CBR	1-1/2	5	0	096	310.13
859-020CBR	2	5	0	096	350.51

Not intended to convey or dispense water for human consumption through drinking or cooking

Union Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-007CBR	3/4	10	40	096	143.69
899-010CBR	1	10	0	096	160.80
899-012CBR	1-1/4	5	20	096	269.46
899-015CBR	1-1/2	5	0	096	306.17
899-020CBR	2	5	0	096	346.21

Not intended to convey or dispense water for human consumption through drinking or cooking



Transition Fittings & Adapters CPVC Orange Special Reinforced (SR) Fittings

The CPVC Orange fittings in this section (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these systems, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Instructions*, and local codes. However, these fittings can also be used in many other types of installations, such as hot water distribution. CPVC fittings may also be used on PVC pipe when installed with a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Sprinkler Head Tee - Special Reinforced Plastic Thread Style with Wrench Flats

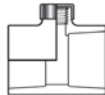
Socket x Socket x SR FIPT - Zinc Collar



4202-010SR	1	15	0	076	20.40
4202-130SR	1X1/2	50	0	076	7.95

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

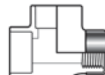
Socket x Socket x SR FIPT - Stainless Steel Collar



4202-101SR	3/4X1/2	50	0	076	7.36
4202-124SR	1X3/4X1/2	50	0	076	7.95
4202-156SR	1-1/4X1X1/2	15	0	076	13.25
4202-166SR	1-1/4X1/2	15	0	076	13.25
4202-168SR	1-1/4X1	15	0	076	28.48
4202-199SR	1-1/2X1-1/4X1/2	10	0	076	17.44
4202-209SR	1-1/2X1/2	25	0	076	17.44
4202-211SR	1-1/2X1-1/2X1	10	0	076	17.44
4202-237SR	2X1-1/2X1/2	10	0	076	24.61
4202-247SR	2X1/2	10	0	076	24.61
4202-287SR	2-1/2X1/2	10	0	076	33.73

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

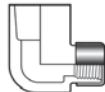
Socket x SR FIPT x Socket - Stainless Steel Collar



4203-122SR	1X1/2X1	50	0	076	8.54
------------	---------	----	---	-----	------

Sprinkler Head 90° Ell - Special Reinforced Plastic Thread Style

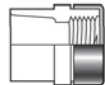
Socket x SR FIPT - Stainless Steel Collar



4207-101SR	3/4X1/2	20	180	076	4.85
4207-130SR	1X1/2	10	150	076	6.84
4207-131SR	1X3/4	50	0	076	8.27
4207-166SR	1-1/4X1/2	25	0	076	8.69

Female Adapter - Special Reinforced Plastic Thread Style

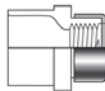
Socket x SR FIPT - Stainless Steel Collar



4235-007SR	3/4	25	300	076	8.65
4235-010SR	1	25	200	076	15.21
4235-012SR	1-1/4	10	60	076	24.76

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style

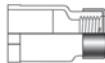
Socket x SR FIPT - Stainless Steel Collar



4235-101SR	3/4X1/2	50	200	076	5.28
4235-130SR	1X1/2	50	0	076	5.65
4235-131SR	1X3/4	50	0	076	8.95

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Socket Body Wrench Flats

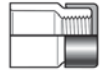
Socket x SR FIPT - Stainless Steel Collar



W4235-101SR	3/4X1/2	50	0	076	6.03
W4235-130SR	1X1/2	50	0	076	6.45

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread with Metal Thread Start

Socket x SR FIPT - Zinc Collar



Z4235-101SR	3/4X1/2	50	200	076	5.28
-------------	---------	----	-----	-----	------

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Positioning Ring

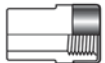
Socket x SR FIPT - Stainless Steel Collar



R4235-101SR	3/4X1/2	25	300	076	5.97
-------------	---------	----	-----	-----	------

Spigot Female Sprinkler Head Adapters - Special Reinforced Plastic Threaded Style

Spigot x SR FIPT - Stainless Steel Collar



4238-101SR	3/4X1/2	50	400	076	5.28
4238-130SR	1X1/2	50	0	076	5.72

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar



42001SR	3/4X1/2	12	0	076	13.49
42011SR	1X1/2	12	0	076	13.49

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

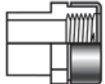
Socket x SR FIPT - Stainless Steel Collar



42004SR	3/4X1/2	12	0	076	13.49
42014SR	1X1/2	12	0	076	13.49

Spigot Female Adapter - Special Reinforced Plastic Thread Style

Spigot x SR FIPT - Stainless Steel Collar



4278-007SR	3/4	25	300	076	9.08
4278-010SR	1	50	0	076	16.17

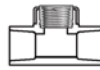
Transition Fittings & Adapters CPVC Orange Brass Thread Fittings



The CPVC Orange fittings in this section (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these systems, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Instructions*, and local codes. However, these fittings can also be used in many other types of installations, such as hot water distribution. CPVC fittings may also be used on PVC pipe when installed with a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Sprinkler Head Tee - Brass Thread Insert Style Socket x Socket x FIPT



4202-101	3/4X1/2	50	0	076	13.83
4202-124	1X3/4X1/2	50	0	076	14.93
4202-130	1X1/2	50	0	076	14.93
4202-010	1	10	40	076	38.39
4202-156	1-1/4X1X1/2	15	0	076	24.89
4202-166	1-1/4X1/2	15	0	076	24.89
4202-199	1-1/2X1-1/4X1/2	10	0	076	32.79
4202-209	1-1/2X1/2	10	0	076	32.79
4202-237	2X1-1/2X1/2	10	0	076	46.24
4202-247	2X1/2	10	0	076	46.24

Not intended to convey or dispense water for human consumption through drinking or cooking

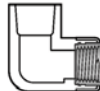
Sprinkler Head Tee - Brass Thread Insert Style Socket x FIPT x Socket



4203-122	1X1/2X1	50	0	076	24.52
----------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

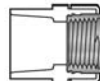
Sprinkler Head 90° Ell - Brass Thread Insert Style Socket x FIPT



4207-101	3/4X1/2	20	120	076	9.14
4207-130	1X1/2	15	90	076	12.84
4207-131	1X3/4	25	0	076	15.54
4207-166	1-1/4X1/2	10	60	076	17.88

Not intended to convey or dispense water for human consumption through drinking or cooking

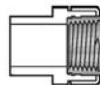
Female Adapter - Brass Thread Insert Style Socket x FIPT



4235-007	3/4	15	90	076	18.23
4235-010	1	15	90	076	31.99
4235-012	1-1/4	15	60	076	52.15
4235-015	1-1/2	10	40	076	69.57
4235-020	2	8	32	076	87.19

Not intended to convey or dispense water for human consumption through drinking or cooking

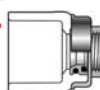
Spigot Female Adapter - Brass Thread Insert Style Spigot x FIPT



4278-007	3/4	25	150	076	17.05
4278-010	1	15	90	076	30.37

Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ Female Sprinkler Head Adapter - Gasket Sealed Brass Thread Insert Style Socket x Gasket FIPT

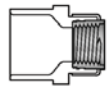


4235-130GS	1X1/2	50	0	076	10.63
------------	-------	----	---	-----	-------

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

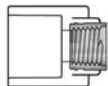
Female Sprinkler Head Adapter - Brass Thread Insert Style Socket x FIPT



4235-101	3/4X1/2	50	0	076	9.96
4235-130	1X1/2	50	0	076	10.63
4235-131	1X3/4	50	0	076	16.80

Not intended to convey or dispense water for human consumption through drinking or cooking

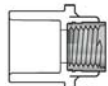
Female Sprinkler Head Adapter - Brass Thread Insert Style with Long Body Socket x FIPT



L4235-130	1X1/2	50	0	076	15.07
-----------	-------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

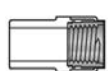
Female Sprinkler Head Adapter - Brass Thread Insert Style with Positioning Ring Socket x FIPT



R4235-101	3/4X1/2	50	0	076	9.96
-----------	---------	----	---	-----	------

Not intended to convey or dispense water for human consumption through drinking or cooking

Spigot Female Sprinkler Head Adapters - Brass Thread Insert Style Spigot x FIPT



4238-101	3/4X1/2	50	0	076	9.96
4238-130	1X1/2	50	0	076	10.63

Not intended to convey or dispense water for human consumption through drinking or cooking

Bushing - with Brass Thread Insert Spigot x FIPT



4238-130BR	1X1/2	50	300	076	13.76
------------	-------	----	-----	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking

Male Adapter MIPT x Socket



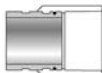
4236-007	3/4	40	160	076	41.02
4236-010	1	10	60	076	62.72
4236-012	1-1/4	10	60	076	75.00
4236-015	1-1/2	10	40	076	136.12
4236-020	2	8	32	076	181.14



Transition Fittings & Adapters
CPVC Orange Brass Grooved Coupling Adapter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Grooved Coupling Adapter
Brass Groove End x Socket



4233-012	1-1/4	10	40	076	103.14
4233-015	1-1/2	10	40	076	109.31
4233-020	2	8	32	076	126.60
4233-025	2-1/2	5	0	076	162.39
4233-030	3	5	0	076	180.53

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Fittings & Adapters
CTS CPVC Tan Special Reinforced (SR) Fittings & CTS CPVC Tan Brass Thread Fittings

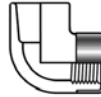


CTS CPVC Tan Special Reinforced (SR) Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

SPECIAL REINFORCED 90° ELL

Socket x SR Fipt - Stainless Steel Collar



4107-005SR	1/2	50	300	035	9.01
------------	-----	----	-----	-----	------

**ZINC DROP EAR REINFORCED CTS 90° ELL
(One Piece Unit)**

Socket x SR Fipt - Zinc Collar



DEZ4107-005SR	1/2	10	150	035	20.26
---------------	-----	----	-----	-----	-------

**DROP EAR SPECIAL REINFORCED 90° ELL
(Fitting Plus Bracket)**

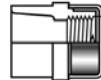
Socket x SR Fipt - Stainless Steel Collar



DE4107-005SR	1/2	10	200	035	13.93
--------------	-----	----	-----	-----	-------

SPECIAL REINFORCED FEMALE ADAPTER

Socket x SR Fipt - Stainless Steel Collar



4135-005SR	1/2	25	200	035	6.96
------------	-----	----	-----	-----	------

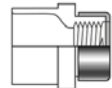
SPECIAL REINFORCED FEMALE ADAPTER (continued)

Socket x SR Fipt - Stainless Steel Collar

4135-007SR	3/4	25	300	035	7.65
4135-010SR	1	5	100	035	9.71

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

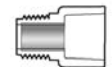
Socket x SR Fipt - Stainless Steel Collar



4135-131SR	1X3/4	25	150	035	15.28
------------	-------	----	-----	-----	-------

**REINFORCED MALE ADAPTER (Internal
Stainless Steel Reinforced)**

R Mipt x Socket - Stainless Steel Sleeve



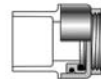
4136-005R	1/2	25	300	035	8.93
4136-007R	3/4	25	300	035	9.93
4136-010R	1	10	120	035	14.79

CTS CPVC Tan Brass Thread Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**GASKET SEALED BRASS THREAD
TRANSITION FEMALE ADAPTER**

Socket x Gasket FPT - Use NO Thread Sealant



NSF Certified Lead Free

4135-005BRG	1/2	25	150	035	40.21
4135-007BRG	3/4	25	150	035	44.28
4135-010BRG	1	15	90	035	132.09
4135-012BRG	1-1/4	15	60	035	250.97
4135-015BRG	1-1/2	10	40	035	327.12
4135-020BRG	2	8	32	035	480.95

**GASKET SEALED BRASS THREAD
TRANSITION REDUCING FEMALE ADAPTER**

Socket x Gasket FPT - Use NO Thread Sealant



NSF Certified Lead Free

4135-101BRG	3/4X1/2	25	150	035	43.77
4135-130BRG	1X1/2	50	0	035	69.15

**TRANSITION MALE ADAPTER w/BRASS
THREAD**

Brass Mipt x Socket



NSF Certified Lead Free

4136-005BR	1/2	60	360	035	40.21
4136-007BR	3/4	40	160	035	44.28
4136-010BR	1	10	60	035	132.09
4136-012BR	1-1/4	10	60	035	162.92
4136-015BR	1-1/2	10	40	035	215.06
4136-020BR	2	8	32	035	357.49

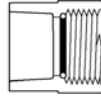


Transition Fittings & Adapters
CTS CPVC Tan Gasket Sealed Thread Fittings & Blue 75™ Thread Sealant

CTS CPVC Tan Gasket Sealed Thread Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

FEMALE ADAPTER with Gasket
Socket x NPSC



For Cold Water Service Only

4135-005OR	1/2	25	200	035	4.71
------------	-----	----	-----	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

FEMALE ADAPTER with Gasket (continued)
Socket x NPSC

4135-007OR	3/4	25	300	035	6.68
4135-010OR	1	5	100	035	7.62

Blue 75™ Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------



Blue 75™ Thread Sealant

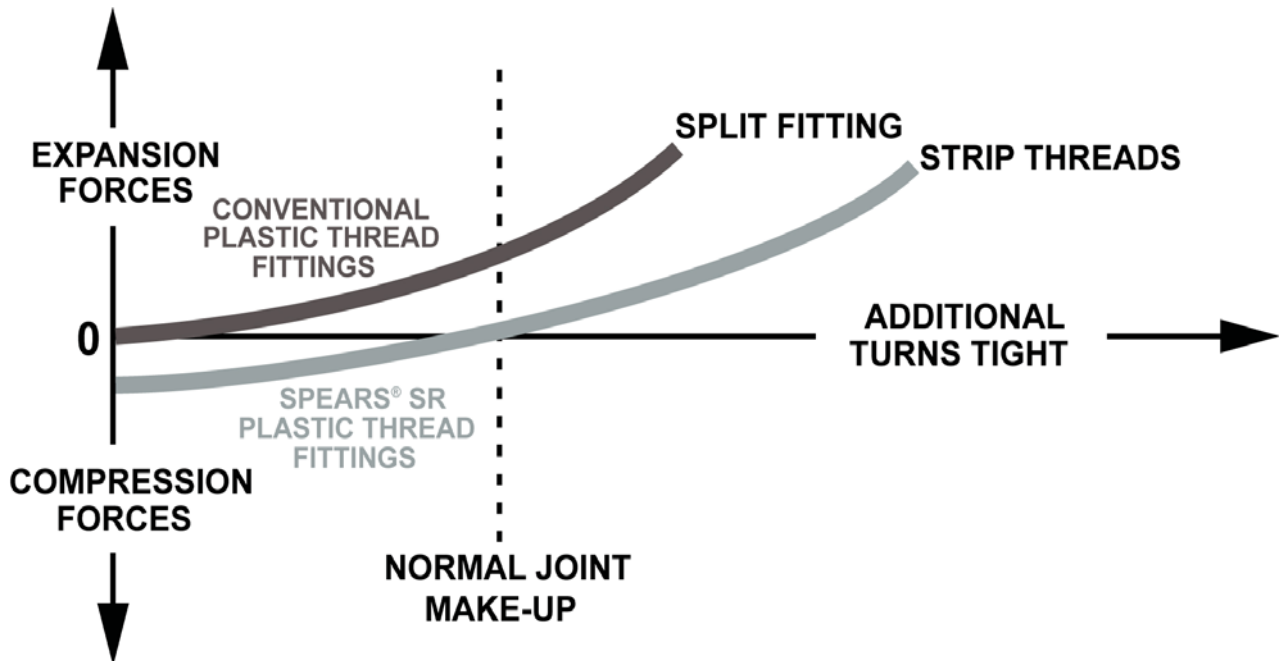
SB75-005	1/4 Pint	24	0	895	10.46
SB75-010	1/2 Pint	24	0	895	16.66
SB75-020	Pint	12	0	895	26.94
SB75-030	Quart	12	0	895	48.41



- Featuring Patented Special Reinforced (SR) Thread
- Full 150 psi Pressure Rating at 73°F (23°C)
- High Grade Homopolymer Compound
- Excellent Chemical Resistance
- IPS Sizes 1/2" through 2"

**Spears® Patented SR Fitting Design is One of the Most Significant
Improvements in Threaded Thermoplastic Fittings . . .**

Radial stress generated by tightening of tapered pipe threads exerts tremendous expansion forces on female plastic thread fittings. When subjected to over-tightening — even accidentally — these forces can literally split the fitting. Spears® patented SR Fitting design not only alleviates this problem by containing expansion forces with its stainless steel collar, but additionally compensates for expansion stress through thermoplastic material compression. Stresses are equalized at normal joint make-up. The following graph illustrates this effect in a comparison of conventional plastic female thread fittings with Spears® SR plastic thread fittings when taken to failure.



Another Quality Spears® Product Designed for
Performance, Customer Satisfaction and Service



Polypropylene Fittings & Accessories

Polypropylene Schedule 80 Natural SR Threaded Fittings & Polypropylene Schedule 80 Black SR Threaded Fittings

Polypropylene Schedule 80 Natural SR Threaded Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee - Natural SR Fipt



4805-005SR	1/2	25	200	060	13.98
4805-007SR	3/4	15	120	060	15.52
4805-010SR	1	15	0	060	18.47
4805-015SR	1-1/2	10	0	060	27.38
4805-020SR	2	10	0	060	36.19

90° Ell - Natural SR Fipt



4808-005SR	1/2	20	240	060	11.36
4808-007SR	3/4	20	240	060	13.81
4808-010SR	1	50	0	060	17.06
4808-015SR	1-1/2	10	0	060	23.13
4808-020SR	2	25	0	060	31.46

45° Ell - Natural SR Fipt



4819-005SR	1/2	50	400	060	14.31
4819-007SR	3/4	50	300	060	16.09
4819-010SR	1	50	0	060	17.00
4819-015SR	1-1/2	25	0	060	23.13
4819-020SR	2	25	0	060	31.46

Coupling - Natural SR Fipt



4830-005SR	1/2	25	300	060	10.77
4830-007SR	3/4	25	300	060	13.48
4830-010SR	1	25	200	060	14.87
4830-015SR	1-1/2	10	80	060	19.44
4830-020SR	2	10	0	060	23.37

T.T. Bushing - Natural Mipt x Fipt



4839-101	3/4X1/2	10	300	060	16.66
4839-130	1X1/2	10	50	060	20.35
4839-131	1X3/4	10	50	060	20.35
4839-211	1-1/2X1	10	120	060	35.96
4839-249	2X1	10	50	060	52.13
4839-251	2X1-1/2	10	120	060	52.13

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cap - Natural SR Fipt



4848-005SR	1/2	50	300	060	10.21
4848-007SR	3/4	50	300	060	13.39
4848-010SR	1	15	180	060	14.87
4848-015SR	1-1/2	10	120	060	20.75
4848-020SR	2	10	80	060	23.37

Union - Natural SR Fipt with FKM O-ring



4858-005SR	1/2	20	120	060	50.18
4858-007SR	3/4	20	80	060	54.68
4858-010SR	1	15	90	060	67.69
4858-015SR	1-1/2	10	0	060	102.54
4858-020SR	2	5	0	060	149.75

Union - Natural SR Fipt with EPDM O-ring



4898-005SR	1/2	20	120	060	49.19
4898-007SR	3/4	20	80	060	53.59
4898-010SR	1	15	90	060	66.34
4898-015SR	1-1/2	10	0	060	100.49
4898-020SR	2	5	0	060	146.75

Flange - Natural SR Fipt



4852-005SR	1/2	25	0	060	31.35
4852-007SR	3/4	25	0	060	33.97
4852-010SR	1	15	0	060	38.08
4852-015SR	1-1/2	15	0	060	53.39
4852-020SR	2	10	0	060	63.00

Blind Flange - Natural



4853-005	1/2	25	0	060	52.45
4853-007	3/4	25	0	060	54.18
4853-010	1	15	0	060	57.49
4853-015	1-1/2	15	0	060	94.95
4853-020	2	10	0	060	103.51

Polypropylene Schedule 80 Black SR Threaded Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee - Black SR Fipt



4805-005BSR	1/2	25	200	061	12.94
4805-007BSR	3/4	15	120	061	14.42
4805-010BSR	1	15	0	061	17.05
4805-015BSR	1-1/2	10	0	061	25.29
4805-020BSR	2	10	0	061	33.55

90° Ell - Black SR Fipt



4808-005BSR	1/2	20	240	061	10.56
4808-007BSR	3/4	20	240	061	12.83

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° Ell - Black (continued) SR Fipt

4808-010BSR	1	50	0	061	15.81
4808-015BSR	1-1/2	25	0	061	21.34
4808-020BSR	2	10	0	061	29.05

45° Ell - Black SR Fipt



4819-005BSR	1/2	50	400	061	13.21
4819-007BSR	3/4	50	300	061	14.93
4819-010BSR	1	50	0	061	15.74
4819-015BSR	1-1/2	25	0	061	21.34
4819-020BSR	2	25	0	061	29.05

Polypropylene Fittings & Accessories
Polypropylene Schedule 80 Black SR Threaded Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling - Black
SR Fipt



4830-005BSR	1/2	25	300	061	10.02
4830-007BSR	3/4	25	300	061	12.49
4830-010BSR	1	25	200	061	13.74
4830-015BSR	1-1/2	10	80	061	17.99
4830-020BSR	2	10	0	061	21.61

T.T. Bushing - Black
Mipt x Fipt



4839-101B	3/4X1/2	10	300	061	15.48
4839-130B	1X1/2	10	50	061	18.87
4839-131B	1X3/4	10	50	061	18.87
4839-211B	1-1/2X1	25	0	061	33.22
4839-249B	2X1	10	120	061	48.14
4839-251B	2X1-1/2	10	120	061	48.14

Cap - Black
SR Fipt



4848-005BSR	1/2	50	300	061	9.49
4848-007BSR	3/4	50	300	061	12.49
4848-010BSR	1	15	180	061	13.75
4848-015BSR	1-1/2	10	120	061	19.19
4848-020BSR	2	10	80	061	21.61

Union - Black
SR Fipt with FKM O-ring



4858-005BSR	1/2	20	120	061	47.52
4858-007BSR	3/4	20	80	061	51.51
4858-010BSR	1	15	90	061	63.53
4858-015BSR	1-1/2	10	0	061	92.23
4858-020BSR	2	5	0	061	143.93

Union - Black
SR Fipt with EPDM O-ring



4898-005BSR	1/2	20	120	061	45.59
4898-007BSR	3/4	20	80	061	49.96
4898-010BSR	1	15	90	061	61.44
4898-015BSR	1-1/2	10	0	061	93.06
4898-020BSR	2	5	0	061	137.40

Flange - Black
SR Fipt



4852-005BSR	1/2	25	0	061	29.01
4852-007BSR	3/4	25	0	061	31.36
4852-010BSR	1	15	0	061	35.17
4852-015BSR	1-1/2	15	0	061	49.40
4852-020BSR	2	10	0	061	58.24

Blind Flange - Black



4853-005B	1/2	25	0	061	48.47
4853-007B	3/4	25	0	061	49.57
4853-010B	1	15	0	061	53.13
4853-015B	1-1/2	15	0	061	87.88
4853-020B	2	10	0	061	96.98



Polypropylene Fittings & Accessories Gauge Guards



Connections use Spears® Patented Special Reinforced (SR)
Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water
on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PP GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002P 121.51	G0004-005P 121.51	1	18	626
0-30 in-Hg	G30V4-002P 186.67	G30V4-005P 186.67	1	18	626
0-15 psi	G0154-002P 177.54	G0154-005P 177.54	1	18	626
0-30 psi	G0304-002P 177.54	G0304-005P 177.54	1	18	626
0-60 psi	G0604-002P 177.54	G0604-005P 177.54	1	18	626
0-100 psi	G1004-002P 177.54	G1004-005P 177.54	1	18	626
0-160 psi	G1604-002P 177.54	G1604-005P 177.54	1	18	626
0-200 psi	G2004-002P 177.54	G2004-005P 177.54	1	18	626
0-300 psi	G3004-002P 177.54	G3004-005P 177.54	1	18	626

FKM Diaphragm

No Gauge	G0003-002P 121.51	G0003-005P 121.51	1	18	626
0-30 in-Hg	G30V3-002P 186.67	G30V3-005P 186.67	1	18	626
0-15 psi	G0153-002P 177.54	G0153-005P 177.54	1	18	626
0-30 psi	G0303-002P 177.54	G0303-005P 177.54	1	18	626
0-60 psi	G0603-002P 177.54	G0603-005P 177.54	1	18	626
0-100 psi	G1003-002P 177.54	G1003-005P 177.54	1	18	626
0-160 psi	G1603-002P 177.54	G1603-005P 177.54	1	18	626
0-200 psi	G2003-002P 177.54	G2003-005P 177.54	1	18	626
0-300 psi	G3003-002P 177.54	G3003-005P 177.54	1	18	626

EPDM Diaphragm

No Gauge	G0002-002P 116.71	G0002-005P 116.71	1	18	626
0-30 in-Hg	G30V2-002P 179.18	G30V2-005P 179.18	1	18	626
0-15 psi	G0152-002P 170.51	G0152-005P 170.51	1	18	626
0-30 psi	G0302-002P 170.51	G0302-005P 170.51	1	18	626
0-60 psi	G0602-002P 170.51	G0602-005P 170.51	1	18	626
0-100 psi	G1002-002P 170.51	G1002-005P 170.51	1	18	626
0-160 psi	G1602-002P 170.51	G1602-005P 170.51	1	18	626
0-200 psi	G2002-002P 170.51	G2002-005P 170.51	1	18	626
0-300 psi	G3002-002P 170.51	G3002-005P 170.51	1	18	626

Polypropylene Fittings & Accessories Needle Valves



Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PP Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	-----------	------------	--------------

Globe Pattern

1/4	5591-002P 78.54	---	---	1	18	219
3/8	5591-003P 78.54	---	---	1	18	219
1/2	---	---	5591-005PSR 86.85	1	18	219

Angle Pattern

1/4	5691-002P 78.54	---	---	1	18	219
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219



Polypropylene Fittings & Accessories Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
 3/4" - 4" 150 psi
 6" 100 psi
 8" 70 psi
 Maximum Service Temperature
 PP = 180°F (82°C)
 Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
3/4	4423-007P 563.29	4433-007P 625.86	1	12	113
1	4423-010P 673.87	4433-010P 734.44	1	4	113
1-1/4	4423-012P 807.65	4433-012P 897.31	1	0	113
1-1/2	4423-015P 1002.77	4433-015P 1091.16	1	0	113
2	4423-020P 1072.15	4433-020P 1204.66	1	0	113
2-1/2	4423-025P 1785.13	4433-025P 1985.68	1	0	112
3	4423-030P 1876.73	4433-030P 2244.16	1	0	112
4	4423-040P 2552.76	4433-040P 2833.55	1	0	112
6	4423-060P 4835.67	4433-060P 5377.21	1	0	112
8	4423-080P 9256.18	4433-080P 10171.67	1	0	112

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
3/4	4423I-007P 571.34	4433I-007P 633.92	1	12	113
1	4423I-010P 685.14	4433I-010P 790.82	1	4	113
1-1/4	4423I-012P 880.14	4433I-012P 976.99	1	0	113
1-1/2	4423I-015P 1131.42	4433I-015P 976.99	1	0	113
2	4423I-020P 1101.74	4433I-020P 1249.35	1	0	113
2-1/2	4423I-025P 1795.51	4433I-025P 2012.18	1	0	112
3	4423I-030P 2237.73	4433I-030P 2335.62	1	0	112
4	4423I-040P 2563.15	4433I-040P 2843.98	1	0	112
6	4423I-060P 4940.04	4433I-060P 5422.53	1	0	112
8	4423I-080P 9325.12	4433I-080P 10274.48	1	0	112

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
3/4	4423CB-007P 721.01	4433CB-007P 801.11	1	12	113
1	4423CB-010P 862.53	4433CB-010P 940.06	1	4	113

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
1-1/4	4423CB-012P 880.14	4433CB-012P 1354.36	1	0	113
1-1/2	4423CB-015P 1244.07	4433CB-015P 1670.49	1	0	113
2	4423CB-020P 1340.19	4433CB-020P 1505.82	1	0	113
2-1/2	4423CB-025P 2069.04	4433CB-025P 2541.67	1	0	112
3	4423CB-030P 2517.42	4433CB-030P 3149.68	1	0	112
4	4423CB-040P 2882.82	4433CB-040P 3167.00	1	0	112
6	4423CB-060P 5363.56	4433CB-060P 6882.82	1	0	112
8	4423CB-080P 9791.67	4433CB-080P 10707.18	1	0	112

Polypropylene Fittings & Accessories Polypropylene Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

Lever Handle

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721311-015P 504.43	722311-015P 504.43	723311-015P 1047.92	1	0	256
2	721311-020P 509.53	722311-020P 509.53	723311-020P 1069.31	1	0	256
2-1/2	721311-025P 532.53	722311-025P 532.53	723311-025P 1087.55	1	0	256
3	721311-030P 543.79	722311-030P 543.79	723311-030P 1108.84	1	0	256
4	721311-040P 606.41	722311-040P 606.41	723311-040P 1384.55	1	0	256
6	721311-060P 947.55	722311-060P 947.55	723311-060P 2189.28	1	0	256
8	721311-080P 1611.42	722311-080P 1611.42	723311-080P 3717.36	1	0	256

Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	721321-020P 1450.40	722321-020P 1450.40	723321-020P 1843.71	1	0	256
2-1/2	721321-025P 1469.71	722321-025P 1469.71	723321-025P 1940.52	1	0	256
3	721321-030P 1498.03	722321-030P 1498.03	723321-030P 2038.75	1	0	256
4	721321-040P 1596.08	722321-040P 1596.08	723321-040P 2319.01	1	0	256
6	721321-060P 1864.45	722321-060P 1864.45	723321-060P 3138.24	1	0	256
8	721321-080P 2547.86	722321-080P 2547.86	723321-080P 4685.58	1	0	256
10	721321-100P 3425.92	722321-100P 3425.92	723321-100P 7623.22	1	0	256
12	721321-120P 4744.19	722321-120P 4744.19	723321-120P 11141.25	1	0	256

Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721301-015P 466.19	722301-015P 466.19	723301-015P 924.76	1	0	256
2	721301-020P 475.69	722301-020P 475.69	723301-020P 941.56	1	0	256
2-1/2	721301-025P 493.96	722301-025P 493.96	723301-025P 976.32	1	0	256
3	721301-030P 509.32	722301-030P 509.32	723301-030P 1001.89	1	0	256
4	721301-040P 582.67	722301-040P 582.67	723301-040P 1242.76	1	0	256
6	721301-060P 891.04	722301-060P 891.04	723301-060P 2010.09	1	0	256
8	721301-080P 1531.21	722301-080P 1531.21	723301-080P 3404.53	1	0	256
10	721301-100P 3058.38	722301-100P 3058.38	723301-100P 6822.46	1	0	256
12	721301-120P 3957.38	722301-120P 3957.38	723301-120P 9744.93	1	0	256



Polypropylene Fittings & Accessories Large Diameter Butterfly Valves



Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50



Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140P 6381.79	723321-140P 15508.33	1	0	257
16	722321-160P 24883.37	723321-160P 26953.13	1	0	257
18	722321-180P 27410.01	723321-180P 31405.12	1	0	257
20	722321-200P 30753.47	723321-200P 37381.61	1	0	257
24	722321-240P 34834.44	723321-240P 50252.52	1	0	257

Polypropylene Fittings & Accessories Diaphragm Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi

1/2" - 4" Flanged
& Valves w/PTFE 150 psi

Diaphragms
6" 100 psi

8" 75 psi

Maximum Service Temperature
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section
for Additional Options and Features

Contact Spears® for Pricing on
Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings
(for True Union Style Valves)

PP Thread Style

PP - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005PSR 141.92	2731-005PSR 157.88	2721T-005PSR 226.87	2731T-005PSR 238.82	2731VT-005PSR 270.09	1	12	280
3/4	2721-007PSR 161.63	2731-007PSR 179.32	2721T-007PSR 237.53	2731T-007PSR 252.03	2731VT-007PSR 295.88	1	8	280
1	2721-010PSR 199.94	2731-010PSR 220.29	2721T-010PSR 346.26	2731T-010PSR 364.27	2731VT-010PSR 384.35	1	8	280
1-1/4	2721-012PSR 303.65	2731-012PSR 338.13	2721T-012PSR 474.08	2731T-012PSR 497.04	2731VT-012PSR 551.59	1	4	280
1-1/2	2721-015PSR 317.62	2731-015PSR 352.59	2721T-015PSR 505.57	2731T-015PSR 530.11	2731VT-015PSR 570.94	1	4	280
2	2721-020PSR 369.41	2731-020PSR 410.53	2721T-020PSR 576.81	2731T-020PSR 605.21	2731VT-020PSR 657.75	1	0	280

PP - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2-1/2	2723-025P 680.55	2733-025P 752.06	2793T-025P 1070.76	2793VT-025P 1195.80	1	0	281
3	2723-030P 973.09	2733-030P 1075.14	2793T-030P 1480.80	2793VT-030P 1651.21	1	0	281
4	2723-040P 1400.18	2733-040P 1541.54	2793T-040P 1973.94	2793VT-040P 2189.40	1	0	281
6	2723-060P 3465.21	2733-060P 3850.23	2793T-060P 4947.32	2793VT-060P 5592.09	1	0	281
8	2723-080P 8626.77	2733-080P 7766.52	2793T-080P 8980.86	2793VT-080P 15133.51	1	0	281



Thermoplastic Valves True Union 2000 Industrial Ball Valves



Socket Style



SR Threaded Style



6" Lever Handle Style

All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Custom Elastomer Seals

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6" - 8"	150 psi
All Flanged	150 psi

Maximum Service Temperature

PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Note: Standard 6" Valve uses lockout type Lever-Style Handle for proper leverage. Non-locking T-Handle is more compact, but will increase difficulty of operation.
True Union 2000 Industrial Ball Valves have Built-in Handle Lockouts (except 6" T-Handle Option)

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829-005 49.69	1839-005 55.27	1	18	600
3/4	1829-007 58.80	1839-007 65.41	1	18	600
1	1829-010 70.02	1839-010 77.99	1	12	600
1-1/4	1829-012 96.86	1839-012 123.64	1	8	600
1-1/2	1829-015 116.67	1839-015 129.52	1	8	600
2	1829-020 153.96	1839-020 169.54	1	4	600

Socket Ends

2-1/2	1822-025 295.95	1832-025 401.01	1	0	601
3	1822-030 390.18	1832-030 433.54	1	0	601
4	1822-040 659.24	1832-040 732.49	1	0	601
6	1822-060 1424.09	1832-060 1580.38	1	0	612
8	1822-080 1894.05	1832-080 2101.91	1	0	612

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	1821-025 295.95	1831-025 401.01	1	0	601
3	1821-030 390.18	1831-030 433.54	1	0	601
4	1821-040 659.24	1831-040 732.49	1	0	601
6	1821-060 1424.09	1831-060 1580.38	1	0	612

SR Threaded Ends

1/2	1821-005SR 50.75	1831-005SR 56.36	1	18	600
3/4	1821-007SR 61.36	1831-007SR 68.00	1	18	600
1	1821-010SR 72.59	1831-010SR 80.56	1	12	600
1-1/4	1821-012SR 104.58	1831-012SR 131.37	1	8	600
1-1/2	1821-015SR 124.98	1831-015SR 137.82	1	8	600
2	1821-020SR 162.95	1831-020SR 178.36	1	4	600

PVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2-1/2	1821-025SR 320.13	1831-025SR 425.16	1	0	601
3	1821-030SR 414.37	1831-030SR 457.72	1	0	601
4	1821-040SR 687.47	1831-040SR 760.73	1	0	601
6	1821-060SR 1464.37	1831-060SR 1620.63	1	0	612

Spigot Ends

1/2	1827-005 49.69	1837-005 55.27	1	18	600
3/4	1827-007 58.80	1837-007 65.41	1	18	600
1	1827-010 70.02	1837-010 77.99	1	12	600
1-1/4	1827-012 96.86	1837-012 123.64	1	8	600
1-1/2	1827-015 116.67	1837-015 129.52	1	8	600
2	1827-020 153.96	1837-020 169.54	1	4	600
2-1/2	1827-025 295.95	1837-025 401.01	1	0	601
3	1827-030 390.18	1837-030 433.54	1	0	601
4	1827-040 659.24	1837-040 732.49	1	0	601
6	1827-060 1424.09	1837-060 1580.38	1	0	612

Flanged Ends

1/2	1823-005 71.08	1833-005 75.81	1	8	600
3/4	1823-007 90.04	1833-007 97.95	1	8	600
1	1823-010 108.98	1833-010 117.21	1	8	600
1-1/4	1823-012 127.97	1833-012 142.17	1	8	600
1-1/2	1823-015 161.16	1833-015 175.36	1	4	600
2	1823-020 256.61	1833-020 272.17	1	0	600
2-1/2	1823-025 473.91	1833-025 481.75	1	0	601
3	1823-030 523.81	1833-030 650.35	1	0	601

Thermoplastic Valves
True Union 2000 Industrial Ball Valves



PVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
4	1823-040 1053.20	1833-040 1220.83	1	0	601
6	1823-060 2242.47	1833-060 2600.11	1	0	612
8	1823-080 2982.48	1833-080 3458.14	1	0	612

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

PVC 6" Industrial T-Handle Valve Option (Non-Locking)

NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
6	18226-060 1424.09	18326-060 1580.38	1	0	612

Threaded Ends

6	18216-060 1424.09	18316-060 1580.38	1	0	612
----------	-----------------------------	-----------------------------	---	---	-----

SR Threaded Ends

6	18216-060SR 1464.37	18316-060SR 1620.63	1	0	612
----------	-------------------------------	-------------------------------	---	---	-----

Flanged Ends

6	18236-060 2242.47	18336-060 2600.11	1	0	612
----------	-----------------------------	-----------------------------	---	---	-----

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Threaded & Socket Ends

1/2	1829-005C 65.63	1839-005C 72.93	1	18	602
3/4	1829-007C 82.65	1839-007C 91.86	1	18	602
1	1829-010C 98.40	1839-010C 109.33	1	12	602
1-1/4	1829-012C 156.43	1839-012C 173.86	1	8	602
1-1/2	1829-015C 165.21	1839-015C 183.57	1	8	602
2	1829-020C 220.95	1839-020C 254.00	1	4	602

Socket Ends

2-1/2	1822-025C 495.39	1832-025C 550.40	1	0	603
3	1822-030C 579.22	1832-030C 643.63	1	0	603
4	1822-040C 1049.59	1832-040C 1166.19	1	0	603
6	1822-060C 2234.41	1832-060C 2482.51	1	0	613
8	1822-080C 2971.79	1832-080C 3301.76	1	0	613

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	1821-025C 495.39	1831-025C 550.40	1	0	603
3	1821-030C 579.22	1831-030C 643.63	1	0	603
4	1821-040C 1049.59	1831-040C 1166.19	1	0	603
6	1821-060C 2234.41	1831-060C 2482.51	1	0	613

SR Threaded Ends

1/2	1821-005CSR 66.68	1831-005CSR 73.99	1	18	602
3/4	1821-007CSR 85.23	1831-007CSR 94.43	1	18	602
1	1821-010CSR 100.98	1831-010CSR 111.88	1	12	602

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
1-1/4	1821-012CSR 164.17	1831-012CSR 181.60	1	8	602
1-1/2	1821-015CSR 173.53	1831-015CSR 191.85	1	8	602
2	1821-020CSR 229.95	1831-020CSR 263.00	1	4	602
2-1/2	1821-025CSR 519.58	1831-025CSR 574.58	1	0	603
3	1821-030CSR 603.40	1831-030CSR 667.80	1	0	603
4	1821-040CSR 1077.80	1831-040CSR 1194.44	1	0	603
6	1821-060CSR 2295.64	1831-060CSR 2543.73	1	0	613

Spigot Ends

1/2	1827-005C 65.63	1837-005C 72.93	1	18	602
3/4	1827-007C 82.65	1837-007C 91.86	1	18	602
1	1827-010C 98.40	1837-010C 109.33	1	12	602
1-1/4	1827-012C 156.43	1837-012C 173.86	1	8	602
1-1/2	1827-015C 165.21	1837-015C 183.57	1	8	602
2	1827-020C 220.95	1837-020C 254.00	1	4	602
2-1/2	1827-025C 495.39	1837-025C 550.40	1	0	603
3	1827-030C 579.22	1837-030C 643.63	1	0	603
4	1827-040C 1049.59	1837-040C 1166.19	1	0	603
6	1827-060C 2234.41	1837-060C 2482.51	1	0	613

Flanged Ends

1/2	1823-005C 111.36	1833-005C 113.76	1	8	602
3/4	1823-007C 136.51	1833-007C 142.17	1	8	602
1	1823-010C 156.26	1833-010C 165.88	1	8	602
1-1/4	1823-012C 233.48	1833-012C 241.68	1	8	602
1-1/2	1823-015C 256.82	1833-015C 265.38	1	4	602
2	1823-020C 357.38	1833-020C 425.63	1	0	602
2-1/2	1823-025C 667.02	1833-025C 800.64	1	0	603
3	1823-030C 975.47	1833-030C 997.72	1	0	603
4	1823-040C 1710.82	1833-040C 1779.24	1	0	603
6	1823-060C 3644.03	1833-060C 3789.02	1	0	613
8	1823-080C 4846.55	1833-080C 5039.38	1	0	613

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket Ends

6	18226-060C 2234.41	18326-060C 2482.51	1	0	613
----------	------------------------------	------------------------------	---	---	-----

Threaded Ends

6	18216-060C 2234.41	18316-060C 2482.51	1	0	613
----------	------------------------------	------------------------------	---	---	-----



Thermoplastic Valves

True Union 2000 Industrial Ball Valves & True Union 2000 Industrial Vented/Bleach Ball Valves

True Union 2000 Industrial Ball Valves

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

SR Threaded Ends

6	18216-060CSR 2295.64	18316-060CSR 2543.73	1	0	613
---	-------------------------	-------------------------	---	---	-----

Flanged Ends

6	18236-060C 3644.03	18336-060C 3789.02	1	0	613
---	-----------------------	-----------------------	---	---	-----



True Union 2000 Industrial Vented/Bleach Ball Valves

Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6"	150 psi
Flanged	150 psi

Same True Union 2000 Industrial Ball Valve with Special Ball Vent Design for Sodium Hypochlorite (Bleach) and other Chemical Applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Custom Elastomer Seals. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Threaded & Socket Ends

1/2	1829V-005 58.45	1839V-005 65.06	1	18	600
3/4	1829V-007 69.17	1839V-007 76.94	1	18	600
1	1829V-010 82.39	1839V-010 91.75	1	12	600
1-1/4	1829V-012 113.97	1839V-012 145.45	1	8	600
1-1/2	1829V-015 137.25	1839V-015 152.38	1	8	600
2	1829V-020 181.12	1839V-020 199.46	1	4	600

Socket Ends

2-1/2	1822V-025 348.17	1832V-025 471.76	1	0	601
3	1822V-030 390.18	1832V-030 510.03	1	0	601
4	1822V-040 659.24	1832V-040 861.75	1	0	601
6	1822V-060 1675.42	1832V-060 1975.46	1	0	612

SR Threaded Ends

1/2	1821V-005SR 59.72	1831V-005SR 66.32	1	18	600
3/4	1821V-007SR 72.18	1831V-007SR 79.99	1	18	600
1	1821V-010SR 85.41	1831V-010SR 94.79	1	12	600
1-1/4	1821V-012SR 123.04	1831V-012SR 154.54	1	8	600
1-1/2	1821V-015SR 147.04	1831V-015SR 162.16	1	8	600
2	1821V-020SR 191.71	1831V-020SR 209.82	1	4	600
2-1/2	1821V-025SR 376.62	1831V-025SR 500.19	1	0	601
3	1821V-030SR 487.51	1831V-030SR 538.48	1	0	601

PVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

SR Threaded Ends

4	1821V-040SR 808.78	1831V-040SR 894.98	1	0	601
---	-----------------------	-----------------------	---	---	-----

Flanged Ends

1/2	1823V-005 83.76	1833V-005 89.47	1	8	600
3/4	1823V-007 105.95	1833V-007 115.22	1	8	600
1	1823V-010 128.21	1833V-010 137.87	1	8	600
1-1/4	1823V-012 150.56	1833V-012 206.28	1	8	600
1-1/2	1823V-015 189.60	1833V-015 206.28	1	4	600
2	1823V-020 301.89	1833V-020 320.20	1	0	600
2-1/2	1823V-025 557.54	1833V-025 566.75	1	0	601
3	1823V-030 616.24	1833V-030 765.09	1	0	601
4	1823V-040 1239.06	1833V-040 1436.28	1	0	601
6	1823V-060 2638.22	1833V-060 3058.95	1	0	612

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Threaded & Socket Ends

1/2	1829V-005C 77.20	1839V-005C 85.79	1	18	602
3/4	1829V-007C 97.23	1839V-007C 108.07	1	18	602
1	1829V-010C 115.77	1839V-010C 128.62	1	12	602
1-1/4	1829V-012C 184.04	1839V-012C 204.57	1	8	602

Thermoplastic Valves
True Union 2000 Industrial Vented/Bleach Ball Valves



CPVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	-----------	------------	--------------

Threaded & Socket Ends

1-1/2	1829V-015C 194.37	1839V-015C 215.96	1	8	602
2	1829V-020C 259.96	1839V-020C 298.81	1	4	602

Socket Ends

2-1/2	1822V-025C 582.81	1832V-025C 647.51	1	0	603
3	1822V-030C 681.44	1832V-030C 757.19	1	0	603
4	1822V-040C 1234.79	1832V-040C 1372.00	1	0	603
6	1822V-060C 2628.74	1832V-060C 2920.60	1	0	613

SR Threaded Ends

1/2	1821V-005CSR 78.43	1831V-005CSR 87.05	1	18	602
3/4	1821V-007CSR 100.28	1831V-007CSR 111.07	1	18	602
1	1821V-010CSR 118.77	1831V-010CSR 131.62	1	12	602
1-1/4	1821V-012CSR 193.12	1831V-012CSR 213.65	1	8	602
1-1/2	1821V-015CSR 204.15	1831V-015CSR 225.73	1	8	602
2	1821V-020CSR 270.54	1831V-020CSR 309.41	1	4	602
2-1/2	1821V-025CSR 611.26	1831V-025CSR 675.97	1	0	603
3	1821V-030CSR 709.89	1831V-030CSR 785.65	1	0	603
4	1821V-040CSR 1268.01	1831V-040CSR 1405.23	1	0	603

Flanged Ends

1/2	1823V-005C 131.00	1833V-005C 133.82	1	8	602
3/4	1823V-007C 160.59	1833V-007C 167.29	1	8	602
1	1823V-010C 183.84	1833V-010C 195.16	1	8	602
1-1/4	1823V-012C 274.69	1833V-012C 284.33	1	8	602
1-1/2	1823V-015C 302.14	1833V-015C 312.22	1	4	602
2	1823V-020C 420.45	1833V-020C 500.73	1	0	602
2-1/2	1823V-025C 784.74	1833V-025C 941.93	1	0	603
3	1823V-030C 1147.61	1833V-030C 1173.76	1	0	603
4	1823V-040C 2093.21	1833V-040C 2093.23	1	0	603
6	1823V-060C 4457.67	1833V-060C 4457.67	1	0	613

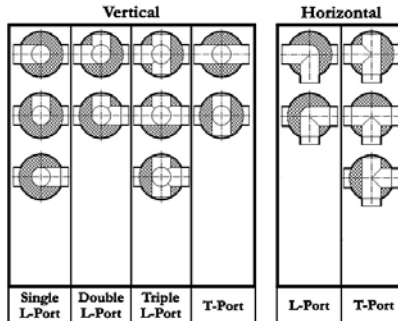


Thermoplastic Valves True Union 2000 Industrial 3-Way Ball Valves

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 4" 150 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
 Vertical 3-Way or Horizontal Diverter Design
 (No Branch Shut-off)
 All Standard Carton Quantities are one
 All Valves assembled with Silicone-Free,
 Water Soluble Lubricant
 See Ball Valve Accessories & Repair Kits Section
 for Additional Options and Features

Ball Port Options



Ball port options viewed from top of valve



Horizontal Diverter Valve



Vertical 3-Way Valve

PVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint	Ball Port	Socket Part # Price Each	SR Thread Part # Price Each	Spigot Part # Price Each	Flanged Part # Price Each	Socket Part # Price Each	SR Thread Part # Price Each	Spigot Part # Price Each	Flanged Part # Price Each	
1/2	L-Port	5022L1-005 102.54	5021L1-005SR 105.85	5027L1-005 102.54	5023L1-005 209.43	5032L1-005 111.22	5031L1-005SR 116.24	5037L1-005 111.22	5033L1-005 218.79	615
	T-Port	5022T1-005 102.54	5021T1-005SR 105.85	5027T1-005 102.54	5023T1-005 209.43	5032T1-005 111.22	5031T1-005SR 116.24	5037T1-005 111.22	5033T1-005 218.79	615
3/4	L-Port	5022L1-007 122.29	5021L1-007SR 126.36	5027L1-007 122.29	5023L1-007 219.13	5032L1-007 131.63	5031L1-007SR 135.73	5037L1-007 131.63	5033L1-007 231.24	615
	T-Port	5022T1-007 122.29	5021T1-007SR 126.36	5027T1-007 122.29	5023T1-007 219.13	5032T1-007 131.63	5031T1-007SR 135.73	5037T1-007 131.63	5033T1-007 231.24	615
1	L-Port	5022L1-010 148.27	5021L1-010SR 152.26	5027L1-010 148.27	5023L1-010 312.32	5032L1-010 163.35	5031L1-010SR 167.40	5037L1-010 163.35	5033L1-010 341.42	615
	T-Port	5022T1-010 148.27	5021T1-010SR 152.26	5027T1-010 148.27	5023T1-010 312.32	5032T1-010 163.35	5031T1-010SR 167.40	5037T1-010 163.35	5033T1-010 341.42	615
1-1/4	L-Port	5022L1-012 171.86	5021L1-012SR 179.63	5027L1-012 171.86	5023L1-012 590.69	5032L1-012 193.32	5031L1-012SR 201.44	5037L1-012 193.32	5033L1-012 625.67	615
	T-Port	5022T1-012 171.86	5021T1-012SR 179.63	5027T1-012 171.86	5023T1-012 590.69	5032T1-012 193.32	5031T1-012SR 201.44	5037T1-012 193.32	5033T1-012 625.67	615
1-1/2	L-Port	5022L1-015 200.95	5021L1-015SR 213.94	5027L1-015 200.95	5023L1-015 608.53	5032L1-015 220.00	5031L1-015SR 232.98	5037L1-015 220.00	5033L1-015 636.42	615
	T-Port	5022T1-015 200.95	5021T1-015SR 213.94	5027T1-015 200.95	5023T1-015 608.53	5032T1-015 220.00	5031T1-015SR 232.98	5037T1-015 220.00	5033T1-015 636.42	615
2	L-Port	5022L1-020 246.51	5021L1-020SR 259.48	5027L1-020 246.51	5023L1-020 790.23	5032L1-020 287.39	5031L1-020SR 301.48	5037L1-020 287.39	5033L1-020 829.91	615
	T-Port	5022T1-020 246.51	5021T1-020SR 259.48	5027T1-020 246.51	5023T1-020 790.23	5032T1-020 287.39	5031T1-020SR 301.48	5037T1-020 287.39	5033T1-020 829.91	615
2-1/2	L-Port	5022L1-025 831.12	5021L1-025SR 867.49	5027L1-025 831.12	5023L1-025 1387.52	5032L1-025 883.79	5031L1-025SR 920.15	5037L1-025 883.79	5033L1-025 1626.02	615
	T-Port	5022T1-025 831.12	5021T1-025SR 867.49	5027T1-025 831.12	5023T1-025 1387.52	5032T1-025 883.79	5031T1-025SR 920.15	5037T1-025 883.79	5033T1-025 1626.02	615
3	L-Port	5022L1-030 848.09	5021L1-030SR 886.21	5027L1-030 848.09	5023L1-030 1405.72	5032L1-030 897.64	5031L1-030SR 934.00	5037L1-030 897.64	5033L1-030 1633.48	615
	T-Port	5022T1-030 848.09	5021T1-030SR 886.21	5027T1-030 848.09	5023T1-030 1405.72	5032T1-030 897.64	5031T1-030SR 934.00	5037T1-030 897.64	5033T1-030 1633.48	615
4	L-Port	5022L1-040 1535.97	5021L1-040SR 1577.56	5027L1-040 1535.97	5023L1-040 2042.29	5032L1-040 1553.29	5031L1-040SR 1594.87	5037L1-040 1553.29	5033L1-040 2232.33	615
	T-Port	5022T1-040 1535.97	5021T1-040SR 1577.56	5027T1-040 1535.97	5023T1-040 2042.29	5032T1-040 1553.29	5031T1-040SR 1594.87	5037T1-040 1553.29	5033T1-040 2232.33	615

Thermoplastic Valves

True Union 2000 Industrial 3-Way Ball Valves



CPVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	5022L1-005C 157.82	5021L1-005CSR 162.83	5027L1-005C 157.82	5023L1-005C 322.20	5032L1-005C 170.98	5031L1-005CSR 178.77	5037L1-005C 170.98	5033L1-005C 336.56	617
	T-Port	5022T1-005C 157.82	5021T1-005CSR 162.83	5027T1-005C 157.82	5023T1-005C 322.20	5032T1-005C 170.98	5031T1-005CSR 178.77	5037T1-005C 170.98	5033T1-005C 336.56	617
3/4	L-Port	5022L1-007C 188.12	5021L1-007CSR 194.37	5027L1-007C 188.12	5023L1-007C 337.09	5032L1-007C 202.49	5031L1-007CSR 208.73	5037L1-007C 202.49	5033L1-007C 355.80	617
	T-Port	5022T1-007C 188.12	5021T1-007CSR 194.37	5027T1-007C 188.12	5023T1-007C 337.09	5032T1-007C 202.49	5031T1-007CSR 208.73	5037T1-007C 202.49	5033T1-007C 355.80	617
1	L-Port	5022L1-010C 228.12	5021L1-010CSR 234.21	5027L1-010C 228.12	5023L1-010C 480.34	5032L1-010C 251.35	5031L1-010CSR 257.40	5037L1-010C 251.35	5033L1-010C 525.21	617
	T-Port	5022T1-010C 228.12	5021T1-010CSR 234.21	5027T1-010C 228.12	5023T1-010C 480.34	5032T1-010C 251.35	5031T1-010CSR 257.40	5037T1-010C 251.35	5033T1-010C 525.21	617
1-1/4	L-Port	5022L1-012C 264.35	5021L1-012CSR 276.29	5027L1-012C 264.35	5023L1-012C 908.74	5032L1-012C 296.38	5031L1-012CSR 309.89	5037L1-012C 296.38	5033L1-012C 962.62	617
	T-Port	5022T1-012C 264.35	5021T1-012CSR 276.29	5027T1-012C 264.35	5023T1-012C 908.74	5032T1-012C 296.38	5031T1-012CSR 309.89	5037T1-012C 296.38	5033T1-012C 962.62	617
1-1/2	L-Port	5022L1-015C 309.22	5021L1-015CSR 329.13	5027L1-015C 309.22	5023L1-015C 936.25	5032L1-015C 338.44	5031L1-015CSR 358.39	5037L1-015C 338.44	5033L1-015C 979.05	617
	T-Port	5022T1-015C 309.22	5021T1-015CSR 329.13	5027T1-015C 309.22	5023T1-015C 936.25	5032T1-015C 338.44	5031T1-015CSR 358.39	5037T1-015C 338.44	5033T1-015C 979.05	617
2	L-Port	5022L1-020C 379.35	5021L1-020CSR 399.20	5027L1-020C 379.35	5023L1-020C 1215.68	5032L1-020C 442.12	5031L1-020CSR 463.73	5037L1-020C 442.12	5033L1-020C 1276.82	617
	T-Port	5022T1-020C 379.35	5021T1-020CSR 399.20	5027T1-020C 379.35	5023T1-020C 1215.68	5032T1-020C 442.12	5031T1-020CSR 463.73	5037T1-020C 442.12	5033T1-020C 1276.82	617
2-1/2	L-Port	5022L1-025C 1278.73	5021L1-025CSR 1334.51	5027L1-025C 1278.73	5023L1-025C 2134.61	5032L1-025C 1359.63	5031L1-025CSR 1415.62	5037L1-025C 1359.63	5033L1-025C 2501.60	617
	T-Port	5022T1-025C 1278.73	5021T1-025CSR 1334.51	5027T1-025C 1278.73	5023T1-025C 2134.61	5032T1-025C 1359.63	5031T1-025CSR 1415.62	5037T1-025C 1359.63	5033T1-025C 2501.60	617
3	L-Port	5022L1-030C 1304.72	5021L1-030CSR 1363.43	5027L1-030C 1304.72	5023L1-030C 2163.38	5032L1-030C 1380.93	5031L1-030CSR 1436.91	5037L1-030C 1380.93	5033L1-030C 2513.13	617
	T-Port	5022T1-030C 1304.72	5021T1-030CSR 1363.43	5027T1-030C 1304.72	5023T1-030C 2163.38	5032T1-030C 1380.93	5031T1-030CSR 1436.91	5037T1-030C 1380.93	5033T1-030C 2513.13	617
4	L-Port	5022L1-040C 2362.94	5021L1-040CSR 2426.84	5027L1-040C 2362.94	5023L1-040C 3142.08	5032L1-040C 2389.62	5031L1-040CSR 2453.65	5037L1-040C 2389.62	5033L1-040C 3434.33	617
	T-Port	5022T1-040C 2362.94	5021T1-040CSR 2426.84	5027T1-040C 2362.94	5023T1-040C 3142.08	5032T1-040C 2389.62	5031T1-040CSR 2453.65	5037T1-040C 2389.62	5033T1-040C 3434.33	617

PVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005 102.03	4721L1-005SR 103.65	4727L1-005 102.03	4723L1-005 210.83	4732L1-005 110.51	4731L1-005SR 112.15	4737L1-005 110.51	4733L1-005 218.43	615
	Double L-Port	4722L2-005 203.20	4721L2-005SR 204.83	4727L2-005 203.20	4723L2-005 311.99	4732L2-005 211.68	4731L2-005SR 213.33	4737L2-005 211.68	4733L2-005 319.60	615
	Triple L-Port	4722L3-005 203.20	4721L3-005SR 204.83	4727L3-005 203.20	4723L3-005 311.99	4732L3-005 211.68	4731L3-005SR 213.33	4737L3-005 211.68	4733L3-005 319.60	615
	T-Port	4722T1-005 102.03	4721T1-005SR 103.65	4727T1-005 102.03	4723T1-005 210.83	4732T1-005 110.51	4731T1-005SR 112.15	4737T1-005 110.51	4733T1-005 218.43	615
3/4	L-Port	4722L1-007 119.68	4721L1-007SR 123.78	4727L1-007 119.68	4723L1-007 221.38	4732L1-007 130.43	4731L1-007SR 134.49	4737L1-007 130.43	4733L1-007 230.74	615
	Double L-Port	4722L2-007 220.86	4721L2-007SR 224.92	4727L2-007 220.86	4723L2-007 322.56	4732L2-007 231.60	4731L2-007SR 235.66	4737L2-007 231.60	4733L2-007 331.89	615
	Triple L-Port	4722L3-007 220.86	4721L3-007SR 224.92	4727L3-007 220.86	4723L3-007 322.56	4732L3-007 231.60	4731L3-007SR 235.66	4737L3-007 231.60	4733L3-007 331.89	615
	T-Port	4722T1-007 119.68	4721T1-007SR 123.78	4727T1-007 119.68	4723T1-007 221.38	4732T1-007 130.43	4731T1-007SR 134.49	4737T1-007 130.43	4733T1-007 230.74	615
1	L-Port	4722L1-010 145.49	4721L1-010SR 149.58	4727L1-010 145.49	4723L1-010 315.78	4732L1-010 161.98	4731L1-010SR 166.03	4737L1-010 161.98	4733L1-010 341.77	615
	Double L-Port	4722L2-010 246.69	4721L2-010SR 250.76	4727L2-010 246.69	4723L2-010 416.96	4732L2-010 263.12	4731L2-010SR 267.20	4737L2-010 263.12	4733L2-010 442.94	615
	Triple L-Port	4722L3-010 246.69	4721L3-010SR 250.76	4727L3-010 246.69	4723L3-010 416.96	4732L3-010 263.12	4731L3-010SR 267.20	4737L3-010 263.12	4733L3-010 442.94	615
	T-Port	4722T1-010 145.49	4721T1-010SR 149.58	4727T1-010 145.49	4723T1-010 315.78	4732T1-010 161.98	4731T1-010SR 166.03	4737T1-010 161.98	4733T1-010 341.77	615
1-1/4	L-Port	4722L1-012 175.99	4721L1-012SR 184.15	4727L1-012 175.99	4723L1-012 595.20	4732L1-012 207.36	4731L1-012SR 215.49	4737L1-012 207.36	4733L1-012 629.48	615
	Double L-Port	4722L2-012 277.17	4721L2-012SR 285.31	4727L2-012 277.17	4723L2-012 696.36	4732L2-012 308.53	4731L2-012SR 316.65	4737L2-012 308.53	4733L2-012 730.66	615
	Triple L-Port	4722L3-012 277.17	4721L3-012SR 285.31	4727L3-012 277.17	4723L3-012 696.36	4732L3-012 308.53	4731L3-012SR 316.65	4737L3-012 308.53	4733L3-012 730.66	615
	T-Port	4722T1-012 175.99	4721T1-012SR 184.15	4727T1-012 175.99	4723T1-012 595.20	4732T1-012 207.36	4731T1-012SR 215.49	4737T1-012 207.36	4733T1-012 629.48	615



Thermoplastic Valves True Union 2000 Industrial 3-Way Ball Valves

PVC Vertical 3-Way Ball Valves (continued)

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/2	L-Port	4722L1-015 203.52	4721L1-015SR 216.54	4727L1-015 203.52	4723L1-015 617.38	4732L1-015 223.11	4731L1-015SR 236.11	4737L1-015 223.11	4733L1-015 636.42	615
	Double L-Port	4722L2-015 304.71	4721L2-015SR 317.68	4727L2-015 304.71	4723L2-015 718.53	4732L2-015 324.26	4731L2-015SR 337.26	4737L2-015 324.26	4733L2-015 737.58	615
	Triple L-Port	4722L3-015 304.71	4721L3-015SR 317.68	4727L3-015 304.71	4723L3-015 718.53	4732L3-015 324.26	4731L3-015SR 337.26	4737L3-015 324.26	4733L3-015 737.58	615
	T-Port	4722T1-015 203.52	4721T1-015SR 216.54	4727T1-015 203.52	4723T1-015 617.38	4732T1-015 223.11	4731T1-015SR 236.11	4737T1-015 223.11	4733T1-015 636.42	615
2	L-Port	4722L1-020 249.61	4721L1-020SR 263.73	4727L1-020 249.61	4723L1-020 795.60	4732L1-020 289.81	4731L1-020SR 303.92	4737L1-020 289.81	4733L1-020 830.80	615
	Double L-Port	4722L2-020 350.76	4721L2-020SR 364.91	4727L2-020 350.76	4723L2-020 896.78	4732L2-020 390.98	4731L2-020SR 405.07	4737L2-020 390.98	4733L2-020 931.93	615
	Triple L-Port	4722L3-020 350.76	4721L3-020SR 364.91	4727L3-020 350.76	4723L3-020 896.78	4732L3-020 390.98	4731L3-020SR 405.07	4737L3-020 390.98	4733L3-020 931.93	615
	T-Port	4722T1-020 249.61	4721T1-020SR 263.73	4727T1-020 249.61	4723T1-020 795.60	4732T1-020 289.81	4731T1-020SR 303.92	4737T1-020 289.81	4733T1-020 830.80	615
2-1/2	L-Port	4722L1-025 877.91	4721L1-025SR 914.28	4727L1-025 877.91	4723L1-025 1393.58	4732L1-025 887.78	4731L1-025SR 924.17	4737L1-025 887.78	4733L1-025 1624.14	615
	Double L-Port	4722L2-025 979.05	4721L2-025SR 1015.43	4727L2-025 979.05	4723L2-025 1494.75	4732L2-025 988.94	4731L2-025SR 1025.31	4737L2-025 988.94	4733L2-025 1725.31	615
	Triple L-Port	4722L3-025 979.05	4721L3-025SR 1015.43	4727L3-025 979.05	4723L3-025 1494.75	4732L3-025 988.94	4731L3-025SR 1025.31	4737L3-025 988.94	4733L3-025 1725.31	615
	T-Port	4722T1-025 877.91	4721T1-025SR 914.28	4727T1-025 877.91	4723T1-025 1393.58	4732T1-025 887.78	4731T1-025SR 924.17	4737T1-025 887.78	4733T1-025 1624.14	615
3	L-Port	4722L1-030 895.91	4721L1-030SR 932.28	4727L1-030 895.91	4723L1-030 1412.80	4732L1-030 903.87	4731L1-030SR 940.25	4737L1-030 903.87	4733L1-030 1634.89	615
	Double L-Port	4722L2-030 997.07	4721L2-030SR 1033.46	4727L2-030 997.07	4723L2-030 1513.98	4732L2-030 1005.05	4731L2-030SR 1041.41	4737L2-030 1005.05	4733L2-030 1736.04	615
	Triple L-Port	4722L3-030 997.07	4721L3-030SR 1033.46	4727L3-030 997.07	4723L3-030 1513.98	4732L3-030 1005.05	4731L3-030SR 1041.41	4737L3-030 1005.05	4733L3-030 1736.04	615
	T-Port	4722T1-030 895.91	4721T1-030SR 932.28	4727T1-030 895.91	4723T1-030 1412.80	4732T1-030 903.87	4731T1-030SR 940.25	4737T1-030 903.87	4733T1-030 1634.89	615
4	L-Port	4722L1-040 1548.61	4721L1-040SR 1590.18	4727L1-040 1548.61	4723L1-040 2053.91	4732L1-040 1563.68	4731L1-040SR 1605.25	4737L1-040 1563.68	4733L1-040 2151.25	615
	Double L-Port	4722L2-040 1649.80	4721L2-040SR 1691.34	4727L2-040 1649.80	4723L2-040 2155.07	4732L2-040 1664.85	4731L2-040SR 1706.43	4737L2-040 1664.85	4733L2-040 2252.42	615
	Triple L-Port	4722L3-040 1649.80	4721L3-040SR 1691.34	4727L3-040 1649.80	4723L3-040 2155.07	4732L3-040 1664.85	4731L3-040SR 1706.43	4737L3-040 1664.85	4733L3-040 2252.42	615
	T-Port	4722T1-040 1548.61	4721T1-040SR 1590.18	4727T1-040 1548.61	4723T1-040 2053.91	4732T1-040 1563.68	4731T1-040SR 1605.25	4737T1-040 1563.68	4733T1-040 2151.25	615

CPVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005C 156.94	4721L1-005CSR 159.53	4727L1-005C 156.94	4723L1-005C 324.26	4732L1-005C 169.93	4731L1-005CSR 172.52	4737L1-005C 169.93	4733L1-005C 336.06	617
	Double L-Port	4722L2-005C 312.67	4721L2-005CSR 315.08	4727L2-005C 312.67	4723L2-005C 480.00	4732L2-005C 325.66	4731L2-005CSR 328.09	4737L2-005C 325.66	4733L2-005C 491.61	617
	Triple L-Port	4722L3-005C 312.67	4721L3-005CSR 315.08	4727L3-005C 312.67	4723L3-005C 480.00	4732L3-005C 325.66	4731L3-005CSR 328.09	4737L3-005C 325.66	4733L3-005C 491.61	617
	T-Port	4722T1-005C 156.94	4721T1-005CSR 159.53	4727T1-005C 156.94	4723T1-005C 324.26	4732T1-005C 169.93	4731T1-005CSR 172.52	4737T1-005C 169.93	4733T1-005C 336.06	617
3/4	L-Port	4722L1-007C 184.15	4721L1-007CSR 190.54	4727L1-007C 184.15	4723L1-007C 340.56	4732L1-007C 200.60	4731L1-007CSR 207.00	4737L1-007C 200.60	4733L1-007C 354.93	617
	Double L-Port	4722L2-007C 339.86	4721L2-007CSR 345.92	4727L2-007C 339.86	4723L2-007C 496.13	4732L2-007C 356.32	4731L2-007CSR 362.56	4737L2-007C 356.32	4733L2-007C 510.48	617
	Triple L-Port	4722L3-007C 339.86	4721L3-007CSR 345.92	4727L3-007C 339.86	4723L3-007C 496.13	4732L3-007C 356.32	4731L3-007CSR 362.56	4737L3-007C 356.32	4733L3-007C 510.48	617
	T-Port	4722T1-007C 184.15	4721T1-007CSR 190.54	4727T1-007C 183.68	4723T1-007C 340.56	4732T1-007C 200.60	4731T1-007CSR 207.00	4737T1-007C 200.60	4733T1-007C 354.93	617
1	L-Port	4722L1-010C 223.81	4721L1-010CSR 230.05	4727L1-010C 223.81	4723L1-010C 485.72	4732L1-010C 249.27	4731L1-010CSR 255.51	4737L1-010C 249.27	4733L1-010C 525.73	617
	Double L-Port	4722L2-010C 379.52	4721L2-010CSR 385.76	4727L2-010C 379.52	4723L2-010C 641.43	4732L2-010C 404.81	4731L2-010CSR 411.07	4737L2-010C 404.81	4733L2-010C 681.45	617
	Triple L-Port	4722L3-010C 379.52	4721L3-010CSR 385.76	4727L3-010C 379.52	4723L3-010C 641.43	4732L3-010C 404.81	4731L3-010CSR 411.07	4737L3-010C 404.81	4733L3-010C 681.45	617
	T-Port	4722T1-010C 223.81	4721T1-010CSR 230.05	4727T1-010C 223.81	4723T1-010C 485.72	4732T1-010C 249.27	4731T1-010CSR 255.51	4737T1-010C 249.27	4733T1-010C 525.73	617

Thermoplastic Valves
True Union 2000 Industrial 3-Way Ball Valves



CPVC Vertical 3-Way Ball Valves (continued)

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/4	L-Port	4722L1-012C 270.75	4721L1-012CSR 283.21	4727L1-012C 270.75	4723L1-012C 915.65	4732L1-012C 319.07	4731L1-012CSR 331.55	4737L1-012C 319.07	4733L1-012C 968.48	617
	Double L-Port	4722L2-012C 426.29	4721L2-012CSR 438.77	4727L2-012C 426.29	4723L2-012C 1071.22	4732L2-012C 474.62	4731L2-012CSR 487.97	4737L2-012C 474.62	4733L2-012C 730.66	617
	Triple L-Port	4722L3-012C 426.29	4721L3-012CSR 438.77	4727L3-012C 426.29	4723L3-012C 1071.22	4732L3-012C 474.62	4731L3-012CSR 487.97	4737L3-012C 474.62	4733L3-012C 1124.04	617
	T-Port	4722T1-012C 270.75	4721T1-012CSR 283.21	4727T1-012C 270.75	4723T1-012C 915.65	4732T1-012C 319.07	4731T1-012CSR 331.55	4737T1-012C 319.07	4733T1-012C 968.48	617
1-1/2	L-Port	4722L1-015C 313.00	4721L1-015CSR 333.11	4727L1-015C 313.00	4723L1-015C 949.80	4732L1-015C 343.15	4731L1-015CSR 363.23	4737L1-015C 343.15	4733L1-015C 979.05	617
	Double L-Port	4722L2-015C 468.76	4721L2-015CSR 488.65	4727L2-015C 468.76	4723L2-015C 1105.32	4732L2-015C 498.89	4731L2-015CSR 558.62	4737L2-015C 498.89	4733L2-015C 1134.78	617
	Triple L-Port	4722L3-015C 468.76	4721L3-015CSR 488.65	4727L3-015C 468.76	4723L3-015C 1105.32	4732L3-015C 498.89	4731L3-015CSR 558.62	4737L3-015C 498.89	4733L3-015C 1134.78	617
	T-Port	4722T1-015C 313.00	4721T1-015CSR 333.11	4727T1-015C 313.00	4723T1-015C 949.80	4732T1-015C 343.15	4731T1-015CSR 363.23	4737T1-015C 343.15	4733T1-015C 979.05	617
2	L-Port	4722L1-020C 384.04	4721L1-020CSR 405.67	4727L1-020C 384.04	4723L1-020C 1223.99	4732L1-020C 445.86	4731L1-020CSR 467.52	4737L1-020C 445.86	4733L1-020C 1278.04	617
	Double L-Port	4722L2-020C 539.61	4721L2-020CSR 561.41	4727L2-020C 539.61	4723L2-020C 1332.96	4732L2-020C 601.44	4731L2-020CSR 623.06	4737L2-020C 601.44	4733L2-020C 1433.76	617
	Triple L-Port	4722L3-020C 539.61	4721L3-020CSR 561.41	4727L3-020C 539.61	4723L3-020C 1332.96	4732L3-020C 601.44	4731L3-020CSR 623.06	4737L3-020C 601.44	4733L3-020C 1433.76	617
	T-Port	4722T1-020C 384.04	4721T1-020CSR 405.67	4727T1-020C 384.04	4723T1-020C 1223.99	4732T1-020C 445.86	4731T1-020CSR 467.52	4737T1-020C 445.86	4733T1-020C 1278.04	617
2-1/2	L-Port	4722L1-025C 1350.63	4721L1-025CSR 1406.56	4727L1-025C 1350.63	4723L1-025C 2143.79	4732L1-025C 1365.85	4731L1-025CSR 1421.81	4737L1-025C 1365.85	4733L1-025C 2498.75	617
	Double L-Port	4722L2-025C 1506.17	4721L2-025CSR 1544.08	4727L2-025C 1506.17	4723L2-025C 2299.54	4732L2-025C 1521.42	4731L2-025CSR 1577.38	4737L2-025C 1521.42	4733L2-025C 2654.31	617
	Triple L-Port	4722L3-025C 1506.17	4721L3-025CSR 1544.08	4727L3-025C 1506.17	4723L3-025C 2299.54	4732L3-025C 1521.42	4731L3-025CSR 1577.38	4737L3-025C 1521.42	4733L3-025C 2654.31	617
	T-Port	4722T1-025C 1350.63	4721T1-025CSR 1406.56	4727T1-025C 1350.63	4723T1-025C 2143.79	4732T1-025C 1365.85	4731T1-025CSR 1421.81	4737T1-025C 1365.85	4733T1-025C 2498.75	617
3	L-Port	4722L1-030C 1378.33	4721L1-030CSR 1434.28	4727L1-030C 1378.33	4723L1-030C 2173.62	4732L1-030C 1390.47	4731L1-030CSR 1446.60	4737L1-030C 1390.47	4733L1-030C 2515.20	617
	Double L-Port	4722L2-030C 1533.91	4721L2-030CSR 1571.82	4727L2-030C 1533.91	4723L2-030C 2329.15	4732L2-030C 1546.18	4731L2-030CSR 1602.15	4737L2-030C 1546.18	4733L2-030C 2670.75	617
	Triple L-Port	4722L3-030C 1533.91	4721L3-030CSR 1571.82	4727L3-030C 1533.91	4723L3-030C 2329.15	4732L3-030C 1546.18	4731L3-030CSR 1602.15	4737L3-030C 1546.18	4733L3-030C 2670.75	617
	T-Port	4722T1-030C 1378.33	4721T1-030CSR 1434.28	4727T1-030C 1378.33	4723T1-030C 2173.62	4732T1-030C 1390.47	4731T1-030CSR 1446.60	4737T1-030C 1390.47	4733T1-030C 2515.20	617
4	L-Port	4722L1-040C 2382.52	4721L1-040CSR 2446.43	4727L1-040C 2382.52	4723L1-040C 3191.12	4732L1-040C 2405.72	4731L1-040CSR 2469.64	4737L1-040C 2405.72	4733L1-040C 3309.60	617
	Double L-Port	4722L2-040C 2538.05	4721L2-040CSR 2601.98	4727L2-040C 2538.05	4723L2-040C 3315.47	4732L2-040C 2561.27	4731L2-040CSR 2625.20	4737L2-040C 2561.27	4733L2-040C 3465.15	617
	Triple L-Port	4722L3-040C 2538.05	4721L3-040CSR 2601.98	4727L3-040C 2538.05	4723L3-040C 3315.47	4732L3-040C 2561.27	4731L3-040CSR 2625.20	4737L3-040C 2561.27	4733L3-040C 3465.15	617
	T-Port	4722T1-040C 2382.52	4721T1-040CSR 2446.43	4727T1-040C 2382.52	4723T1-040C 3191.12	4732T1-040C 2405.72	4731T1-040CSR 2469.64	4737T1-040C 2405.72	4733T1-040C 3309.60	617



Thermoplastic Valves Tee-Style "Zero Dead-Leg" Ball Valves

Valves are produced to order in Ball Valve sizes 1/2" – 2".
Tee Valves can be custom produced in any standard
Tee and Valve size combination.

The Tee Valve is assembled with socket end connector.
Tee Valves are a non-stock configuration.
All orders are non-cancelable, non-returnable.



Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm) = 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1/2	182901-005 163.19	183901-005 175.80	1	12	263
3/4	182901-007 178.35	183901-007 192.79	1	8	263
1	182901-010 181.71	183901-010 203.39	1	8	263
2	182901-020 301.16	183901-020 351.61	1	0	263
3/4X1/2	182901-101 165.91	183901-101 178.48	1	12	263
1X1/2	182901-130 171.36	183901-130 183.99	1	8	263
1X3/4	182901-131 181.71	183901-131 203.39	1	8	263
1-1/4X1/2	182901-166 180.55	183901-166 193.15	1	8	263
1-1/4X3/4	182901-167 185.06	183901-167 199.53	1	8	263
1-1/4X1	182901-168 197.72	183901-168 219.42	1	8	263
1-1/2X1/2	182901-209 180.55	183901-209 193.17	1	8	263
1-1/2X3/4	182901-210 185.06	183901-210 199.53	1	8	263
1-1/2X1	182901-211 197.72	183901-211 219.42	1	8	263
2X1/2	182901-247 233.48	183901-247 246.17	1	8	263
2X3/4	182901-248 240.39	183901-248 254.80	1	8	263
2X1	182901-249 250.64	183901-249 272.35	1	8	263
2X1-1/2	182901-251 309.25	183901-251 336.34	1	8	263
3X1/2	182901-333 238.23	183901-333 250.85	1	0	263
3X1	182901-335 255.26	183901-335 276.96	1	4	263
3X1-1/2	182901-337 292.86	183901-337 319.97	1	0	263
3X2	182901-338 318.44	183901-338 368.92	1	0	263
4X1	182901-417 295.06	183901-417 316.75	1	0	263
4X1-1/2	182901-419 332.68	183901-419 359.77	1	0	263
4X2	182901-420 392.35	183901-420 442.83	1	0	263
6X2	182901-528 461.26	183901-528 511.75	1	0	263
8X2	182901-578 703.81	183901-578 754.31	1	0	263

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1/2	182901-005C 251.47	183901-005C 263.35	1	12	264
3/4	182901-007C 274.80	183901-007C 288.40	1	8	264

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1	182901-010C 279.99	183901-010C 300.41	1	8	264
2	182901-020C 305.92	183901-020C 353.36	1	4	264
3/4X1/2	182901-101C 255.63	183901-101C 267.48	1	12	264
1X1/2	182901-130C 231.83	183901-130C 277.07	1	8	264
1X3/4	182901-131C 279.99	183901-131C 293.61	1	8	264
1-1/4X1/2	182901-166C 283.69	183901-166C 295.58	1	8	264
1-1/4X3/4	182901-167C 285.19	183901-167C 298.78	1	8	264
1-1/4X1	182901-168C 326.88	183901-168C 347.29	1	8	264
1-1/2X1/2	182901-209C 318.65	183901-209C 329.88	1	8	264
1-1/2X3/4	182901-210C 327.88	183901-210C 335.95	1	8	264
1-1/2X1	182901-211C 339.20	183901-211C 347.29	1	8	264
2X1/2	182901-247C 363.89	183901-247C 375.75	1	8	264
2X3/4	182901-248C 392.64	183901-248C 406.24	1	8	264
2X1	182901-249C 413.22	183901-249C 433.63	1	8	264
2X1-1/2	182901-251C 485.20	183901-251C 510.64	1	0	264
3X1/2	182901-333C 479.02	183901-333C 490.88	1	0	264
3X1	182901-335C 501.63	183901-335C 522.04	1	0	264
3X1-1/2	182901-337C 571.54	183901-337C 596.99	1	0	264
3X2	182901-338C 627.05	183901-338C 674.49	1	0	264
4X1	182901-417C 616.77	183901-417C 637.18	1	0	264
4X1-1/2	182901-419C 686.65	183901-419C 712.13	1	0	264
4X2	182901-420C 818.23	183901-420C 865.67	1	0	264
6X2	182901-528C 1068.74	183901-528C 1116.17	1	0	264
8X2	182901-578C 1576.85	183901-578C 1624.31	1	0	264

PVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
20	182901M-020 163.19	183901M-020 175.80	1	8	263
25	182901M-025 178.35	183901M-025 192.79	1	8	263
32	182901M-032 181.71	183901M-032 203.39	1	8	263
40	182901M-040 252.48	183901M-040 270.74	1	8	263

Thermoplastic Valves
Tee-Style "Zero Dead-Leg" Ball Valves & True Union 2000 Standard Ball Valves



Tee-Style "Zero Dead-Leg" Ball Valves

PVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
50	182901M-050 264.35	183901M-050 342.67	1	8	263
63	182901M-063 301.16	183901M-063 351.61	1	8	263

CPVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
20	182901M-020C 251.47	183901M-020C 263.35	1	8	264

CPVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
25	182901M-025C 292.34	183901M-025C 288.40	1	8	263
32	182901M-032C 279.99	183901M-032C 300.41	1	8	264
40	182901M-040C 283.87	183901M-040C 302.98	1	8	264
50	182901M-050C 288.93	183901M-050C 340.43	1	8	264
63	182901M-063C 305.92	183901M-063C 353.36	1	8	264

True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" = 235 psi
 2-1/2" - 4" = 150 psi
 Flanged = 150 psi

Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free, Water Soluble Lubricant
 See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3629-005 39.77	3639-005 44.23	1	18	608
3/4	3629-007 47.03	3639-007 52.32	1	18	608
1	3629-010 56.02	3639-010 62.40	1	12	608
1-1/4	3629-012 77.48	3639-012 98.91	1	8	608
1-1/2	3629-015 93.35	3639-015 103.62	1	8	608
2	3629-020 123.18	3639-020 135.62	1	4	608

Socket Ends

2-1/2	3622-025 235.95	3632-025 320.80	1	0	609
3	3622-030 312.14	3632-030 346.81	1	0	609
4	3622-040 527.23	3632-040 586.01	1	0	609

Threaded Ends

2-1/2	3621-025 235.95	3631-025 320.80	1	0	609
3	3621-030 312.14	3631-030 346.81	1	0	609
4	3621-040 527.23	3631-040 586.01	1	0	609

SR Threaded Ends

1/2	3621-005SR 40.63	3631-005SR 45.08	1	18	608
3/4	3621-007SR 49.06	3631-007SR 54.39	1	18	608
1	3621-010SR 58.06	3631-010SR 64.44	1	18	608
1-1/4	3621-012SR 83.67	3631-012SR 105.08	1	12	608
1-1/2	3621-015SR 99.98	3631-015SR 110.24	1	8	608
2	3621-020SR 130.35	3631-020SR 142.81	1	8	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	3621-025SR 256.11	3631-025SR 340.14	1	0	609
3	3621-030SR 331.52	3631-030SR 366.17	1	0	609
4	3621-040SR 550.00	3631-040SR 608.60	1	0	609

Spigot Ends

1/2	3627-005 39.77	3637-005 44.23	1	18	608
3/4	3627-007 47.03	3637-007 52.32	1	18	608
1	3627-010 56.02	3637-010 62.40	1	12	608
1-1/4	3627-012 77.48	3637-012 98.91	1	12	608
1-1/2	3627-015 93.35	3637-015 103.62	1	8	608
2	3627-020 123.18	3637-020 135.62	1	8	608
2-1/2	3627-025 236.74	3637-025 320.80	1	0	609
3	3627-030 312.14	3637-030 346.81	1	0	609
4	3627-040 527.23	3637-040 586.01	1	0	609

Flanged Ends

1/2	3623-005 56.87	3633-005 60.65	1	8	608
3/4	3623-007 72.05	3633-007 78.36	1	8	608
1	3623-010 87.18	3633-010 93.75	1	8	608
1-1/4	3623-012 102.35	3633-012 113.76	1	4	608
1-1/2	3623-015 128.93	3633-015 140.29	1	4	608
2	3623-020 205.28	3633-020 217.74	1	0	608



Thermoplastic Valves True Union 2000 Standard Ball Valves

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
2-1/2	3623-025 379.14	3633-025 385.41	1	0	609
3	3623-030 392.87	3633-030 520.28	1	0	609
4	3623-040 842.57	3633-040 976.66	1	0	609

PVC White Standard

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Socket EPDM

3622-015W	1-1/2	1	8	608	93.35
3622-020W	2	1	8	608	123.18

PVC White Standard

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

SR Threaded Ends EPDM

3621-015WSR	1-1/2	1	8	608	99.98
3621-020WSR	2	1	8	608	130.35

CPVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1/2	3629-005C 52.48	3639-005C 58.36	1	18	610
3/4	3629-007C 66.13	3639-007C 73.49	1	18	610
1	3629-010C 78.73	3639-010C 87.47	1	12	610
1-1/4	3629-012C 125.16	3639-012C 139.11	1	8	610
1-1/2	3629-015C 132.16	3639-015C 146.85	1	8	610
2	3629-020C 176.78	3639-020C 203.21	1	4	610

Socket Ends

2-1/2	3622-025C 396.31	3632-025C 440.32	1	0	611
3	3622-030C 463.39	3632-030C 514.91	1	0	611
4	3622-040C 839.66	3632-040C 932.96	1	0	611

Threaded Ends

2-1/2	3621-025C 396.31	3631-025C 440.32	1	0	611
3	3621-030C 463.39	3631-030C 514.91	1	0	611
4	3621-040C 839.66	3631-040C 932.96	1	0	611

SR Threaded Ends

1/2	3621-005CSR 53.34	3631-005CSR 59.19	1	18	610
3/4	3621-007CSR 68.21	3631-007CSR 75.56	1	18	610
1	3621-010CSR 80.77	3631-010CSR 89.48	1	18	610
1-1/4	3621-012CSR 131.34	3631-012CSR 145.26	1	12	610
1-1/2	3621-015CSR 138.17	3631-015CSR 153.47	1	8	610
2	3621-020CSR 183.94	3631-020CSR 210.39	1	8	610
2-1/2	3621-025CSR 415.65	3631-025CSR 459.67	1	0	611
3	3621-030CSR 482.73	3631-030CSR 534.25	1	0	611
4	3621-040CSR 862.26	3631-040CSR 956.28	1	0	611

Spigot Ends

1/2	3627-005C 52.48	3637-005C 58.36	1	18	610
------------	---------------------------	---------------------------	---	----	-----

CPVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
3/4	3627-007C 66.13	3637-007C 73.49	1	18	610
1	3627-010C 78.73	3637-010C 87.47	1	12	610
1-1/4	3627-012C 125.16	3637-012C 139.11	1	12	610
1-1/2	3627-015C 132.16	3637-015C 146.85	1	8	610
2	3627-020C 176.78	3637-020C 203.21	1	8	610
2-1/2	3627-025C 396.31	3637-025C 440.32	1	0	611
3	3627-030C 463.39	3637-030C 514.91	1	0	611
4	3627-040C 839.66	3637-040C 932.96	1	0	611

Flanged Ends

1/2	3623-005C 89.08	3633-005C 91.01	1	8	610
3/4	3623-007C 109.19	3633-007C 113.80	1	8	610
1	3623-010C 125.01	3633-010C 132.71	1	8	610
1-1/4	3623-012C 186.79	3633-012C 193.34	1	4	610
1-1/2	3623-015C 205.47	3633-015C 212.31	1	4	610
2	3623-020C 285.91	3633-020C 340.49	1	0	610
2-1/2	3623-025C 533.62	3633-025C 640.52	1	0	611
3	3623-030C 731.60	3633-030C 798.18	1	0	611
4	3623-040C 1368.66	3633-040C 1423.40	1	0	611

Thermoplastic Valves

True Union 2000 Industrial Retrofit Ball Valves - Replaces Other Brand Valves



Industrial Valve

Complete universal replacement valve for domestic and import PVC or CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

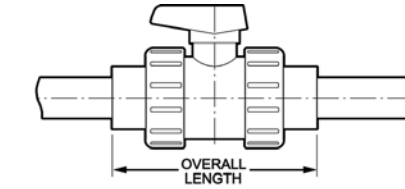
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" = 235 psi

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

Suitable for Vacuum Service

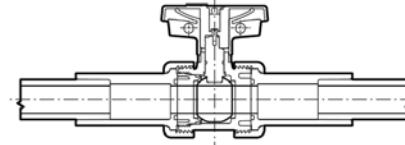
Retrofit End Connector Sets without
valve are also available - See
Ball Valve Accessories & Repair Kits



BALL VALVE FOR
REPLACEMENT



PIPE LAYING LENGTH
AFTER CUTTING



TRUE UNION 2000
INDUSTRIAL BALL
VALVE INSTALLED
WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005 49.69	1832R-005 55.27	1	18	600
3/4	1822R-007 58.80	1832R-007 65.41	1	18	600
1	1822R-010 70.02	1832R-010 77.99	1	12	600
1-1/4	1822R-012 96.86	1832R-012 123.64	1	8	600
1-1/2	1822R-015 116.67	1832R-015 129.52	1	8	600
2	1822R-020 153.96	1832R-020 169.54	1	4	600
2-1/2	1822R-025 295.95	1832R-025 401.01	1	0	601
3	1822R-030 390.18	1832R-030 433.54	1	0	601
4	1822R-040 659.24	1832R-040 732.49	1	0	601

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005C 65.63	1832R-005C 72.93	1	18	602
3/4	1822R-007C 82.65	1832R-007C 91.86	1	18	602
1	1822R-010C 98.40	1832R-010C 109.33	1	12	602
1-1/4	1822R-012C 156.43	1832R-012C 173.86	1	8	602
1-1/2	1822R-015C 165.21	1832R-015C 183.57	1	8	602
2	1822R-020C 220.95	1832R-020C 254.00	1	4	602
2-1/2	1822R-025C 495.39	1832R-025C 550.40	1	0	603
3	1822R-030C 579.22	1832R-030C 643.63	1	0	603
4	1822R-040C 1049.59	1832R-040C 1166.19	1	0	603



Thermoplastic Valves

True Union 2000 Industrial Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Industrial Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

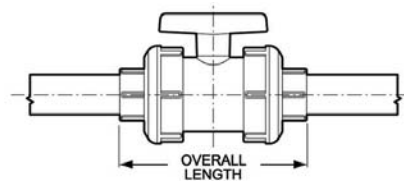
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

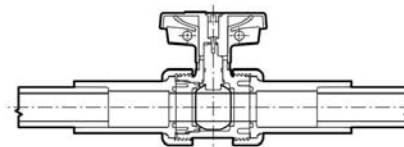
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 INDUSTRIAL BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005 49.69	1832RS-005 55.27	1	18	600
3/4	1822RS-007 58.80	1832RS-007 65.41	1	18	600
1	1822RS-010 70.02	1832RS-010 77.99	1	12	600
1-1/4	1822RS-012 96.86	1832RS-012 123.64	1	8	600
1-1/2	1822RS-015 116.67	1832RS-015 129.52	1	8	600
2	1822RS-020 153.96	1832RS-020 169.54	1	4	600
2-1/2	1822RS-025 295.95	1832RS-025 401.01	1	0	601
3	1822RS-030 390.18	1832RS-030 433.54	1	0	601
4	1822RS-040 659.24	1832RS-040 732.49	1	0	601

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005C 65.63	1832RS-005C 72.93	1	18	602
3/4	1822RS-007C 82.65	1832RS-007C 91.86	1	18	602
1	1822RS-010C 98.40	1832RS-010C 109.33	1	12	602
1-1/4	1822RS-012C 156.43	1832RS-012C 173.86	1	8	602
1-1/2	1822RS-015C 165.21	1832RS-015C 183.57	1	8	602
2	1822RS-020C 220.95	1832RS-020C 254.00	1	4	602
2-1/2	1822RS-025C 495.39	1832RS-025C 550.40	1	0	603
3	1822RS-030C 579.22	1832RS-030C 643.63	1	0	603
4	1822RS-040C 1049.59	1832RS-040C 1166.19	1	0	603

Thermoplastic Valves

True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves



Standard Valve

Complete universal replacement valve for domestic and import PVC or CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

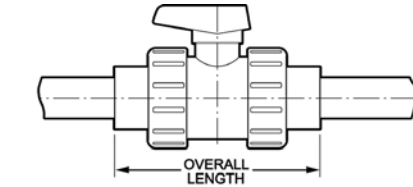
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.

Suitable for Vacuum Service.

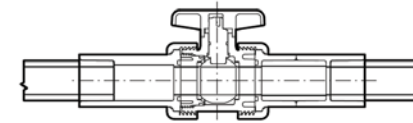
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 STANDARD BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005 39.77	3632R-005 44.23	1	18	608
3/4	3622R-007 47.03	3632R-007 52.32	1	12	608
1	3622R-010 56.02	3632R-010 62.40	1	8	608
1-1/4	3622R-012 77.48	3632R-012 98.91	1	8	608
1-1/2	3622R-015 93.35	3632R-015 103.62	1	8	608
2	3622R-020 123.18	3632R-020 135.62	1	4	608
2-1/2	3622R-025 235.95	3632R-025 320.80	1	0	609
3	3622R-030 312.14	3632R-030 346.81	1	0	609
4	3622R-040 527.23	3632R-040 586.01	1	0	609

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005C 52.48	3632R-005C 58.36	1	18	610
3/4	3622R-007C 66.13	3632R-007C 73.49	1	12	610
1	3622R-010C 78.73	3632R-010C 87.47	1	8	610
1-1/4	3622R-012C 125.16	3632R-012C 139.11	1	8	610
1-1/2	3622R-015C 132.16	3632R-015C 146.85	1	8	610
2	3622R-020C 176.78	3632R-020C 203.21	1	4	610
2-1/2	3622R-025C 396.31	3632R-025C 440.32	1	0	611
3	3622R-030C 463.39	3632R-030C 514.91	1	0	611
4	3622R-040C 839.66	3632R-040C 932.96	1	0	611



Thermoplastic Valves

True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves & True Union Ball Valves (Regular Style)

True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Standard Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

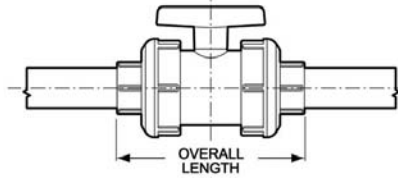
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

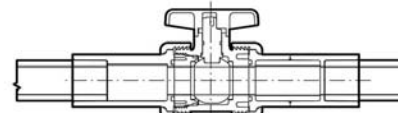
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 STANDARD BALL VALVE INSTALLED WITH RETROFIT KIT

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005 39.77	3632RS-005 44.23	1	18	608
3/4	3622RS-007 47.03	3632RS-007 52.32	1	18	608
1	3622RS-010 56.02	3632RS-010 62.40	1	12	608
1-1/4	3622RS-012 77.48	3632RS-012 98.91	1	8	608
1-1/2	3622RS-015 93.35	3632RS-015 103.62	1	8	608
2	3622RS-020 123.18	3632RS-020 135.62	1	4	608
2-1/2	3622RS-025 235.95	3632RS-025 320.80	1	0	609
3	3622RS-030 312.14	3632RS-030 346.81	1	0	609
4	3622RS-040 527.23	3632RS-040 586.01	1	0	609

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005C 52.48	3632RS-005C 58.36	1	18	610
3/4	3622RS-007C 66.13	3632RS-007C 73.49	1	18	610
1	3622RS-010C 78.73	3632RS-010C 87.47	1	12	610
1-1/4	3622RS-012C 125.16	3632RS-012C 139.11	1	8	610
1-1/2	3622RS-015C 132.16	3632RS-015C 146.85	1	8	610
2	3622RS-020C 176.78	3632RS-020C 203.21	1	4	610
2-1/2	3622RS-025C 396.31	3632RS-025C 440.32	1	0	611
3	3622RS-030C 463.39	3632RS-030C 514.91	1	0	611
4	3622RS-040C 839.66	3632RS-040C 932.96	1	0	611

True Union Ball Valves (Regular Style)



Socket/Threaded Style



Flanged Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2" 235 psi

2-1/2" - 6" 150 psi

Flanged 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant.

6" Venturied Valves are 4" Ball Valves equipped with 4x6 End Connectors.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2329-005 57.23	2339-005 63.68	1	18	230
3/4	2329-007 67.69	2339-007 75.34	1	12	230
1	2329-010 80.64	2339-010 89.82	1	8	230
1-1/4	2329-012 111.55	2339-012 142.38	1	8	230

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1-1/2	2329-015 134.40	2339-015 149.16	1	8	230
2	2329-020 177.31	2339-020 195.25	1	4	230
Socket Ends					
2-1/2	2322-025 323.80	2332-025 438.75	1	0	230

Thermoplastic Valves
True Union Ball Valves (Regular Style)



PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket Ends

3	2322-030 426.91	2332-030 474.35	1	0	230
4	2322-040 721.29	2332-040 801.42	1	0	230

Socket Venturied Ends

6 VENTURIED	2322-060 962.36	2332-060 1048.55	1	0	231
--------------------	---------------------------	----------------------------	---	---	-----

Threaded Ends

2-1/2	2321-025 323.80	2331-025 438.75	1	0	230
3	2321-030 426.91	2331-030 474.35	1	0	230
4	2321-040 721.29	2331-040 801.42	1	0	230

Flanged Ends

1/2	2323-005 81.87	2333-005 87.34	6	0	230
3/4	2323-007 103.72	2333-007 112.80	5	0	230
1	2323-010 125.55	2333-010 134.96	5	0	230
1-1/4	2323-012 147.37	2333-012 163.75	2	0	230
1-1/2	2323-015 185.60	2333-015 201.94	3	0	230
2	2323-020 295.56	2333-020 313.45	2	0	230
2-1/2	2323-025 518.53	2333-025 527.07	1	0	230
3	2323-030 573.11	2333-030 711.55	1	0	230
4	2323-040 1152.32	2333-040 1335.74	1	0	230

Flanged Venturied Ends

6 VENTURIED	2323-060 1680.55	2333-060 1723.61	1	0	231
--------------------	----------------------------	----------------------------	---	---	-----

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

Threaded End Connectors available on request

1/2	2329-005C 75.57	2339-005C 84.00	1	18	232
3/4	2329-007C 95.21	2339-007C 105.80	1	12	232
1	2329-010C 113.32	2339-010C 125.92	1	8	232
1-1/4	2329-012C 180.16	2339-012C 200.24	1	8	232
1-1/2	2329-015C 190.27	2339-015C 211.42	1	8	232
2	2329-020C 254.49	2339-020C 292.53	1	4	232

Socket Ends

2-1/2	2322-025C 542.01	2332-025C 602.21	1	0	232
3	2322-030C 633.75	2332-030C 704.19	1	0	232
4	2322-040C 1148.37	2332-040C 1275.97	1	0	232

Socket Venturied Ends

6 VENTURIED	2322-060C 1910.38	2332-060C 1982.16	1	0	233
--------------------	-----------------------------	-----------------------------	---	---	-----

Threaded Ends

2-1/2	2321-025C 542.01	2331-025C 602.21	1	0	232
3	2321-030C 633.75	2331-030C 704.19	1	0	232
4	2321-040C 1148.37	2331-040C 1275.97	1	0	232

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Flanged Ends

1/2	2323-005C 128.23	2333-005C 131.00	6	0	232
3/4	2323-007C 157.20	2333-007C 163.75	5	0	232
1	2323-010C 179.99	2333-010C 191.05	5	0	232
1-1/4	2323-012C 268.89	2333-012C 278.33	2	0	232
1-1/2	2323-015C 295.79	2333-015C 305.61	3	0	232
2	2323-020C 411.60	2333-020C 490.19	2	0	232
2-1/2	2323-025C 729.80	2333-025C 875.99	1	0	232
3	2323-030C 1067.29	2333-030C 1091.61	1	0	232
4	2323-040C 1871.83	2333-040C 1946.69	1	0	232

Flanged Venturied Ends

6 VENTURIED	2323-060C 2901.42	2333-060C 3001.97	1	0	233
--------------------	-----------------------------	-----------------------------	---	---	-----



Thermoplastic Valves Single Entry Ball Valves



PVC White – Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 4" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features



PVC Gray – Socket/Threaded Style

PVC White

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2411-005W 19.02	2421-005W 21.09	2431-005W 23.46	10	120	240
3/4	2411-007W 25.75	2421-007W 26.55	2431-007W 29.51	10	80	240
1	2411-010W 28.11	2421-010W 31.22	2431-010W 34.72	10	0	240
1-1/4	2411-012W 39.08	2421-012W 43.46	2431-012W 48.28	6	0	240
1-1/2	2411-015W 50.66	2421-015W 58.82	2431-015W 63.78	5	0	240
2	2411-020W 57.03	2421-020W 63.31	2431-020W 70.37	5	0	240
3	2411-030W 207.42	2421-030W 257.32	2431-030W 296.68	1	0	240
4	2411-040W 438.47	2421-040W 483.08	2431-040W 525.14	1	0	240

Socket Ends

1/2	2412-005W 19.02	2422-005W 21.09	2432-005W 23.46	10	120	240
3/4	2412-007W 25.75	2422-007W 26.55	2432-007W 29.51	10	80	240
1	2412-010W 28.11	2422-010W 31.22	2432-010W 34.72	10	0	240
1-1/4	2412-012W 39.08	2422-012W 43.46	2432-012W 48.28	6	0	240
1-1/2	2412-015W 50.66	2422-015W 58.82	2432-015W 63.79	5	0	240
2	2412-020W 57.03	2422-020W 63.31	2432-020W 70.37	5	0	240
3	2412-030W 207.42	2422-030W 257.32	2432-030W 296.68	1	0	240
4	2412-040W 438.47	2422-040W 483.08	2432-040W 525.14	1	0	240

PVC Gray

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2411-005G 20.88	2421-005G 23.15	2431-005G 25.75	10	120	240
3/4	2411-007G 26.31	2421-007G 29.26	2431-007G 32.49	10	80	240
1	2411-010G 30.95	2421-010G 34.35	2431-010G 38.18	10	0	240
1-1/4	2411-012G 42.98	2421-012G 47.78	2431-012G 53.02	6	0	240
1-1/2	2411-015G 54.11	2421-015G 63.38	2431-015G 70.48	5	0	240
2	2411-020G 62.65	2421-020G 69.62	2431-020G 77.32	5	0	240
3	2411-030G 218.37	2421-030G 270.83	2431-030G 312.31	1	0	240
4	2411-040G 461.53	2421-040G 508.53	2431-040G 552.76	1	0	240

Socket Ends

1/2	2412-005G 20.88	2422-005G 23.15	2432-005G 25.75	10	120	240
-----	--------------------	--------------------	--------------------	----	-----	-----

Thermoplastic Valves Compact 2000 Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free, Water Soluble Lubricants.

Rated for Vacuum Service

Compact 2000 Ball Valves are a Maintenance-Free, Sealed Unit (non-repairable).
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features.

PVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	6622-005 21.17	6632-005 23.83	10	120	210
3/4	6622-007 28.88	6632-007 29.57	10	80	210
1	6622-010 31.53	6632-010 35.36	10	0	210
1-1/4	6622-012 47.43	6632-012 54.81	6	0	210
1-1/2	6622-015 56.49	6632-015 62.83	5	0	210
2	6622-020 75.42	6632-020 84.74	8	0	210

Threaded Ends

1/2	6621-005 21.17	6631-005 23.83	10	120	210
3/4	6621-007 28.88	6631-007 29.57	10	80	210
1	6621-010 31.53	6631-010 35.36	10	0	210
1-1/4	6621-012 51.92	6631-012 54.81	6	0	210
1-1/2	6621-015 56.49	6631-015 62.83	5	0	210
2	6621-020 75.42	6631-020 84.74	8	0	210

Flanged Ends

1/2	6623-005 44.58	6633-005 46.84	10	120	210
3/4	6623-007 50.35	6633-007 52.11	10	120	210
1	6623-010 65.61	6633-010 69.13	10	120	210
1-1/4	6623-012 81.93	6633-012 87.89	10	120	210
1-1/2	6623-015 99.12	6633-015 107.74	10	120	210
2	6623-020 132.27	6633-020 138.07	10	120	210

CPVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	6622-005C 24.93	6632-005C 27.74	10	120	212
3/4	6622-007C 32.88	6632-007C 36.95	10	80	212
1	6622-010C 41.09	6632-010C 46.21	10	0	212
1-1/4	6622-012C 67.25	6632-012C 83.12	6	0	212
1-1/2	6622-015C 83.18	6632-015C 92.42	5	0	212
2	6622-020C 108.97	6632-020C 122.43	8	0	212

Threaded Ends

1/2	6621-005C 24.93	6631-005C 27.74	10	120	212
------------	--------------------	--------------------	----	-----	-----

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
3/4	6621-007C 32.88	6631-007C 36.95	10	80	212
1	6621-010C 41.09	6631-010C 46.21	10	0	212
1-1/4	6621-012C 67.25	6631-012C 83.12	6	0	212
1-1/2	6621-015C 83.18	6631-015C 92.42	5	0	212
2	6621-020C 108.97	6631-020C 122.43	8	0	212

Flanged Ends

1/2	6623-005C 68.21	6633-005C 70.32	1	0	212
3/4	6623-007C 80.63	6633-007C 84.19	1	0	212
1	6623-010C 106.11	6633-010C 112.37	1	0	212
1-1/4	6623-012C 133.47	6633-012C 140.63	1	0	212
1-1/2	6623-015C 168.63	6633-015C 178.73	1	0	212
2	6623-020C 234.95	6633-020C 241.89	1	0	212



Thermoplastic Valves Compact Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 3" - 6" 150 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricants.

See Ball Valve Accessories & Repair Kits Section
 for Additional Options and Features

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.

T-Handle option is more compact but will increase difficulty of operation.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005 22.27	2132-005 25.08	10	80	210
3/4	2122-007 30.40	2132-007 31.13	10	0	210
1	2122-010 33.17	2132-010 37.24	10	0	210
1-1/4	2122-012 59.48	2132-012 66.13	6	0	210
1-1/2	2122-015 73.65	2132-015 76.96	5	0	210
2	2122-020 79.38	2132-020 89.20	6	0	210
3	2122-030 258.01	2132-030 289.86	1	4	211
4	2122-040 396.95	2132-040 571.38	1	0	211
6 (Lever Handle)	2122-060 515.51	2132-060 742.05	1	0	211
6 (Tee Handle)	21226-060 515.51	21326-060 742.05	1	0	211

Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2121-005 22.27	2131-005 25.08	10	80	210
3/4	2121-007 30.40	2131-007 31.13	10	0	210
1	2121-010 33.17	2131-010 37.24	10	0	210
1-1/4	2121-012 59.48	2131-012 66.13	6	0	210
1-1/2	2121-015 73.65	2131-015 76.96	5	0	210
2	2121-020 79.38	2131-020 89.20	6	0	210
3	2121-030 258.01	2131-030 289.86	1	4	211
4	2121-040 396.95	2131-040 571.38	1	0	211

Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2123-005 49.24	2133-005 52.45	1	8	210
3/4	2123-007 59.58	2133-007 61.95	1	8	210
1	2123-010 65.73	2133-010 69.78	1	8	210
1-1/4	2123-012 93.05	2133-012 99.69	1	8	210
1-1/2	2123-015 107.66	2133-015 112.73	1	4	210
2	2123-020 124.97	2133-020 134.69	1	0	210
3	2123-030 335.73	2133-030 367.59	1	0	211
4	2123-040 495.22	2133-040 669.64	1	0	211
6 (Lever Handle)	2123-060 953.51	2133-060 1049.57	1	0	211

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
6 (Tee Handle)	21236-060 953.51	21336-060 1049.57	1	0	211

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005C 26.24	2132-005C 29.18	10	80	212
3/4	2122-007C 34.61	2132-007C 38.91	10	0	212
1	2122-010C 43.27	2132-010C 48.64	10	0	212
1-1/4	2122-012C 87.56	2132-012C 97.25	6	0	212
1-1/2	2122-015C 108.18	2132-015C 113.73	5	0	212
2	2122-020C 114.72	2132-020C 128.89	6	0	212
3	2122-030C 349.04	2132-030C 389.31	1	4	213
4	2122-040C 645.24	2132-040C 724.94	1	0	213
6 (Lever Handle)	2122-060C 1054.51	2132-060C 1123.62	1	0	213
6 (Tee Handle)	21226-060C 1054.51	21326-060C 1123.62	1	0	213

Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2121-005C 26.24	2131-005C 29.18	10	80	212
3/4	2121-007C 34.61	2131-007C 38.91	10	0	212
1	2121-010C 43.27	2131-010C 48.64	10	0	212
1-1/4	2121-012C 87.56	2131-012C 97.25	6	0	212
1-1/2	2121-015C 108.18	2131-015C 113.73	5	0	212
2	2121-020C 114.72	2131-020C 128.89	6	0	212
3	2121-030C 349.04	2131-030C 389.31	1	4	213
4	2121-040C 645.24	2131-040C 724.94	1	0	213

Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2123-005C 73.15	2133-005C 76.11	1	8	212
3/4	2123-007C 84.93	2133-007C 89.22	1	8	212
1	2123-010C 100.42	2133-010C 105.81	1	8	212
1-1/4	2123-012C 158.24	2133-012C 167.96	1	8	212
1-1/2	2123-015C 197.89	2133-015C 204.01	1	4	212

Thermoplastic Valves Compact Ball Valves (Regular Style) & Lab Ball Valves



Compact Ball Valves (Regular Style)

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
2	2123-020C 224.11	2133-020C 238.28	1	0	212
3	2123-030C 536.68	---	1	0	213
4	2123-040C 838.37	2133-040C 918.05	1	0	213
6 (Lever Handle)	2123-060C 1592.42	2133-060C 1708.33	1	0	213
6 (Tee Handle)	21236-060C 1592.42	21336-060C 1708.33	1	0	213

Lab Ball Valves



Socket/Threaded Valve Only

Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Valve & Adapters includes:

- 1 - Threaded 1/4" Valve
- 2 - O-ring Sealed 1/4" MPT x Mipt Adapters
- 2 - EPDM or FKM O-rings (AS568-013 size)
- 1 - End Connector Wrench
- 2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
- 2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters



Valve & Adapters

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002A 25.75	1539-002A 26.92	1	25	218
1/4X3/8T	1529-002 25.75	1539-002 26.92	1	25	218

Valve only Threaded Ends

1/4	1521-002 20.58	1531-002 22.91	50	200	218
3/8	1521-003 28.93	1531-003 32.07	50	200	218

Valve only Socket Ends

1/4	1522-002 20.58	1532-002 23.28	50	200	218
3/8	1522-003 28.93	1532-003 32.07	50	200	218

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002CA 30.91	1539-002CA 31.51	1	25	219
1/4X3/8T	1529-002C 30.91	1539-002C 31.51	1	25	219

Valve only Threaded Ends

1/4	1521-002C 24.75	1531-002C 27.21	50	200	219
3/8	1521-003C 34.71	1531-003C 32.53	50	200	219

Valve only Socket Ends

1/4	1522-002C 24.75	1532-002C 29.45	50	200	219
3/8	1522-003C 34.71	1532-003C 38.53	50	200	219



Thermoplastic Valves Utility Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC White					
1/2	2621-005 9.37	2622-005 9.37	50	0	215
3/4	2621-007 11.12	2622-007 11.12	25	0	215
1	2621-010 15.12	2622-010 15.12	25	0	215
1-1/4	2621-012 20.03	2622-012 20.03	20	0	215
1-1/2	2621-015 30.57	2622-015 30.57	20	0	215
2	2621-020 38.64	2622-020 38.64	8	0	215
2-1/2	2621-025 66.14	2622-025 66.14	6	0	214
3	2621-030 118.62	2622-030 118.62	1	4	214
4	2621-040 217.41	2622-040 217.41	1	0	214
6 (Lever Handle)	---	2622-060 350.76	1	0	214

PVC Gray

1/2	2621-005G 9.37	2622-005G 9.37	50	0	215
3/4	2621-007G 11.12	2622-007G 11.12	25	0	215
1	2621-010G 15.12	2622-010G 15.12	25	0	215
1-1/4	2621-012G 20.03	2622-012G 20.03	20	0	215
1-1/2	2621-015G 30.57	2622-015G 30.57	20	0	215
2	2621-020G 38.64	2622-020G 38.64	8	0	215
2-1/2	2621-025G 66.14	2622-025G 66.14	6	0	214
3	2621-030G 118.62	2622-030G 118.62	1	4	214
4	2621-040G 217.41	2622-040G 217.41	1	0	214

CPVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
CPVC					
1/2	2621-005C 12.35	2622-005C 12.35	50	0	216
3/4	2621-007C 15.69	2622-007C 15.69	25	0	216
1	2621-010C 17.05	2622-010C 17.05	25	0	216
1-1/4	2621-012C 24.03	2622-012C 24.03	20	0	216
1-1/2	2621-015C 37.26	2622-015C 37.26	20	0	216
2	2621-020C 46.35	2622-020C 46.35	8	0	216

Thermoplastic Valves CWV Ball Valves & Swing Check Ball Valve



CWV Ball Valves



**A Combination of Economy & Quality - Made in the U.S.A.
For Greater Value in a General Purpose Cold Water Valve**

Pressure Rating @ 73°F (23°C), Water = 125 psi

You don't have to go overseas to find an economical general purpose ball valve! Spears® CWV BALL VALVES are produced in the U.S.A. with Spears® high quality construction and NSF® Certified for potable water service. Designed for use with cold water, these PVC valves may be suitable for some applications previously handled by Spears® Utility Valves. Available in IPS sizes 1/2" through 2" with a Full 1-Year Warranty.

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket Ends					
8722-005	1/2	50	0	204	8.43
8722-007	3/4	25	0	204	10.00
8722-010	1	25	0	204	13.60
8722-012	1-1/4	20	0	204	18.03
8722-015	1-1/2	20	0	204	27.52
8722-020	2	10	0	204	34.78

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded Ends					
8721-005	1/2	50	0	204	10.41
8721-007	3/4	25	0	204	12.35
8721-010	1	25	0	204	16.80
8721-012	1-1/4	20	0	204	22.25
8721-015	1-1/2	20	0	204	33.97
8721-020	2	10	0	204	42.94

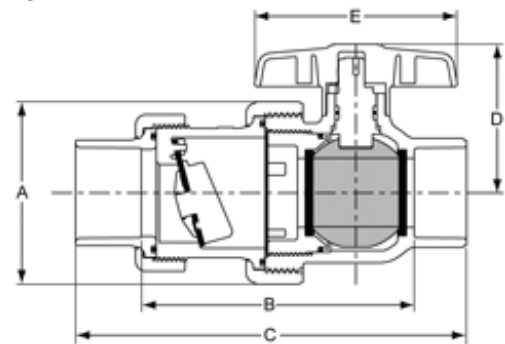
Swing Check Ball Valve



- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)

Temperature/Pressure De-ratings Apply



Dimensions					
Size	A	B	C	D	E
1-1/2	3-7/8	5-3/4	8-1/4	3-3/16	4-1/4
2	4-7/16	6-11/16	9-3/8	3-7/8	5-1/16

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion **MUST** be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

PVC Swing Check Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Soc x Soc					
7622-015	1-1/2	10	0	026	42.57
7622-020	2	6	0	026	61.09



Thermoplastic Valves CTS Valves



CPVC CTS Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

1922-005	1/2	50	200	217	33.39
1922-007	3/4	25	0	217	39.47
1922-010	1	25	0	217	45.53
1922-012	1-1/4	20	0	217	70.68
1922-015	1-1/2	20	0	217	101.94
1922-020	2	8	0	217	130.59

For additional valve information, please refer to Spears® Technical Information part 2 This book.

1/4-Turn Angle Supply Stop

Socket x NPT



100 psi @ 180°F (82°C)

1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7722-005	1/2	50	400	217	16.43
7722-073	1/2X3/8	50	400	217	16.43

1/4-Turn Angle Supply Stop

SR FPT x NPT



100 psi @ 180°F (82°C)

1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7721-005SR	1/2	50	400	217	40.69
7721-073SR	1/2X3/8	50	400	217	40.69

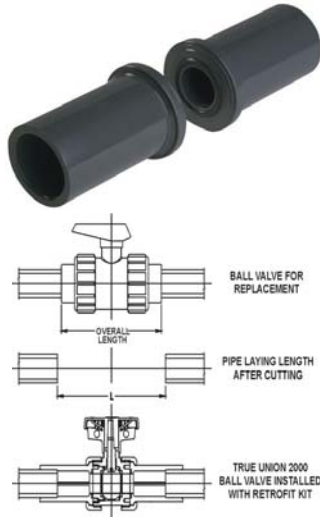
Thermoplastic Valves Ball Valve Accessories & Repair Kits



Retrofit End Connector Sets (Socket Style Only)

Special extended Socket end connectors allow in-line replacement of other brand valves with Spears® True Union 2000 Ball Valves, 3-Way Ball Valves, and True Union 2000 Ball Check Valves. Kit includes 2 Extended End Connectors with O-rings

Retrofit Kit For Other Brand Valves

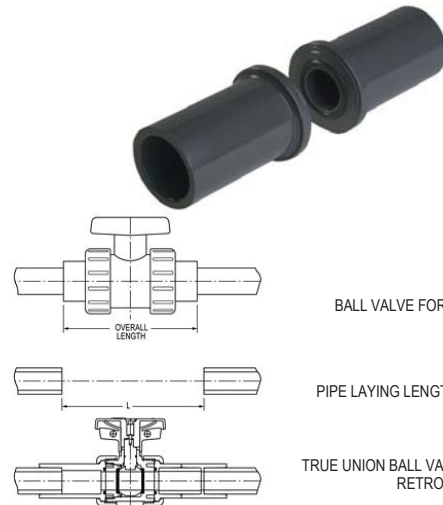


Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

True Union Retrofit Kits - Other Brand Valves (Socket Style Only) CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
4	RFK2-040C 165.75	RFK3-040C 218.97	1	4	299

Retrofit Kit For Older "Regular Style" Spears® Valves



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

True Union Retrofit Kits - Other Brand Valves (Socket Style Only) PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFK2-005 10.16	RFK3-005 13.23	1	25	299
3/4	RFK2-007 13.22	RFK3-007 15.11	1	25	299
1	RFK2-010 14.97	RFK3-010 17.48	1	25	299
1-1/4	RFK2-012 17.59	RFK3-012 24.98	1	10	299
1-1/2	RFK2-015 22.06	RFK3-015 28.80	1	10	299
2	RFK2-020 31.78	RFK3-020 39.72	1	10	299
2-1/2	RFK2-025 58.47	RFK3-025 79.58	1	5	299
3	RFK2-030 77.78	RFK3-030 97.20	1	5	299
4	RFK2-040 114.79	RFK3-040 164.27	1	4	299

True Union Retrofit Kits - Other Brand Valves (Socket Style Only) CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFK2-005C 14.75	RFK3-005C 15.98	1	25	299
3/4	RFK2-007C 16.60	RFK3-007C 20.15	1	25	299
1	RFK2-010C 18.97	RFK3-010C 23.13	1	25	299
1-1/4	RFK2-012C 24.71	RFK3-012C 32.09	1	10	299
1-1/2	RFK2-015C 30.16	RFK3-015C 38.57	1	10	299
2	RFK2-020C 40.95	RFK3-020C 48.89	1	10	299
2-1/2	RFK2-025C 86.49	RFK3-025C 103.29	1	5	299
3	RFK2-030C 115.92	RFK3-030C 140.49	1	5	299

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFKS2-005 10.16	RFKS3-005 13.23	1	10	299
3/4	RFKS2-007 13.22	RFKS3-007 15.11	1	10	299
1	RFKS2-010 14.97	RFKS3-010 17.48	1	10	299
1-1/4	RFKS2-012 17.59	RFKS3-012 24.98	1	10	299
1-1/2	RFKS2-015 22.06	RFKS3-015 28.80	1	10	299
2	RFKS2-020 31.78	RFKS3-020 39.72	1	5	299
2-1/2	RFKS2-025 58.47	RFKS3-025 79.58	1	5	299
3	RFKS2-030 77.78	RFKS3-030 97.20	1	5	299
4	RFKS2-040 114.79	RFKS3-040 164.27	1	2	299

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFKS2-005C 14.75	RFKS3-005C 15.98	1	10	299
3/4	RFKS2-007C 16.60	RFKS3-007C 20.15	1	10	299
1	RFKS2-010C 18.97	RFKS3-010C 23.13	1	10	299
1-1/4	RFKS2-012C 24.71	RFKS3-012C 32.09	1	10	299
1-1/2	RFKS2-015C 30.16	RFKS3-015C 38.57	1	10	299
2	RFKS2-020C 40.95	RFKS3-020C 48.89	1	5	299



Thermoplastic Valves Ball Valve Accessories & Repair Kits

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	RFKS2-025C 86.49	RFKS3-025C 103.29	1	5	299
3	RFKS2-030C 115.92	RFKS3-030C 140.49	1	5	299
4	RFKS2-040C 165.75	RFKS3-040C 218.97	1	2	299

Supplemental End Connector Sets



Set of 2 End Connectors with O-rings for all True Union 2000 Ball Valves, Sch 80 Union 2000 fittings and True Union Style Diaphragm Valves.

PVC - Supplemental End Connector Sets

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
1/2	ECSRT2-005 8.21	ECSRT3-005 10.35	1	25	299
3/4	ECSRT2-007 11.87	ECSRT3-007 13.20	1	25	299
1	ECSRT2-010 13.22	ECSRT3-010 14.81	1	25	299
1-1/4	ECSRT2-012 17.52	ECSRT3-012 22.65	1	10	299
1-1/2	ECSRT2-015 23.84	ECSRT3-015 28.56	1	10	299
2	ECSRT2-020 31.34	ECSRT3-020 36.89	1	10	299
2-1/2	ECSRT2-025 64.18	ECSRT3-025 78.95	1	5	299
3	ECSRT2-030 77.66	ECSRT3-030 91.27	1	5	299
4	ECSRT2-040 107.48	ECSRT3-040 142.14	1	4	299
6	ECSRT2-060 232.18	ECSRT3-060 307.00	1	4	299

Socket Ends

1/2	ECS2-005 7.13	ECS3-005 9.28	1	25	299
3/4	ECS2-007 9.26	ECS3-007 10.59	1	25	299
1	ECS2-010 10.47	ECS3-010 12.24	1	25	299
1-1/4	ECS2-012 12.32	ECS3-012 17.51	1	10	299
1-1/2	ECS2-015 15.45	ECS3-015 20.16	1	10	299
2	ECS2-020 22.25	ECS3-020 27.80	1	10	299
2-1/2	ECS2-025 40.94	ECS3-025 55.69	1	5	299
3	ECS2-030 54.44	ECS3-030 68.04	1	5	299
4	ECS2-040 80.37	ECS3-040 114.98	1	4	299

PVC - Supplemental End Connector Sets (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
6	ECS2-060 173.58	ECS3-060 248.40	1	0	299
Spigot Ends					
1/2	ECSP2-005 7.13	ECSP3-005 9.28	1	25	299
3/4	ECSP2-007 9.26	ECSP3-007 10.59	1	25	299
1	ECSP2-010 10.47	ECSP3-010 12.24	1	25	299
1-1/4	ECSP2-012 12.32	ECSP3-012 17.51	1	10	299
1-1/2	ECSP2-015 15.45	ECSP3-015 20.16	1	10	299
2	ECSP2-020 22.25	ECSP3-020 27.80	1	10	299
2-1/2	ECSP2-025 40.94	ECSP3-025 55.69	1	5	299
3	ECSP2-030 54.44	ECSP3-030 68.04	1	5	299
4	ECSP2-040 80.37	ECSP3-040 114.98	1	4	299

CPVC - Supplemental End Connector Sets

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
1/2	ECSRT2-005C 11.41	ECSRT3-005C 12.26	1	25	299
3/4	ECSRT2-007C 14.21	ECSRT3-007C 16.68	1	25	299
1	ECSRT2-010C 15.86	ECSRT3-010C 18.79	1	25	299
1-1/4	ECSRT2-012C 23.25	ECSRT3-012C 30.87	1	10	299
1-1/2	ECSRT2-015C 29.49	ECSRT3-015C 35.39	1	10	299
2	ECSRT2-020C 37.76	ECSRT3-020C 43.33	1	10	299
2-1/2	ECSRT2-025C 83.74	ECSRT3-025C 95.56	1	5	299
3	ECSRT2-030C 104.37	ECSRT3-030C 121.60	1	5	299
4	ECSRT2-040C 143.16	ECSRT3-040C 180.43	1	4	299
6	ECSRT2-060C 309.23	ECSRT3-060C 389.69	1	4	299

Socket Ends

1/2	ECS2-005C 10.33	ECS3-005C 11.19	1	25	299
3/4	ECS2-007C 11.62	ECS3-007C 14.09	1	25	299
1	ECS2-010C 13.26	ECS3-010C 16.18	1	25	299
1-1/4	ECS2-012C 18.06	ECS3-012C 22.47	1	10	299
1-1/2	ECS2-015C 21.09	ECS3-015C 27.00	1	10	299
2	ECS2-020C 28.67	ECS3-020C 34.22	1	10	299
2-1/2	ECS2-025C 60.55	ECS3-025C 72.31	1	5	299
3	ECS2-030C 81.13	ECS3-030C 98.37	1	5	299
4	ECS2-040C 116.03	ECS3-040C 153.28	1	4	299
6	ECS2-060C 250.64	ECS3-060C 331.09	1	0	299

Spigot Ends

1/2	ECSP2-005C 10.33	ECSP3-005C 11.19	1	25	299
3/4	ECSP2-007C 11.62	ECSP3-007C 14.09	1	25	299

Thermoplastic Valves Ball Valve Accessories & Repair Kits



CPVC - Supplemental End Connector Sets (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1	ECSP2-010C 13.26	ECSP3-010C 16.18	1	25	299
1-1/4	ECSP2-012C 18.06	ECSP3-012C 22.47	1	10	299
1-1/2	ECSP2-015C 21.09	ECSP3-015C 27.00	1	10	299
2	ECSP2-020C 28.67	ECSP3-020C 34.22	1	10	299
2-1/2	ECSP2-025C 60.55	ECSP3-025C 72.31	1	5	299
3	ECSP2-030C 81.13	ECSP3-030C 98.37	1	5	299
4	ECSP2-040C 116.03	ECSP3-040C 153.28	1	4	299

Spigot Ends



Split Nut Repair Kit

Designed to replace broken union nuts on all True Union 2000 Ball Valves and Sch 80 Union 2000 fittings

Kit includes:

2-Split Nut Halves 1-SS316 Gear Clamp
Full valve pressure rating maintained

Split Nut Repair Kits

Split Nut Repair Kits

Size	PVC	CPVC	Std Pk	Mstr Pk	Disc Code
1/2	SNK-005 8.42	SNK-005C 12.96	25	200	299
3/4	SNK-007 10.41	SNK-007C 16.35	1	25	299
1	SNK-010 13.03	SNK-010C 20.01	1	25	299
1-1/4	SNK-012 16.31	SNK-012C 26.69	1	25	299
1-1/2	SNK-015 21.79	SNK-015C 38.28	1	25	299
2	SNK-020 33.19	SNK-020C 57.43	1	25	299
3	SNK-030 90.06	SNK-030C 207.36	1	6	299
4	SNK-040 150.12	SNK-040C 290.39	1	6	299

True Union 2000 Valve Seal Carrier Tools



True Union 2000 Valve Seal Carrier Tools

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
True Union 2000 Check Valve Seal Carrier Tool					
TSK-00503	1/2	1000	0	299	.83
TSK-00703	3/4	1800	0	299	.83
TSK-01003	1	1800	0	299	.83
TSK-01203	1-1/4	1500	0	299	1.67
TSK-01503	1-1/2	800	0	299	1.67
TSK-02003	2	550	0	299	1.67
TSK-03003	3	200	0	299	5.01

True Union 2000 Valve Seal Carrier Tools (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TSK-04003	4	150	0	299	5.01
TSK-06003	6	40	0	299	10.37

True Union 2000 Ball Valve Seal Carrier Tool

TSK1-00503	1/2	2200	0	299	.83
TSK1-00703	3/4	1800	0	299	.83
TSK1-01003	1	1600	0	299	.83
TSK1-01203	1-1/4	1200	0	299	1.67
TSK1-01503	1-1/2	700	0	299	1.67
TSK1-02003	2	550	0	299	1.67
TSK-03003	3	200	0	299	5.01
TSK-04003	4	150	0	299	5.01
TSK-06003	6	40	0	299	10.37

Seal Carrier Adjustment Tool

for Regular True Union Valves (not shown)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
VT-025-040	2-1/2 - 4	20	0	299	44.08

Designed for use on Spears® 2-1/2", 3", & 4" Regular True Union Ball Valves for quick, easy adjustment of valve seal carriers using a standard 1", 6-point socket.



Thermoplastic Valves Ball Valve Accessories & Repair Kits

Stem Extension Kits



Desired Handle Height for Factory Assembled One-Piece Units

Desired Handle Height	Code	Desired Handle Height	Code	Desired Handle Height	Code	Desired Handle Height	Code
5"	050	16"	160	27"	270	38"	380
6"	060	17"	170	28"	280	39"	390
7"	070	18"	180	29"	290	40"	400
8"	080	19"	190	30"	300	41"	410
9"	090	20"	200	31"	310	42"	420
10"	100	21"	210	32"	320	43"	430
11"	110	22"	220	33"	330	44"	440
12"	120	23"	230	34"	340	45"	450
13"	130	24"	240	35"	350	46"	460
14"	140	25"	250	36"	360	47"	470
15"	150	26"	260	37"	370	48"	480

If desired handle height is in increments of less than a full inch, substitute the last "0" of the three-digit code with a "2" for 1/4", a "5" for 1/2", or a "7" for 3/4". EXAMPLE: If ordering a Stem Extension Kit for a 1/2" valve with a desired handle height of 14-3/4", the part number would read: BVSE-005-147.

- * Desired length of PVC Schedule 80 Pipe purchased separately and assembled by others.
- ** Factory assembled with solvent cemented PVC Schedule 80 pipe. To order, fill in the last three digits of the part number with the three-digit code representing the desired handle height from the chart above. FACTORY SOLVENT CEMENTED STEM EXTENSION KITS, ONCE PRODUCED ARE NON-CANCELLABLE AND NON-RETURNABLE.

IMPORTANT NOTE

The following minimum handle heights apply to use of all Stem Extension Kits.

Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
True Union 2000 Industrial Ball Valves										
Minimum Height (in.)	4-9/16	5-3/16	5-1/2	6-3/4	7-3/8	8	9-13/16	9-13/16	11-5/8	12-3/4
True Union 2000 Standard, Compact 2000 & Single Entry Ball Valves										
Minimum Height (in.)	3-5/8	4-1/4	4-3/4	6	6-3/8	7-7/16	9-1/2	9-1/2	11	N/A
Regular True Union & Compact Ball Valves										
Minimum Height (in.)	4-1/2	5-1/4	5-1/2	7	7-1/2	8	9	9	10-1/2	N/A

Stem Extension Kits (Two Piece)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BVSE-005-000*	1/2	1	25	299	10.80
BVSE-007-000*	3/4	1	25	299	11.98
BVSE-010-000*	1	1	25	299	11.98
BVSE-012-000*	1-1/4	1	25	299	19.41
BVSE-015-000*	1-1/2	1	25	299	22.05
BVSE-020-000*	2	1	25	299	23.97
BVSE-030-000*	2-1/2, 3	1	25	299	24.45
BVSE-040-000*	4	1	25	299	33.58

Fits Spears Regular True Union and Compact Ball Valves, 1/2"-2" = 3-Slot Stem, 2-1/2"-4" = Double Flats Stem

Optional Factory Assembled (One-Piece)

Part Number	Disc Code	5"-12" Handle Height	13"-18" Handle Height	19"-24" Handle Height	25"-36" Handle Height	37"-48" Handle Height
BVSE-005- **	299	17.75	19.22	20.80	27.57	32.06
BVSE-007- **	299	19.05	20.48	22.06	28.84	33.35
BVSE-010- **	299	19.05	20.48	22.06	28.84	33.35
BVSE-012- **	299	29.71	30.68	33.97	42.97	48.37
BVSE-015- **	299	32.48	35.06	36.73	45.76	51.15
BVSE-020- **	299	34.53	37.07	38.75	47.80	53.17
BVSE-030- **	299	35.28	37.61	39.24	48.28	53.65
BVSE-040- **	299	48.61	52.67	56.33	63.68	73.94

Stem Extension Kits (Two Piece)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Fits All True Union 2000, Compact 2000 & Single Entry Ball Valves (Except 3-Way) 1/2" - 3" = 3-Slot Stem, sizes 4"-6" = Double Flats Stem

BVSE2-005-000*	1/2	1	25	299	10.80
BVSE2-007-000*	3/4	1	25	299	11.98
BVSE2-010-000*	1	1	25	299	11.98
BVSE2-012-000*	1-1/4	1	25	299	19.41
BVSE2-015-000*	1-1/2	1	25	299	22.05
BVSE2-020-000*	2	1	25	299	23.97
BVSE2-030-000*	2-1/2, 3	1	25	299	24.45
BVSE2-040-000*	4	1	25	299	33.58
BVSE2-060-000*	6	1	25	299	62.12

Optional Factory Assembled (One-Piece)

Part Number	Disc Code	5"-12" Handle Height	13"-18" Handle Height	19"-24" Handle Height	25"-36" Handle Height	37"-48" Handle Height
BVSE2-005- **	299	17.75	19.22	20.80	27.57	32.06
BVSE2-007- **	299	19.05	20.48	22.06	28.84	33.35
BVSE2-010- **	299	19.05	20.48	22.06	28.84	33.35
BVSE2-012- **	299	29.71	30.68	33.97	42.97	48.37
BVSE2-015- **	299	32.48	35.06	36.73	45.76	51.15
BVSE2-020- **	299	34.53	37.07	38.75	47.80	53.17
BVSE2-030- **	299	35.28	37.61	39.24	48.28	53.65
BVSE2-040- **	299	48.61	52.67	56.33	63.68	73.94
BVSE2-060- **	299	90.01	97.57	104.32	117.91	136.91

Round Safety Handle Kits



Regular fits Spears® Regular True Union and Compact Ball Valves in sizes 1/2" - 2" with 3-Slot Stem and in sizes 2-1/2" - 4" with 1-Slot Stem.

Industrial fits All True Union 2000, Compact 2000, and Single Entry Ball Valves in sizes 1/2" - 2" with 3-Slot Stem and in sizes 2-1/2" - 4" with 1-Slot Stem. The 6" size has a Double-Flat Stem pattern.

Round Safety Handle Kits

Size	Regular	Industrial	Std Pk	Mstr Pk	Disc Code
1/2	RSH-005 13.92	RSH2-005 13.92	500	0	299
3/4	RSH-007 16.78	RSH2-007 16.78	300	0	299
1	RSH-010 17.73	RSH2-010 17.73	210	0	299
1-1/4	RSH-012 21.07	RSH2-012 21.07	200	0	299

Thermoplastic Valves Ball Valve Accessories & Repair Kits



Round Safety Handle Kits (continued) 2" Operator Nuts

Size	Regular	Industrial	Std Pk	Mstr Pk	Disc Code
1-1/2	RSH-015 21.07	RSH2-015 21.07	100	0	299
2	RSH-020 27.33	RSH2-020 27.33	60	0	299
2-1/2 & 3	RSH-030 58.48	RSH2-030 58.48	25	0	299
4	RSH-040 78.61	RSH2-040 78.61	16	0	299
6	---	RSH2-060 95.17	16	0	299



Industrial & Regular (VTN2 Series) Operator Nuts fit Regular True Union, True Union 2000, Compact, Compact 2000 and Single Entry Ball Valves in sizes 1/2" - 2" with current 3-Slot Stems and in sizes 2-1/2", 3", and 4" with current 1-Slot Stems. The VTN-040 fits the 6" size with a Double-Flat Stem pattern.

2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Regular

VTN-030	2-1/2 & 3	10	40	299	107.86
VTN-040	4	5	0	299	107.86

Industrial

VTN2-005	1/2	10	60	299	12.96
VTN2-007	3/4	10	60	299	17.24
VTN2-010	1	10	60	299	21.59
VTN2-012	1-1/4	10	60	299	25.89
VTN2-015	1-1/2	10	60	299	38.85
VTN2-020	2	10	60	299	64.71
VTN2-030	2-1/2 & 3	10	40	299	70.79
VTN2-040	4	5	0	299	75.05

Handle Lockout Ring



Spears® Handle Lockout Ring is for use with Spears® True Union 2000 Industrial Ball Valves with built-in handle lockout mechanism. Normal handle lockout operation allows lockout in both open and closed positions. The Lockout Ring limits lockout operation to either a lock-open only or a lock-closed only position, according to the position in which the Lockout Ring is installed.

Handle Lockout Ring

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TU2LR-005	1/2	250	3000	299	19.97
TU2LR-007	3/4	250	3000	299	19.97
TU2LR-010	1	250	3000	299	19.97
TU2LR-012	1-1/4	1	25	299	19.97
TU2LR-015	1-1/2	1	25	299	22.47
TU2LR-020	2	1	25	299	22.47
TU2LR-030	2-1/2 & 3	1	25	299	24.97
TU2LR-040	4	1	25	299	24.97

Multi-Mount Mounting Bracket



TUMB2 fits all True Union 2000 Ball Valves (except 3-Way). TUMB fits Regular True Union Ball Valves.

Multi-Mount Mounting Bracket

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
1/2	TUMB2-005 47.20	TUMB-005 47.20	1	10	299
3/4	TUMB2-007 50.01	TUMB-007 50.01	1	10	299
1	TUMB2-010 53.81	TUMB-010 53.81	1	10	299
1-1/4	TUMB2-012 56.32	TUMB-012 56.32	1	10	299
1-1/2	TUMB2-015 60.66	TUMB-015 60.66	1	10	299
2	TUMB2-020 67.68	TUMB-020 67.68	1	10	299
2-1/2, 3	TUMB2-030 128.57	TUMB-030 128.57	1	4	299
4	TUMB2-040 157.25	TUMB-040 157.25	1	4	299

Multi-Mount Actuator Mounting Platform



Add-on actuator adapter. Use MMP1 with True Union 2000 Multi-Mount Bracket. Use MMP with Regular True Union.

Multi-Mount Actuator Mounting Platform

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
1/2	MMP1-005 19.97	MMP-005 19.97	1	10	299
3/4	MMP1-007 20.65	MMP-007 20.65	1	10	299
1	MMP1-010 24.11	MMP-010 24.11	1	10	299
1-1/4	MMP1-012 26.33	MMP-012 26.33	1	10	299
1-1/2	MMP1-015 35.99	MMP-015 35.99	1	10	299
2	MMP1-020 40.71	MMP-020 40.71	1	10	299
2-1/2, 3	MMP1-030 91.86	MMP-030 91.86	1	5	299



Thermoplastic Valves Ball Valve Accessories & Repair Kits

Multi-Mount Actuator Mounting Platform (continued)

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
4	MMP1-040 105.85	MMP-040 105.85	1	5	299

True Union Multi-Mount Mounting Kit



Complete Multi-Mount Actuation Mounting Kit fits all True Union 2000 (except 3-Way) and Regular True Union Ball Valves.

True Union Multi-Mount Mounting Kit

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
1/2	TUAK1-005 63.84	TUAK-005 63.84	1	5	299
3/4	TUAK1-007 67.17	TUAK-007 67.17	1	5	299
1	TUAK1-010 74.07	TUAK-010 74.07	1	5	299
1-1/4	TUAK1-012 78.54	TUAK-012 78.54	1	5	299
1-1/2	TUAK1-015 91.85	TUAK-015 91.85	1	5	299
2	TUAK1-020 102.97	TUAK-020 102.97	1	5	299
2-1/2 & 3	TUAK1-030 209.42	TUAK-030 209.42	1	5	299
4	TUAK1-040 249.94	TUAK-040 249.94	1	2	299

True Union 2000 Low Profile Actuator Mounting Kit



Industrial Unit - Top-mount actuator mounting system for True Union 2000 Industrial (1800 series) & 3-Way Ball Valves

Standard Unit - Top-mount actuator mounting system for True Union 2000 Standard Ball Valves (3600 series) and Compact 2000 Ball Valves (6600 series)

Note: Low Profile Mounting Kit will not work with Multi-Mount Valve Mounting Bracket - See Mini-Mount actuation Mounting Kit or Mini-Mount Combo Actuation Mounting Kit

True Union 2000 Low Profile Actuator Mounting Kit Mini-Mount Actuator Mounting Kit

Size	TU 2000 Industrial	TU 2000 Standard & Compact	Std Pk	Mstr Pk	Disc Code
1/2	AMB5-005 14.63	AMB6-005 14.63	1	10	299
3/4	AMB5-007 17.78	AMB6-007 17.78	1	10	299
1	AMB5-010 21.54	AMB6-010 21.54	1	10	299
1-1/4	AMB5-012 24.07	AMB6-012 24.07	1	10	299
1-1/2	AMB5-015 26.31	AMB6-015 26.31	1	10	299
2	AMB5-020 34.51	AMB6-020 34.51	1	10	299
3	AMB5-030 72.06	AMB6-030 72.06	1	10	299
4	AMB5-040 75.85	AMB6-040 75.85	1	5	299
6	AMB5-060 110.64	---	1	5	299



Industrial Unit - Top-mount actuator mounting system for True Union 2000 Industrial (1800 series) & 3-Way Ball Valves

Standard Unit - Top-mount actuator mounting system for True Union 2000 Standard Ball Valves (3600 series) and Compact 2000 Ball Valves (6600 series)

Compact Unit - Top-mount actuator mounting system for Regular Style Compact Ball Valves (2100 series)

Mini-Mount Actuator Mounting Kit

Size	TU 2000 Industrial	TU 2000 Standard/Compact	Compact (Regular)	Std Pk	Mstr Pk	Disc Code
1/2	AMB2-005 14.63	AMB3-005 14.63	AMB4-005 14.63	1	10	299
3/4	AMB2-007 17.78	AMB3-007 17.78	AMB4-007 17.78	1	10	299
1	AMB2-010 21.54	AMB3-010 21.54	AMB4-010 21.54	1	10	299

Thermoplastic Valves Ball Valve Accessories & Repair Kits



Mini-Mount Actuator Mounting Kit (continued)

True Union 2000 Mini-Mount Combo

Size	TU 2000 Industrial	TU 2000 Standard/Compact	Compact (Regular)	Std Pk	Mstr Pk	Disc Code
1-1/4	AMB2-012 24.07	AMB3-012 24.07	AMB4-012 24.07	1	10	299
1-1/2	AMB2-015 26.31	AMB3-015 26.31	AMB4-015 26.31	1	10	299
2	AMB2-020 34.51	AMB3-020 34.51	AMB4-020 34.51	1	10	299
3	AMB2-030 72.06	AMB3-030 72.06	AMB4-030 72.06	1	10	299
4	AMB2-040 75.85	AMB3-040 75.85	AMB4-040 75.85	1	5	299
6	AMB2-060 110.64	---	---	1	5	299



Industrial Unit – Top-mount actuator mounting system with valve support mounting bracket for True Union 2000 Industrial (1800 series) Ball Valve (will not fit 3-Way)

Standard Unit – Top-mount actuator mounting system with valve support mounting bracket for True Union 2000 (3600 series) Standard Ball Valve

True Union 2000 Mini-Mount Combo

Size	Industrial	Standard	Std Pk	Mstr Pk	Disc Code
1/2	TUAK2-005 63.84	TUAK3-005 63.84	1	5	299
3/4	TUAK2-007 67.17	TUAK3-007 67.17	1	10	299
1	TUAK2-010 74.07	TUAK3-010 74.07	1	5	299
1-1/4	TUAK2-012 78.54	TUAK3-012 78.54	1	5	299
1-1/2	TUAK2-015 91.85	TUAK3-015 91.85	1	5	299
2	TUAK2-020 102.97	TUAK3-020 102.97	1	5	299
3	TUAK2-030 209.42	TUAK3-030 209.42	1	5	299
4	TUAK2-040 249.94	TUAK3-040 249.94	1	2	299

True Union 2000 Valve Repair Kits — Industrial Ball Valve

Industrial Kit includes:
 2-PTFE Seats
 2-End Connector O-rings
 2-Stem O-rings
 1-Seal Carrier O-ring
 1-PTFE Stem Bearing
 2-Seat O-rings (where applicable)

True Union 2000 Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Industrial Ball Valve					
1/2	TU2-ERK-005 19.67	TU2-VRK-005 22.28	1	10	299
3/4	TU2-ERK-007 22.28	TU2-VRK-007 23.03	1	10	299
1	TU2-ERK-010 23.03	TU2-VRK-010 29.37	1	10	299
1-1/4	TU2-ERK-012 28.00	TU2-VRK-012 47.06	1	10	299

True Union 2000 Valve Repair Kits (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Industrial Ball Valve					
1-1/2	TU2-ERK-015 40.18	TU2-VRK-015 61.62	1	10	299
2	TU2-ERK-020 46.25	TU2-VRK-020 86.26	1	10	299
2-1/2 & 3	TU2-ERK-030 106.74	TU2-VRK-030 139.96	1	10	299
4	TU2-ERK-040 151.80	TU2-VRK-040 181.40	1	10	299
6	TU2-ERK-060 276.55	TU2-VRK-060 352.47	1	10	299

True Union 2000 Valve Repair Kits — Standard Ball Valve

Standard Kit includes:
 2-HDPE/PTFE Seats
 2-End Connector O-rings
 2-Stem O-rings
 1-Seal Carrier O-ring
 2-Seat O-rings (where applicable)

Standard Ball Valve

1/2	TU1-ERK-005 18.72	TU1-VRK-005 21.18	1	10	299
3/4	TU1-ERK-007 21.18	TU1-VRK-007 21.91	1	10	299
1	TU1-ERK-010 21.91	TU1-VRK-010 27.88	1	10	299
1-1/4	TU1-ERK-012 26.57	TU1-VRK-012 44.72	1	10	299
1-1/2	TU1-ERK-015 38.18	TU1-VRK-015 58.55	1	10	299
2	TU1-ERK-020 43.93	TU1-VRK-020 90.81	1	10	299
2-1/2 & 3	TU1-ERK-030 101.39	TU1-VRK-030 132.95	1	10	299
4	TU1-ERK-040 144.23	TU1-VRK-040 172.33	1	10	299

True Union 2000 Valve Repair Kits — 3-Way Ball Valve

3-Way Kit includes:
 2-PTFE Seats (no branch seal)
 3-End Connector O-rings
 2-Stem O-rings
 1-Seal Carrier O-ring
 1-Stem Bushing
 2-Seat O-rings (where applicable)

3-Way Ball Valve

1/2	TU3-ERK-005 28.13	TU3-VRK-005 31.85	1	10	299
3/4	TU3-ERK-007 31.85	TU3-VRK-007 32.93	1	10	299
1	TU3-ERK-010 32.93	TU3-VRK-010 41.95	1	10	299
1-1/4	TU3-ERK-012 39.98	TU3-VRK-012 67.23	1	10	299
1-1/2	TU3-ERK-015 57.42	TU3-VRK-015 88.05	1	10	299
2	TU3-ERK-020 66.08	TU3-VRK-020 123.21	1	10	299
2-1/2 & 3	TU3-ERK-030 152.47	TU3-VRK-030 199.93	1	10	299
4	TU3-ERK-040 204.95	TU3-VRK-040 259.14	1	10	299



Thermoplastic Valves Ball Valve Accessories & Repair Kits

True Union 2000 Valve Repair Kits — Ball Check Valve

Ball Check Kit includes:
2-End Connector O-rings
1-Seal Carrier O-ring
1-Seal Plate O-ring

True Union 2000 Valve Repair Kits Single Entry Ball Valve Repair Kit

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Ball Check Valve					
1/2	CK2-ERK-005 3.36	CK2-VRK-005 6.24	1	10	299
3/4	CK2-ERK-007 4.05	CK2-VRK-007 10.32	1	10	299
1	CK2-ERK-010 5.27	CK2-VRK-010 16.78	1	10	299
1-1/4	CK2-ERK-012 7.91	CK2-VRK-012 26.83	1	10	299
1-1/2	CK2-ERK-015 7.91	CK2-VRK-015 26.83	1	10	299
2	CK2-ERK-020 11.73	CK2-VRK-020 28.97	1	10	299
3	CK2-ERK-030 17.12	CK2-VRK-030 80.77	1	10	299
4	CK2-ERK-040 22.14	CK2-VRK-040 87.23	1	10	299
6	CK2-ERK-060 40.39	CK2-VRK-060 209.31	1	10	299

Single Entry Kit includes:
2-End Connector O-rings
1-Seal Carrier O-ring
1-Seal Plate O-ring
1-Stem Bearing (1-1/4" & up)

Single Entry Ball Valve Repair Kits True Union Valve Repair Kits (Regular Style)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	SE-BRK-005 16.06	SE-ERK-005 17.02	SE-VRK-005 19.91	1	10	299
3/4	SE-BRK-007 16.54	SE-ERK-007 17.52	SE-VRK-007 20.13	1	10	299
1	SE-BRK-010 17.73	SE-ERK-010 18.44	SE-VRK-010 21.07	1	10	299
1-1/4, 1-1/2	SE-BRK-015 22.54	SE-ERK-015 24.94	SE-VRK-015 29.95	1	10	299
2	SE-BRK-020 25.64	SE-ERK-020 26.35	SE-VRK-020 31.41	1	10	299
3	SE-BRK-030 58.96	SE-ERK-030 59.24	SE-VRK-030 64.66	1	10	299
4	SE-BRK-040 108.80	SE-ERK-040 108.85	SE-VRK-040 112.13	1	10	299

Ball Valve Kit includes:
2-PTFE Seats
2-Seat O-rings (2-1/2")
2-End Connector O-rings
1-Stem Bearing (1-1/4" & up)

True Union Valve Repair Kits (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Ball Valve					
1/2	TU-ERK-005 19.67	TU-VRK-005 22.28	1	10	299
3/4	TU-ERK-007 22.28	TU-VRK-007 23.03	1	10	299
1	TU-ERK-010 23.03	TU-VRK-010 29.37	1	10	299
1-1/4	TU-ERK-012 28.00	TU-VRK-012 47.06	1	10	299

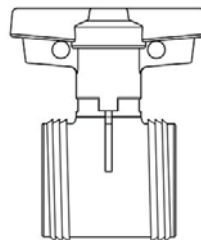
True Union Valve Repair Kits (Regular Style) (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Ball Valve					
1-1/2	TU-ERK-015 40.18	TU-VRK-015 61.62	1	10	299
2	TU-ERK-020 46.25	TU-VRK-020 86.26	1	10	299
2-1/2, 3	TU-ERK-030 106.74	TU-VRK-030 139.96	1	10	299
4, 6 VENTURIED	TU-ERK-040 151.80	TU-VRK-040 181.40	1	10	299

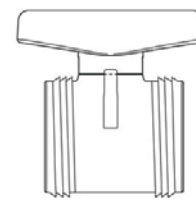
True Union Ball Check Valve Repair Kits (Regular Style)

Ball Check (Regular Style) Kit includes:
1-Body O-ring
2-Seat-plate O-rings
2-End Connector O-rings

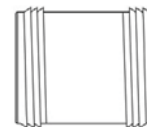
Ball Check Valve					
1/2	CK-ERK-005 3.36	CK-VRK-005 6.24	1	10	299
3/4	CK-ERK-007 4.05	CK-VRK-007 10.32	1	10	299
1	CK-ERK-010 5.27	CK-VRK-010 16.78	1	10	299
1-1/4	CK-ERK-012 7.91	CK-VRK-012 26.83	1	10	299
1-1/2	CK-ERK-015 7.91	CK-VRK-015 26.83	1	10	299
2	CK-ERK-020 11.73	CK-VRK-020 28.97	1	10	299
2-1/2 OR 3	CK-ERK-030 17.12	CK-VRK-030 80.77	1	10	299
4	CK-ERK-040 22.14	CK-VRK-040 87.23	1	10	299



True Union 2000 Industrial
Ball Valve Cartridge



True Union 2000 Standard
Ball Valve Cartridge



True Union 2000 Industrial
Ball Check Valve Cartridge

True Union Ball Valve Cartridge Kits include valve assembly, less union nuts and end connectors.

Note: 6" Valve uses Lever-Style Handle for proper leverage. T-Style Handle is more compact, but will increase difficulty of operation.

PVC True Union 2000 Industrial Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1820-005 34.53	1830-005 39.24	1	18	299

**Thermoplastic Valves
Ball Valve Accessories & Repair Kits**



PVC True Union 2000 Industrial Ball Valve Cartridges
(continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	1820-007 40.94	1830-007 43.84	1	18	299
1	1820-010 48.92	1830-010 55.55	1	18	299
1-1/4	1820-012 63.16	1830-012 74.26	1	8	299
1-1/2	1820-015 82.29	1830-015 92.97	1	8	299
2	1820-020 105.45	1830-020 112.25	1	8	299
2-1/2	1820-025 231.35	1830-025 290.07	1	0	299
3	1820-030 282.33	1830-030 313.63	1	0	299
4	1820-040 477.03	1830-040 529.85	1	0	299
6 (T-Style Handle)	18206-060 882.27	18306-060 978.82	1	0	299
6 (Lever Handle)	1820-060 882.27	1830-060 978.82	1	0	299

CPVC True Union 2000 Industrial Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1820-005C 48.69	1830-005C 53.13	1	18	299
3/4	1820-007C 59.54	1830-007C 64.94	1	18	299
1	1820-010C 74.12	1830-010C 75.69	1	18	299
1-1/4	1820-012C 99.91	1830-012C 103.89	1	8	299
1-1/2	1820-015C 125.72	1830-015C 131.99	1	8	299
2	1820-020C 170.22	1830-020C 173.43	1	8	299
2-1/2	1820-025C 358.33	1830-025C 398.11	1	0	299
3	1820-030C 419.00	1830-030C 464.43	1	0	299
4	1820-040C 759.08	1830-040C 843.55	1	0	299
6 (T-Style Handle)	18206-060C 1385.01	18306-060C 1538.15	1	0	299
6 (Lever Handle)	1820-060C 1385.01	1830-060C 1538.15	1	0	299

PVC True Union 2000 Industrial Ball Check Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	4520-005 40.77	4530-005 45.97	1	10	299
3/4	4520-007 48.63	4530-007 51.33	1	10	299
1	4520-010 57.80	4530-010 64.44	1	6	299
1-1/4	4520-012 89.13	4530-012 94.75	1	4	299
1-1/2	4520-015 96.99	4530-015 107.62	1	4	299
2	4520-020 132.39	4530-020 147.23	1	4	299
2-1/2	4520-025 320.96	4530-025 341.83	1	4	299
3	4520-030 384.33	4530-030 487.96	1	4	299
4	4520-040 602.05	4530-040 634.31	1	0	299
6	4520-060 1013.79	4530-060 1125.31	1	0	299

CPVC True Union 2000 Industrial Ball Check Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	4520-005C 60.25	4530-005C 67.06	1	18	299
3/4	4520-007C 72.12	4530-007C 80.15	1	18	299
1	4520-010C 85.13	4530-010C 94.57	1	18	299
1-1/4	4520-012C 146.56	4530-012C 162.74	1	12	299
1-1/2	4520-015C 146.56	4530-015C 162.74	1	8	299
2	4520-020C 195.76	4530-020C 218.14	1	8	299
2-1/2	4520-025C 410.23	4530-025C 455.80	1	4	299
3	4520-030C 484.04	4530-030C 577.18	1	4	299
4	4520-040C 900.21	4530-040C 1000.89	1	0	299
6	4520-060C 1596.43	4530-060C 1769.54	1	0	299

PVC True Union 2000 Standard Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3620-005 26.71	3630-005 29.69	1	18	299
3/4	3620-007 31.58	3630-007 35.14	1	18	299
1	3620-010 37.64	3630-010 41.89	1	18	299
1-1/4	3620-012 52.06	3630-012 66.44	1	12	299
1-1/2	3620-015 62.68	3630-015 69.61	1	12	299
2	3620-020 82.75	3630-020 91.09	1	8	299
2-1/2 & 3	3620-030 209.65	3630-030 232.93	1	0	299
4	3620-040 354.14	3630-040 393.61	1	0	299

CPVC True Union 2000 Standard Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3620-005C 35.25	3630-005C 39.18	1	18	299
3/4	3620-007C 44.42	3630-007C 49.34	1	18	299
1	3620-010C 52.66	3630-010C 58.76	1	18	299
1-1/4	3620-012C 84.03	3630-012C 93.40	1	12	299
1-1/2	3620-015C 88.77	3630-015C 98.64	1	12	299
2	3620-020C 118.73	3630-020C 136.49	1	8	299
2-1/2 & 3	3620-030C 311.25	3630-030C 345.83	1	0	299
4	3620-040C 647.21	3630-040C 626.62	1	0	299

PVC True Union Ball Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2320-005 34.53	2330-005 39.24	1	10	299
3/4	2320-007 40.94	2330-007 43.84	1	10	299
1	2320-010 48.92	2330-010 55.55	1	10	299



Thermoplastic Valves Ball Valve Accessories & Repair Kits

PVC True Union Ball Valve Cartridges (Regular Style) (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	2320-012 63.16	2330-012 74.26	1	4	299
1-1/2	2320-015 82.29	2330-015 92.97	1	4	299
2	2320-020 105.45	2330-020 112.25	1	4	299
2-1/2, 3	2320-030 231.35	2330-030 270.02	1	0	299
4	2320-040 424.18	2330-040 446.51	1	0	299

CPVC True Union Ball Check Valve Cartridges (Regular Style) (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3	2220-030C 381.51	2230-030C 423.88	1	0	299
4	2220-040C 837.20	2230-040C 930.83	1	0	299

CPVC True Union Ball Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2320-005C 48.69	2330-005C 53.13	1	10	299
3/4	2320-007C 59.54	2330-007C 64.94	1	10	299
1	2320-010C 74.12	2330-010C 75.69	1	10	299
1-1/4	2320-012C 99.91	2330-012C 103.89	1	4	299
1-1/2	2320-015C 125.72	2330-015C 131.99	1	4	299
2	2320-020C 170.22	2330-020C 173.43	1	4	299
2-1/2, 3	2320-030C 323.52	2330-030C 329.37	1	0	299
4	2320-040C 534.94	2330-040C 638.18	1	0	299

PVC True Union Ball Check Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2220-005 37.91	2230-005 42.74	1	10	299
3/4	2220-007 45.19	2230-007 47.74	1	10	299
1	2220-010 53.78	2230-010 59.93	1	6	299
1-1/4	2220-012 78.55	2230-012 72.96	1	4	299
1-1/2	2220-015 90.19	2230-015 100.09	1	4	299
2	2220-020 123.14	2230-020 136.92	1	4	299
2-1/2	2220-025 298.49	2230-025 317.91	1	0	299
3	2220-030 298.49	2230-030 317.91	1	0	299
4	2220-040 559.89	2230-040 589.93	1	0	299

CPVC True Union Ball Check Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2220-005C 56.03	2230-005C 62.39	1	10	299
3/4	2220-007C 67.05	2230-007C 74.54	1	10	299
1	2220-010C 79.15	2230-010C 87.94	1	6	299
1-1/4	2220-012C 136.29	2230-012C 151.35	1	4	299
1-1/2	2220-015C 146.56	2230-015C 162.83	1	4	299
2	2220-020C 182.52	2230-020C 202.86	1	4	299
2-1/2	2220-025C 381.51	2230-025C 423.88	1	0	299

Thermoplastic Valves True Union 2000 Industrial Ball Check Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 4" 235 psi
 6" - 8" 150 psi
 All Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 Rated for Vacuum Service

All Valves assembled with Silicone-Free,
 Water Soluble Lubricant
 Contact Spears® for Pricing & Availability
 on Custom Elastomer Seals
 See Ball Valve Accessories & Repair Kits Section
 for Additional Options and Features

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005 56.36	4539-005 63.52	1	18	604
3/4	4529-007 67.20	4539-007 70.93	1	18	604
1	4529-010 79.93	4539-010 89.09	1	18	604
1-1/4	4529-012 116.72	4539-012 131.00	1	12	604
1-1/2	4529-015 134.05	4539-015 148.78	1	8	604
2	4529-020 183.02	4539-020 203.51	1	8	604

Socket Ends

2-1/2	4522-025 443.72	4532-025 472.58	1	0	605
3	4522-030 564.68	4532-030 632.98	1	0	605
4	4522-040 832.33	4532-040 876.92	1	0	605
6	4522-060 1636.75	4532-060 1813.96	1	0	558
8	4522-080 2181.25	4532-080 2417.89	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	4521-025 443.72	4531-025 472.58	1	0	605
3	4521-030 568.31	4531-030 637.46	1	0	605
4	4521-040 832.33	4531-040 876.92	1	0	605
6	4521-060 1636.75	4531-060 1813.96	1	0	558

SR Threaded Ends

1/2	4521-005SR 57.51	4531-005SR 64.64	1	18	604
3/4	4521-007SR 69.94	4531-007SR 73.66	1	18	604
1	4521-010SR 82.63	4531-010SR 91.82	1	18	604
1-1/4	4521-012SR 122.14	4531-012SR 136.39	1	12	604
1-1/2	4521-015SR 142.79	4531-015SR 157.51	1	8	604
2	4521-020SR 192.47	4531-020SR 212.97	1	8	604
2-1/2	4521-025SR 467.89	4531-025SR 496.78	1	0	605
3	4521-030SR 580.14	4531-030SR 496.78	1	0	605
4	4521-040SR 860.55	4531-040SR 905.16	1	0	605
6	4521-060SR 1683.47	4531-060SR 1862.27	1	0	558

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	4527-005 56.36	4537-005 63.52	1	18	604
3/4	4527-007 67.20	4537-007 70.93	1	18	604
1	4527-010 79.93	4537-010 89.09	1	12	604
1-1/4	4527-012 116.72	4537-012 131.00	1	12	604
1-1/2	4527-015 134.05	4537-015 148.78	1	8	604
2	4527-020 183.02	4537-020 203.51	1	8	604
2-1/2	4527-025 443.72	4537-025 472.58	1	0	605
3	4527-030 502.43	4537-030 634.38	1	0	605
4	4527-040 832.33	4537-040 876.92	1	0	605
6	4527-060 1636.75	4537-060 1813.96	1	0	558

Flanged Ends

1/2	4523-005 79.46	4533-005 99.73	1	8	604
3/4	4523-007 96.11	4533-007 119.60	5	0	604
1	4523-010 113.91	4533-010 139.17	5	0	604
1-1/4	4523-012 140.88	4533-012 182.12	2	0	604
1-1/2	4523-015 194.40	4533-015 211.28	3	0	604
2	4523-020 274.37	4533-020 280.87	2	0	604
2-1/2	4523-025 568.38	4533-025 661.89	1	0	605
3	4523-030 795.06	4533-030 924.53	1	0	605
4	4523-040 1076.19	4533-040 1249.16	1	0	605
6	4523-060 2577.57	4533-060 2989.97	1	0	558
8	4523-080 3347.48	4533-080 3891.12	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005C 83.31	4539-005C 92.74	1	18	606
3/4	4529-007C 99.71	4539-007C 110.81	1	18	606
1	4529-010C 117.65	4539-010C 130.71	1	18	606



Thermoplastic Valves True Union 2000 Industrial Ball Check Valves

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1-1/4	4529-012C 202.63	4539-012C 224.94	1	12	606
1-1/2	4529-015C 202.63	4539-015C 224.94	1	8	606
2	4529-020C 270.65	4539-020C 301.56	1	8	606

Socket Ends

2-1/2	4522-025C 567.14	4532-025C 630.13	1	0	607
3	4522-030C 753.47	4532-030C 820.66	1	0	607
4	4522-040C 1244.54	4532-040C 1383.69	1	0	607
6	4522-060C 2569.49	4532-060C 2854.63	1	0	559
8	4522-080C 3022.95	4532-080C 3805.11	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.

Threaded Ends

2-1/2	4521-025C 567.14	4531-025C 630.13	1	0	607
3	4521-030C 751.23	4531-030C 841.78	1	0	607
4	4521-040C 1244.54	4531-040C 1383.69	1	0	607
6	4521-060C 2569.49	4531-060C 2854.63	1	0	559

SR Threaded Ends

1/2	4521-005CSR 84.42	4531-005CSR 93.87	1	18	606
3/4	4521-007CSR 102.44	4531-007CSR 113.51	1	18	606
1	4521-010CSR 120.35	4531-010CSR 133.43	1	18	606
1-1/4	4521-012CSR 208.03	4531-012CSR 233.68	1	12	606
1-1/2	4521-015CSR 208.03	4531-015CSR 233.68	1	8	606
2	4521-020CSR 280.11	4531-020CSR 311.02	1	8	606
2-1/2	4521-025CSR 591.64	4531-025CSR 654.32	1	0	607
3	4521-030CSR 591.64	4531-030CSR 881.74	1	0	607
4	4521-040CSR 1272.76	4531-040CSR 1411.94	1	0	607
6	4521-060CSR 2638.78	4531-060CSR 2923.92	1	0	559

Spigot Ends

1/2	4527-005C 83.31	4537-005C 92.74	1	18	606
3/4	4527-007C 99.71	4537-007C 110.81	1	18	606
1	4527-010C 117.65	4537-010C 130.71	1	12	606
1-1/4	4527-012C 202.63	4537-012C 224.94	1	12	606
1-1/2	4527-015C 230.09	4537-015C 224.94	1	8	606
2	4527-020C 270.65	4537-020C 301.56	1	8	606
2-1/2	4527-025C 567.14	4537-025C 630.13	1	0	607
3	4527-030C 737.00	4537-030C 815.96	1	0	607
4	4527-040C 1244.54	4537-040C 1383.69	1	0	607
6	4527-060C 2569.49	4537-060C 2854.63	1	0	559

Flanged Ends

1/2	4523-005C 103.44	4533-005C 129.26	1	8	606
------------	----------------------------	----------------------------	---	---	-----

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Flanged Ends

3/4	4523-007C 123.41	4533-007C 156.22	1	8	606
1	4523-010C 147.36	4533-010C 181.67	1	8	606
1-1/4	4523-012C 248.55	4533-012C 308.19	1	8	606
1-1/2	4523-015C 265.54	4533-015C 331.81	1	4	606
2	4523-020C 469.52	4533-020C 503.37	1	0	606
2-1/2	4523-025C 850.66	4533-025C 920.31	1	0	607
3	4523-030C 949.84	4533-030C 1042.04	1	0	607
4	4523-040C 1571.47	4533-040C 1687.47	1	0	607
6	4523-060C 4190.15	4533-060C 4356.08	1	0	559
8	4523-080C 4823.25	4533-080C 5248.27	1	0	559

8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.

Thermoplastic Valves True Union Ball Check Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F
(23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves assembled with Silicone-Free,
Water Soluble Lubricant

6" Venturied Valves are 4" Ball Check Valves equipped with 4x6 End Connectors.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1/2	2229-005 61.67	2239-005 69.49	1	18	220
3/4	2229-007 73.53	2239-007 77.62	1	12	220
1	2229-010 87.44	2239-010 97.48	1	8	220
1-1/4	2229-012 127.71	2239-012 143.32	1	8	220
1-1/2	2229-015 146.67	2239-015 162.78	1	8	220
2	2229-020 200.24	2239-020 222.66	1	4	220

Socket Ends

2-1/2	2222-025 485.46	2232-025 517.04	1	0	220
3	2222-030 586.46	2232-030 681.48	1	0	220
4	2222-040 910.65	2232-040 959.46	1	0	220

Socket Venturied Ends

6 VENTURIED	2222-060 1230.28	2232-060 1393.56	1	0	221
--------------------	----------------------------	----------------------------	---	---	-----

Threaded Ends

2-1/2	2221-025 485.46	2231-025 517.04	1	0	220
3	2221-030 586.46	2231-030 681.48	1	0	220
4	2221-040 910.65	2231-040 959.46	1	0	220

Flanged Ends

1/2	2223-005 86.95	2233-005 109.14	6	0	220
3/4	2223-007 105.15	2233-007 130.85	5	0	220
1	2223-010 124.63	2233-010 152.27	5	0	220
1-1/4	2223-012 154.15	2233-012 199.26	2	0	220
1-1/2	2223-015 212.68	2233-015 231.19	3	0	220
2	2223-020 300.19	2233-020 307.32	2	0	220
2-1/2	2223-025 621.87	2233-025 724.20	1	0	220
3	2223-030 869.88	2233-030 1011.54	1	0	220
4	2223-040 1177.48	2233-040 1366.73	1	0	220

Flanged Venturied Ends

6 VENTURIED	2223-060 1473.61	2233-060 1644.16	1	0	221
--------------------	----------------------------	----------------------------	---	---	-----

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1/2	2229-005C 91.15	2239-005C 101.47	1	18	222
3/4	2229-007C 109.11	2239-007C 121.24	1	12	222
1	2229-010C 128.74	2239-010C 143.02	1	8	222

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Socket & Threaded Ends

1-1/4	2229-012C 221.69	2239-012C 246.12	1	8	222
1-1/2	2229-015C 268.08	2239-015C 283.37	1	8	222
2	2229-020C 296.87	2239-020C 329.95	1	4	222

Socket Ends

2-1/2	2222-025C 620.52	2232-025C 689.44	1	0	222
3	2222-030C 1010.72	2232-030C 1106.06	1	0	222
4	2222-040C 1361.67	2232-040C 1513.93	1	0	222

Socket Venturied Ends

6 VENTURIED	2222-060C 1756.56	2232-060C 1968.07	1	0	223
--------------------	-----------------------------	-----------------------------	---	---	-----

Threaded Ends

2-1/2	2221-025C 620.52	2231-025C 689.44	1	0	222
3	2221-030C 1010.72	2231-030C 1106.06	1	0	222
4	2221-040C 1361.67	2231-040C 1513.93	1	0	222

Flanged Ends

1/2	2223-005C 113.18	2233-005C 141.42	6	0	222
3/4	2223-007C 135.02	2233-007C 170.94	5	0	222
1	2223-010C 161.22	2233-010C 198.76	5	0	222
1-1/4	2223-012C 271.95	2233-012C 337.19	2	0	222
1-1/2	2223-015C 290.53	2233-015C 363.03	3	0	222
2	2223-020C 513.69	2233-020C 550.75	2	0	222
2-1/2	2223-025C 817.39	2233-025C 930.72	1	0	222
3	2223-030C 1039.25	2233-030C 1140.12	1	0	222
4	2223-040C 1719.37	2233-040C 1846.29	1	0	222

Flanged Venturied Ends

6 VENTURIED	2223-060C 2072.75	2233-060C 2243.62	1	0	223
--------------------	-----------------------------	-----------------------------	---	---	-----



Thermoplastic Valves Foot Valve Screens & Y-Check Valves

Foot Valve Screens

Convert Check Valve to Foot Valve using adapter - Fits all Socket Ball Check Valves or any IPS fitting socket or thread

Standard Foot Valve Screen



PVC/CPVC Spigot

Compact Foot Valve Screens



PVC Gray Spigot
or Threaded

PE Black
Threaded Only

Foot Valve Screens - PVC

Size	PVC	CPVC	Std Pk	Mstr Pk	Disc Code
Spigot					
1/2	FVS-005 45.51	FVS-005C 62.85	10	60	299
3/4	FVS-007 54.04	FVS-007C 67.80	10	60	299
1	FVS-010 65.73	FVS-010C 76.97	10	40	299
1-1/4	FVS-012 95.67	FVS-012C 118.87	5	30	299
1-1/2	FVS-015 100.78	FVS-015C 123.43	5	0	299
2	FVS-020 113.74	FVS-020C 136.26	5	0	299
2-1/2	FVS-025 156.45	FVS-025C 198.53	5	0	299
3	FVS-030 160.93	FVS-030C 221.08	5	0	299
4	FVS-040 190.41	FVS-040C 315.98	5	0	299
6	FVS-060 257.85	FVS-060C 451.53	5	0	299

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Spigot					
CFVS7-005	1/2	1	0	299	2.80
CFVS7-007	3/4	1	0	299	3.19
CFVS7-010	1	1	0	299	3.78
CFVS7-012	1-1/4	1	0	299	4.81
CFVS7-015	1-1/2	1	0	299	8.06

PVC Compact Foot Valve Screen (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CFVS7-020	2	1	0	299	9.17

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005	1/2	1	0	299	2.80
CFVS1-007	3/4	1	0	299	3.19
CFVS1-010	1	1	0	299	3.78
CFVS1-012	1-1/4	1	0	299	4.81
CFVS1-015	1-1/2	1	0	299	8.06
CFVS1-020	2	1	0	299	9.17

HDPE Black Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005P	1/2	1	0	299	3.35
CFVS1-007P	3/4	1	0	299	4.03
CFVS1-010P	1	1	0	299	4.62
CFVS1-012P	1-1/4	1	0	299	5.31
CFVS1-015P	1-1/2	1	0	299	9.04
CFVS1-020P	2	1	0	299	10.14

Y-Check Valves



PVC Clear — Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 150 psi
 3" - 4" 90 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply



True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005 88.61	1632-005 98.27	1	18	627
3/4	1622-007 95.05	1632-007 106.34	1	18	627
1	1622-010 104.72	1632-010 115.98	1	12	627

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	1622-012 164.32	1632-012 182.05	1	8	627
1-1/2	1622-015 178.81	1632-015 198.15	1	8	627
2	1622-020 222.32	1632-020 246.49	1	4	627

Thermoplastic Valves Y-Check Valves



PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3	1622-030 439.80	1632-030 488.12	1	0	627
4	1622-040 766.83	1632-040 852.22	1	0	627

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005SR 91.83	1631-005SR 101.51	1	18	627
3/4	1621-007SR 99.87	1631-007SR 111.16	1	12	627
1	1621-010SR 111.16	1631-010SR 122.43	1	8	627
1-1/4	1621-012SR 173.98	1631-012SR 191.71	1	8	627
1-1/2	1621-015SR 193.32	1631-015SR 212.65	1	4	627
2	1621-020SR 238.42	1631-020SR 262.59	1	0	627
3	1621-030SR 483.31	1631-030SR 531.62	1	0	627
4	1621-040SR 811.94	1631-040SR 897.31	1	0	627

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005 115.98	1633-005 128.89	1	8	627
3/4	1623-007 127.26	1633-007 141.77	1	4	627
1	1623-010 148.98	1633-010 170.76	1	8	627
1-1/4	1623-012 236.81	1633-012 262.59	1	4	627
1-1/2	1623-015 251.33	1633-015 278.69	1	4	627
2	1623-020 336.69	1633-020 373.73	1	0	627
3	1623-030 658.88	1633-030 731.38	1	0	627
4	1623-040 1051.96	1633-040 1167.96	1	0	627

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005CL 88.61	1632-005CL 98.27	1	18	628
3/4	1622-007CL 95.05	1632-007CL 106.34	1	18	628
1	1622-010CL 104.72	1632-010CL 115.98	1	12	628
1-1/4	1622-012CL 164.32	1632-012CL 182.05	1	8	628
1-1/2	1622-015CL 178.81	1632-015CL 198.15	1	8	628
2	1622-020CL 222.32	1632-020CL 246.49	1	4	628
3	1622-030CL 439.80	1632-030CL 488.12	1	0	628
4	1622-040CL 766.83	1632-040CL 852.22	1	0	628

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CLSR 91.83	1631-005CLSR 101.51	1	18	628
3/4	1621-007CLSR 99.87	1631-007CLSR 111.16	1	12	628
1	1621-010CLSR 111.16	1631-010CLSR 122.43	1	8	628
1-1/4	1621-012CLSR 173.98	1631-012CLSR 191.71	1	8	628

PVC Clear - SR Threaded Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	1621-015CLSR 193.32	1631-015CLSR 212.65	1	4	628
2	1621-020CLSR 238.42	1631-020CLSR 262.59	1	0	628
3	1621-030CLSR 483.31	1631-030CLSR 531.62	1	0	628
4	1621-040CLSR 811.94	1631-040CLSR 897.31	1	0	628

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005CL 115.98	1633-005CL 128.89	1	8	628
3/4	1623-007CL 127.26	1633-007CL 141.77	1	8	628
1	1623-010CL 153.04	1633-010CL 170.76	1	8	628
1-1/4	1623-012CL 236.81	1633-012CL 262.59	1	4	628
1-1/2	1623-015CL 251.33	1633-015CL 278.69	1	4	628
2	1623-020CL 336.69	1633-020CL 373.73	1	0	628
3	1623-030CL 658.88	1633-030CL 731.38	1	0	628
4	1623-040CL 1051.96	1633-040CL 1167.96	1	0	628

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005C 127.26	1632-005C 140.15	1	18	629
3/4	1622-007C 136.94	1632-007C 151.43	1	18	629
1	1622-010C 149.82	1632-010C 165.93	1	12	629
1-1/4	1622-012C 235.20	1632-012C 260.98	1	8	629
1-1/2	1622-015C 256.15	1632-015C 283.53	1	8	629
2	1622-020C 317.36	1632-020C 352.79	1	4	629
3	1622-030C 908.25	1632-030C 1016.27	1	0	629
4	1622-040C 1095.44	1632-040C 1217.88	1	0	629

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CSR 130.48	1631-005CSR 144.98	1	18	629
3/4	1621-007CSR 141.77	1631-007CSR 157.88	1	12	629
1	1621-010CSR 157.88	1631-010CSR 173.98	1	8	629
1-1/4	1621-012CSR 248.09	1631-012CSR 272.25	1	8	629
1-1/2	1621-015CSR 277.08	1631-015CSR 304.48	1	4	629
2	1621-020CSR 339.91	1631-020CSR 375.37	1	0	629
3	1621-030CSR 691.11	1631-030CSR 760.38	1	0	629
4	1621-040CSR 1158.28	1631-040CSR 1280.73	1	0	629

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005C 165.93	1633-005C 170.80	1	8	629
3/4	1623-007C 182.05	1633-007C 202.98	1	8	629



Thermoplastic Valves Y-Check Valves

CPVC - Flanged Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1	1623-010C 219.11	1633-010C 243.91	1	8	629
1-1/4	1623-012C 338.31	1633-012C 375.37	1	4	629
1-1/2	1623-015C 357.62	1633-015C 397.91	1	4	629
2	1623-020C 480.06	1633-020C 533.22	1	0	629
3	1623-030C 940.81	1633-030C 1045.52	1	0	629
4	1623-040C 1501.42	1633-040C 1668.97	1	0	629

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005 96.66	163A-005 106.34	1	12	627
3/4	162A-007 103.09	163A-007 115.98	1	8	627
1	162A-010 114.38	163A-010 125.64	1	8	627
1-1/4	162A-012 178.81	163A-012 198.15	1	4	627
1-1/2	162A-015 194.93	163A-015 215.88	1	0	627
2	162A-020 241.64	163A-020 267.41	2	0	627
3	162A-030 478.45	163A-030 521.96	1	0	627
4	162A-040 834.49	163A-040 926.32	1	0	627

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005 96.66	163B-005 106.34	1	12	627
3/4	162B-007 103.09	163B-007 115.98	1	8	627
1	162B-010 114.38	163B-010 125.64	1	8	627
1-1/4	162B-012 177.22	163B-012 198.15	1	4	627
1-1/2	162B-015 194.93	163B-015 215.88	1	0	627
2	162B-020 241.64	163B-020 267.41	2	0	627
3	162B-030 478.45	163B-030 521.96	1	0	627
4	162B-040 834.49	163B-040 926.32	1	0	627

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005SR 99.87	163B-005SR 109.55	1	12	627
3/4	162B-007SR 107.93	163B-007SR 119.22	1	8	627
1	162B-010SR 119.22	163B-010SR 132.11	1	8	627
1-1/4	162B-012SR 188.48	163B-012SR 207.80	1	4	627
1-1/2	162B-015SR 211.03	163B-015SR 231.98	1	0	627
2	162B-020SR 259.37	163B-020SR 286.74	1	0	627
3	162B-030SR 525.17	163B-030SR 578.35	1	0	627
4	162B-040SR 881.20	163B-040SR 974.63	1	0	627

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005CL 96.66	163A-005CL 106.34	1	12	628
3/4	162A-007CL 103.09	163A-007CL 115.98	1	8	628
1	162A-010CL 114.38	163A-010CL 125.64	1	8	628
1-1/4	162A-012CL 178.81	163A-012CL 198.15	1	4	628
1-1/2	162A-015CL 194.93	163A-015CL 215.88	1	0	628
2	162A-020CL 241.64	163A-020CL 267.41	2	0	628
3	162A-030CL 478.45	163A-030CL 521.96	1	0	628
4	162A-040CL 834.49	163A-040CL 926.32	1	0	628

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CL 96.66	163B-005CL 106.34	1	12	628
3/4	162B-007CL 103.09	163B-007CL 115.98	1	8	628
1	162B-010CL 114.38	163B-010CL 125.64	1	8	628
1-1/4	162B-012CL 178.81	163B-012CL 198.15	1	4	628
1-1/2	162B-015CL 194.93	163B-015CL 215.88	1	0	628
2	162B-020CL 241.64	163B-020CL 267.41	2	0	628
3	162B-030CL 478.45	163B-030CL 521.96	1	0	628
4	162B-040CL 834.49	163B-040CL 926.32	1	0	628

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CLSR 99.87	163B-005CLSR 109.55	1	12	628
3/4	162B-007CLSR 107.93	163B-007CLSR 119.22	1	8	628
1	162B-010CLSR 119.22	163B-010CLSR 132.11	1	8	628
1-1/4	162B-012CLSR 188.48	163B-012CLSR 207.80	1	4	628
1-1/2	162B-015CLSR 211.03	163B-015CLSR 231.98	1	0	628
2	162B-020CLSR 259.37	163B-020CLSR 286.74	1	0	628
3	162B-030CLSR 525.17	163B-030CLSR 578.35	1	0	628
4	162B-040CLSR 881.20	163B-040CLSR 974.63	1	0	628

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005C 138.55	163A-005C 153.04	1	12	629
3/4	162A-007C 148.21	163A-007C 165.93	1	8	629
1	162A-010C 162.71	163A-010C 180.43	1	8	629
1-1/4	162A-012C 254.54	163A-012C 283.53	1	4	629
1-1/2	162A-015C 277.08	163A-015C 307.71	1	0	629
2	162A-020C 344.75	163A-020C 383.40	2	0	629
3	162A-030C 683.05	163A-030C 745.86	1	0	629
4	162A-040C 1190.51	163A-040C 1322.61	1	0	629

Thermoplastic Valves Y-Check Valves



CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005C 138.55	163B-005C 153.04	1	12	629
3/4	162B-007C 148.21	163B-007C 165.93	1	8	629
1	162B-010C 162.71	163B-010C 180.43	1	8	629
1-1/4	162B-012C 254.54	163B-012C 283.53	1	4	629
1-1/2	162B-015C 277.08	163B-015C 307.71	1	0	629
2	162B-020C 344.75	163B-020C 383.40	2	0	629
3	162B-030C 683.05	163B-030C 745.86	1	0	629
4	162B-040C 1190.51	163B-040C 1322.61	1	0	629

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CSR 141.77	163B-005CSR 156.26	1	12	629
3/4	162B-007CSR 154.66	163B-007CSR 170.76	1	8	629
1	162B-010CSR 170.76	163B-010CSR 188.48	1	8	629
1-1/4	162B-012CSR 269.02	163B-012CSR 296.42	1	4	629
1-1/2	162B-015CSR 301.25	163B-015CSR 330.23	1	0	629
2	162B-020CSR 370.52	163B-020CSR 407.57	1	0	629
3	162B-030CSR 750.72	163B-030CSR 824.83	1	0	629
4	162B-040CSR 1259.79	163B-040CSR 1391.89	1	0	629



Thermoplastic Valves Y-Check Valve Repair Kits

All Kits include:
 1-Seat
 1-Bonnet O-ring
 1-Plug O-ring

All Union Kits include:
 1-Seat
 1-Bonnet O-ring
 1-Plug O-ring
 2-End Connector O-rings

Y-Check Valve - Seat & O-ring Repair Kits

Size	Standard EPDM O-ring	Standard FKM O-ring	True Union EPDM O-ring	True Union FKM O-ring	Std Pk	Mstr Pk	Disc Code
1/2	YC-ERK-005 3.49	YC-VRK-005 10.32	YC-UERK-005 4.08	YC-UVRK-005 12.38	1	10	299
3/4	YC-ERK-007 4.00	YC-VRK-007 11.13	YC-UERK-007 4.73	YC-UVRK-007 13.84	1	10	299
1	YC-ERK-010 4.08	YC-VRK-010 15.11	YC-UERK-010 4.97	YC-UVRK-010 20.03	1	10	299
1-1/4	YC-ERK-012 4.27	YC-VRK-012 28.11	YC-UERK-012 6.20	YC-UVRK-012 35.15	1	10	299
1-1/2	YC-ERK-015 7.42	YC-VRK-015 30.69	YC-UERK-015 10.41	YC-UVRK-015 43.69	1	10	299
2	YC-ERK-020 9.98	YC-VRK-020 36.74	YC-UERK-020 13.78	YC-UVRK-020 52.99	1	10	299
3	YC-ERK-030 17.22	YC-VRK-030 96.37	YC-UERK-030 29.93	YC-UVRK-030 122.27	1	10	299
4	YC-ERK-040 22.29	YC-VRK-040 138.74	YC-UERK-040 33.16	YC-UVRK-040 171.17	1	10	299

Thermoplastic Valves Butterfly Check Valves



Pressure Rating @ 73°F (23°C), Water

2" - 8" 150 psi
10" - 16" 100 psi
18" - 24" 50 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

General Installation Information: Butterfly Check Valve seating may be affected by normal system turbulence. Flow velocities should be limited to approximately 5 feet per second. Valves should be installed at least 5 pipe diameters away from any fitting, pump or other source of turbulence. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Wafer					
2	5420-020 405.36	5430-020 446.66	1	18	289
2-1/2	5420-025 558.62	5430-025 615.63	1	0	289
3	5420-030 714.56	5430-030 787.42	1	8	289
4	5420-040 971.78	5430-040 1070.91	1	4	289
6	5420-060 1473.27	5430-060 1623.54	1	0	289
8	5420-080 2499.61	5430-080 2754.56	1	0	289
10	5420-100 4596.12	5430-100 5101.67	1	0	289
12	5420-120 6480.46	5430-120 7193.33	1	0	289
14	5420-140 9256.78	---	1	0	289
16	5420-160 12855.58	---	1	0	289
18	5420-180 16068.26	---	1	0	289
20	5420-200 20085.32	---	1	0	289
24	5420-240 28691.31	---	1	0	289

Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	5423-020 517.05	5433-020 556.04	1	8	289
2-1/2	5423-025 672.97	5433-025 732.75	1	0	289
3	5423-030 966.60	5433-030 1062.73	1	0	289
4	5423-040 1255.01	5433-040 1400.49	1	0	289
6	5423-060 2034.51	5433-060 2328.13	1	0	289
8	5423-080 2915.34	5433-080 3440.21	1	0	289
10	5423-100 5368.20	5433-100 6121.71	1	0	289
12	5423-120 7605.37	5433-120 8090.37	1	0	289
14	5423-140 10723.57	5433-140 11407.36	4	0	289

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
16	5423-160 15093.44	5433-160 16296.21	1	0	289
18	5423-180 19283.61	5433-180 20626.99	1	0	289
20	5423-200 25345.15	5433-200 27140.77	1	0	289
24	5423-240 33197.34	5433-240 35709.75	1	0	289

Spigot (Plain End)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	5427-020 220.86	5437-020 259.83	1	12	289
2-1/2	5427-025 304.01	5437-025 363.79	1	12	289
3	5427-030 407.94	5437-030 504.07	1	8	289
4	5427-040 535.26	5437-040 680.78	1	4	289
6	5427-060 1138.06	5437-060 1431.68	1	0	289
8	5427-080 1696.74	5437-080 2221.57	1	0	289
10	5427-100 4149.55	5437-100 4903.06	1	0	289
12	5427-120 5620.22	5437-120 6588.52	1	0	289
14	5427-140 7500.69	5437-140 8618.72	1	0	289
16	5427-160 11284.86	5437-160 13230.73	1	0	289
18	5427-180 14106.08	5437-180 16536.92	1	0	289
20	5427-200 17632.13	5437-200 20669.82	1	0	289
24	5427-240 25188.72	5437-240 29527.29	1	0	289

Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	5421A-020 215.67	5431A-020 254.64	1	4	289
2-1/2	5421A-025 293.62	5431A-025 353.36	1	8	289
3	5421A-030 400.16	5431A-030 496.27	1	8	289
4	5421A-040 524.87	5431A-040 670.37	1	4	289



Thermoplastic Valves Butterfly Check Valves

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
6	5421A-060 1117.29	5431A-060 1410.89	1	0	289
8	5421A-080 1678.56	5431A-080 2203.39	1	0	289
10	5421A-100 4141.06	5431A-100 4895.80	1	0	289
12	5421A-120 5613.29	5431A-120 6581.60	1	0	289

Grooved Ends

2	542G-020 244.24	543G-020 283.21	1	12	289
2-1/2	542G-025 319.60	543G-025 379.35	1	8	289
3	542G-030 420.93	543G-030 517.05	1	8	289
4	542G-040 566.45	543G-040 711.95	1	4	289
6	542G-060 1184.84	543G-060 1478.47	1	0	289
8	542G-080 1748.67	543G-080 2273.56	1	0	289
10	542G-100 4232.69	543G-100 4986.21	1	0	289
12	542G-120 5731.94	543G-120 6701.15	1	0	289

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Wafer					
2	5420-020C 628.27	5430-020C 697.39	1	18	290
2-1/2	5420-025C 865.88	5430-025C 917.65	1	0	290
3	5420-030C 1107.55	5430-030C 1229.38	1	0	290
4	5420-040C 1506.29	5430-040C 1671.97	1	0	290
6	5420-060C 2283.56	5430-060C 2534.76	1	0	290
8	5420-080C 3874.39	5430-080C 4300.57	1	0	290
10	5420-100C 8332.34	5430-100C 9165.58	1	0	290
12	5420-120C 14674.37	5430-120C 16141.81	1	0	290

Flanged Ends

2	5423-020C 800.28	5433-020C 839.26	1	8	290
2-1/2	5423-025C 1280.98	5433-025C 1340.74	1	0	290
3	5423-030C 1369.32	5433-030C 1465.46	1	0	290
4	5423-040C 1603.17	5433-040C 1748.67	1	0	290
6	5423-060C 2826.99	5433-060C 3120.62	1	0	290
8	5423-080C 4528.92	5433-080C 5053.80	1	0	290
10	5423-100C 8558.96	5433-100C 9312.47	1	0	290
12	5423-120C 15415.98	5433-120C 16385.20	1	0	290
14	5423-140C 22022.45	5433-140C 23407.12	1	0	290
16	5423-160C 30585.05	5433-160C 32509.86	1	0	290
18	5423-180C 38231.29	5433-180C 40637.35	1	0	290
20	5423-200C 54615.94	5433-200C 58052.18	1	0	290
24	5423-240C 68268.40	5433-240C 72564.97	1	0	290

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot (Plain End)					
2	5427-020C 420.93	5437-020C 459.91	1	12	290
2-1/2	5427-025C 569.05	5437-025C 628.79	1	12	290
3	5427-030C 579.44	5437-030C 674.71	1	8	290
4	5427-040C 727.53	5437-040C 873.05	1	4	290
6	5427-060C 1556.42	5437-060C 1850.04	1	0	290
8	5427-080C 2335.92	5437-080C 2860.78	1	0	290
10	5427-100C 5838.47	5437-100C 6592.03	1	0	290
12	5427-120C 9580.11	5437-120C 10548.42	1	0	290
14	5427-140C 10020.27	5437-140C 20928.65	1	0	290
16	5427-160C 13250.63	5437-160C 13755.01	1	0	290
18	5427-180C 20149.82	5437-180C 23126.81	1	0	290
20	5427-200C 25188.27	5437-200C 28905.66	1	0	290
24	5427-240C 26089.01	5437-240C 72564.97	1	0	290

Threaded Ends

2	5421A-020C 418.36	5431A-020C 483.31	1	12	290
2-1/2	5421A-025C 566.79	5431A-025C 627.07	1	8	290
3	5421A-030C 575.97	5431A-030C 672.09	1	8	290
4	5421A-040C 724.07	5431A-040C 869.58	1	4	290
6	5421A-060C 1544.27	5431A-060C 1837.02	1	0	290
8	5421A-080C 2325.16	5431A-080C 2850.04	1	0	290
10	5421A-100C 5829.28	5431A-100C 6582.83	1	0	290
12	5421A-120C 9564.84	5431A-120C 10534.04	1	0	290

Grooved Ends

2	542G-020C 444.34	543G-020C 514.68	1	12	290
2-1/2	542G-025C 589.82	543G-025C 649.60	1	8	290
3	542G-030C 599.33	543G-030C 695.48	1	8	290
4	542G-040C 769.11	543G-040C 915.29	1	4	290
6	542G-060C 1610.98	543G-060C 1904.60	1	0	290
8	542G-080C 2388.06	543G-080C 2912.93	1	0	290
10	542G-100C 5926.83	543G-100C 6680.34	1	0	290
12	542G-120C 9878.92	543G-120C 10848.08	1	0	290

Thermoplastic Valves Butterfly Check Valve Repair Kits & Industrial Swing Check Valves



Butterfly Check Valve Repair Kits

PVC & CPVC Butterfly Check Valve Repair Kit is an internal assembly including:

- 1-Flex Seal Gasket Seat
- 1-Hinge Post
- 2-Flapper Plates
- 2-Flapper Covers

- 1-Post Strip
- 2-Seat Post O-rings
- Plastic Assembly Screws
- Use Existing Hinge Post Bolts

PVC Butterfly Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFC-ERK-020 155.97	BFC-VRK-020 184.27	1	10	299
2-1/2	BFC-ERK-025 212.40	BFC-VRK-025 255.68	1	0	299
3	BFC-ERK-030 289.32	BFC-VRK-030 358.56	1	10	299
4	BFC-ERK-040 379.69	BFC-VRK-040 484.75	1	10	299
6	BFC-ERK-060 808.19	BFC-VRK-060 1020.60	1	10	299
8	BFC-ERK-080 1214.39	BFC-VRK-080 1593.74	1	10	299
10	BFC-ERK-100 2995.41	BFC-VRK-100 3541.26	1	0	299
12	BFC-ERK-120 4060.31	BFC-VRK-120 4760.63	1	0	299

CPVC Butterfly Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFC-ERK-020C 302.62	BFC-VRK-020C 330.77	1	10	299
2-1/2	BFC-ERK-025C 410.02	BFC-VRK-025C 453.64	1	10	299
3	BFC-ERK-030C 416.84	BFC-VRK-030C 486.08	1	10	299
4	BFC-ERK-040C 523.71	BFC-VRK-040C 629.08	1	10	299
6	BFC-ERK-060C 1117.00	BFC-VRK-060C 1328.74	1	10	299
8	BFC-ERK-080C 1681.80	BFC-VRK-080C 2061.54	1	10	299
10	BFC-ERK-100C 4216.46	BFC-VRK-100C 4761.63	1	0	299
12	BFC-ERK-120C 6918.72	BFC-VRK-120C 7619.71	1	0	299

Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
 3/4" - 4" 150 psi
 6" 100 psi
 8" 70 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 PP = 180°F (82°C)
 Temperature/Pressure De-ratings Apply
 All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up
 (Valve Shown with Arrow Indicator Option)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	4423-007 489.87	4433-007 518.17	1	12	108
1	4423-010 564.53	4433-010 615.23	1	4	108
1-1/4	4423-012 706.16	4433-012 747.16	1	0	108
1-1/2	4423-015 774.14	4433-015 864.87	1	0	108
2	4423-020 891.23	4433-020 990.28	1	0	108
2-1/2	4423-025 1491.55	4433-025 1759.58	1	0	110
3	4423-030 1668.08	4433-030 2185.93	1	0	110
4	4423-040 2126.11	4433-040 2496.24	1	0	110
6	4423-060 4040.65	4433-060 4742.66	1	0	110
8	4423-080 7742.14	4433-080 9049.54	1	0	110

CPVC

3/4	4423-007C 774.01	4433-007C 860.13	1	12	109
1	4423-010C 892.53	4433-010C 992.43	1	4	109

Industrial Swing Check Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	4423-012C 1116.48	4433-012C 1239.96	1	0	109
1-1/2	4423-015C 1151.88	4433-015C 1565.51	1	0	109
2	4423-020C 1485.39	4433-020C 1650.42	1	0	109
2-1/2	4423-025C 2461.58	4433-025C 2921.09	1	0	111
3	4423-030C 3074.86	4433-030C 3308.52	1	0	111
4	4423-040C 3528.28	4433-040C 4161.00	1	0	111
6	4423-060C 7220.66	4433-060C 7908.09	1	0	111
8	4423-080C 12884.15	4433-080C 15066.75	1	0	111

PP

3/4	4423-007P 563.29	4433-007P 625.86	1	12	113
1	4423-010P 673.87	4433-010P 734.44	1	4	113
1-1/4	4423-012P 807.65	4433-012P 897.31	1	0	113
1-1/2	4423-015P 1002.77	4433-015P 1091.16	1	0	113



Thermoplastic Valves Industrial Swing Check Valves

Industrial Swing Check Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
2	4423-020P 1072.15	4433-020P 1204.66	1	0	113
2-1/2	4423-025P 1785.13	4433-025P 1985.68	1	0	112
3	4423-030P 1876.73	4433-030P 2244.16	1	0	112
4	4423-040P 2552.76	4433-040P 2833.55	1	0	112
6	4423-060P 4835.67	4433-060P 5377.21	1	0	112
8	4423-080P 9256.18	4433-080P 10171.67	1	0	112

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423I-007 497.92	4433I-007 526.24	1	12	108
1	4423I-010 572.57	4433I-010 641.02	1	4	108
1-1/4	4423I-012 731.22	4433I-012 803.54	1	0	108
1-1/2	4423I-015 848.02	4433I-015 803.54	1	0	108
2	4423I-020 918.19	4433I-020 1002.26	1	0	108
2-1/2	4423I-025 1500.05	4433I-025 1668.77	1	0	110
3	4423I-030 1746.95	4433I-030 1668.77	1	0	110
4	4423I-040 2134.74	4433I-040 2536.97	1	0	110
6	4423I-060 4049.09	4433I-060 4781.72	1	0	110
8	4423I-080 7865.20	4433I-080 9095.78	1	0	110

CPVC

3/4	4423I-007C 782.56	4433I-007C 868.15	1	12	109
1	4423I-010C 900.59	4433I-010C 1002.09	1	4	109
1-1/4	4423I-012C 1111.08	4433I-012C 1251.24	1	0	109
1-1/2	4423I-015C 1277.94	4433I-015C 1251.24	1	0	109
2	4423I-020C 1497.00	4433I-020C 1693.56	1	0	109
2-1/2	4423I-025C 2469.95	4433I-025C 2962.41	1	0	111
3	4423I-030C 2650.77	4433I-030C 3446.74	1	0	111
4	4423I-040C 3551.77	4433I-040C 4185.59	1	0	111
6	4423I-060C 7327.88	4433I-060C 7916.65	1	0	111
8	4423I-080C 12897.99	4433I-080C 15114.39	1	0	111

PP

3/4	4423I-007P 571.34	4433I-007P 633.92	1	12	113
1	4423I-010P 685.14	4433I-010P 790.82	1	4	113
1-1/4	4423I-012P 880.14	4433I-012P 976.99	1	0	113
1-1/2	4423I-015P 1131.42	4433I-015P 976.99	1	0	113
2	4423I-020P 1101.74	4433I-020P 1249.35	1	0	113
2-1/2	4423I-025P 1795.51	4433I-025P 2012.18	1	0	112
3	4423I-030P 2237.73	4433I-030P 2335.62	1	0	112

Swing Check Valve With Arrow Indicator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
4	4423I-040P 2563.15	4433I-040P 2843.98	1	0	112
6	4423I-060P 4940.04	4433I-060P 5422.53	1	0	112
8	4423I-080P 9325.12	4433I-080P 10274.48	1	0	112

Contact Spears® for Pricing on Additional Specialty Valve Accessories

Available:

- Arrow Indicator Kits for Field Installation
- Counter Balance Kits for Field Installation

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423CB-007 774.86	4433CB-007 829.28	1	8	108
1	4423CB-010 866.79	4433CB-010 928.46	1	4	108
1-1/4	4423CB-012 1046.99	4433CB-012 1088.37	1	0	108
1-1/2	4423CB-015 1123.33	4433CB-015 1311.98	1	0	108
2	4423CB-020 1239.38	4433CB-020 1500.17	1	0	108
2-1/2	4423CB-025 1864.98	4433CB-025 2132.38	1	0	110
3	4423CB-030 2100.28	4433CB-030 2423.29	1	0	110
4	4423CB-040 2516.60	4433CB-040 2886.71	1	0	110
6	4423CB-060 4487.07	4433CB-060 4487.07	1	0	110
8	4423CB-080 8996.31	4433CB-080 9487.41	1	0	110

CPVC

3/4	4423CB-007C 1201.33	4433CB-007C 1309.60	1	12	109
1	4423CB-010C 1303.47	4433CB-010C 1416.69	1	4	109
1-1/4	4423CB-012C 1111.08	4433CB-012C 1526.17	1	0	109
1-1/2	4423CB-015C 1526.17	4433CB-015C 1764.87	1	0	109
2	4423CB-020C 1983.65	4433CB-020C 2148.72	1	0	109
2-1/2	4423CB-025C 2994.18	4433CB-025C 3453.78	1	0	111
3	4423CB-030C 3241.42	4433CB-030C 4294.28	1	0	111
4	4423CB-040C 4010.76	4433CB-040C 4718.82	1	0	111
6	4423CB-060C 7858.41	4433CB-060C 8545.80	1	0	111
8	4423CB-080C 13533.00	4433CB-080C 15715.46	1	0	111

PP

3/4	4423CB-007P 721.01	4433CB-007P 801.11	1	12	113
1	4423CB-010P 862.53	4433CB-010P 940.06	1	4	113
1-1/4	4423CB-012P 880.14	4433CB-012P 1354.36	1	0	113
1-1/2	4423CB-015P 1244.07	4433CB-015P 1670.49	1	0	113
2	4423CB-020P 1340.19	4433CB-020P 1505.82	1	0	113
2-1/2	4423CB-025P 2069.04	4433CB-025P 2541.67	1	0	112
3	4423CB-030P 2517.42	4433CB-030P 3149.68	1	0	112
4	4423CB-040P 2882.82	4433CB-040P 3167.00	1	0	112



Industrial Swing Check Valves

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
6	4423CB-060P 5363.56	4433CB-060P 6882.82	1	0	112
8	4423CB-080P 9791.67	4433CB-080P 10707.18	1	0	112

Industrial Swing Check Valve Accessory and Repair Kits

Repair Kits include:

1-Bonnet O-ring

1-Disc O-ring

1-Seat O-ring

1-Plug O-ring

1-Arm Plug O-ring

Industrial Swing Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	SK-ERK-007 26.29	SK-VRK-007 32.05	1	10	299
1	SK-ERK-010 34.34	SK-VRK-010 41.88	1	10	299
1-1/2 & 1-1/4	SK-ERK-015 82.11	SK-VRK-015 103.84	1	10	299
2	SK-ERK-020 88.15	SK-VRK-020 107.48	1	10	299
2-1/2	SK-ERK-025 93.22	SK-VRK-025 119.31	1	10	299
3	SK-ERK-030 105.69	SK-VRK-030 128.97	1	10	299
4	SK-ERK-040 115.32	SK-VRK-040 140.62	1	10	299
6	SK-ERK-060 229.20	SK-VRK-060 270.57	1	10	299
8	SK-ERK-080 288.39	SK-VRK-080 349.87	1	10	299



Thermoplastic Valves Utility Swing Check Valves & True Union Utility Swing Check Valves

Utility Swing Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520-05 16.68	S1520-05F 16.68	S1520-05FSR 19.46	35	0	026
3/4	S1520-07 17.22	S1520-07F 17.22	S1520-07FSR 21.18	35	0	026
1	S1520-10 17.94	S1520-10F 17.94	S1520-10FSR 23.45	20	0	026
1-1/4	S1520-12 18.63	S1520-12F 18.63	S1520-12FSR 27.48	12	0	026
1-1/2	S1520-15 19.75	S1520-15F 19.75	S1520-15FSR 34.86	12	0	026
2	S1520-20 30.65	S1520-20F 30.65	S1520-20FSR 47.05	15	0	026
2-1/2	S1520-25 50.99	S1520-25F 50.99	S1520-25FSR 67.39	5	0	026
3	S1520-30 56.66	S1520-30F 56.66	S1520-30FSR 100.49	4	0	026
4	S1520-40 80.22	S1520-40F 80.22	S1520-40FSR 125.64	2	0	026
6	S1520-60 168.56	S1520-60F 168.56	S1520-60FSR 222.33	1	0	026
8	S1520-80 313.13	---	---	1	0	026

PVC Clear Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520C05 22.68	S1520C05F 22.68	S1520C05FSR 25.45	35	0	026
3/4	S1520C07 23.13	S1520C07F 23.13	S1520C07FSR 27.12	35	0	026
1	S1520C10 23.57	S1520C10F 23.57	S1520C10FSR 29.09	20	0	026
1-1/4	S1520C12 24.75	S1520C12F 24.75	S1520C12FSR 33.57	12	0	026
1-1/2	S1520C15 26.89	S1520C15F 26.89	S1520C15FSR 42.03	12	0	026
2	S1520C20 38.72	S1520C20F 38.72	S1520C20FSR 55.12	15	0	026
2-1/2	S1520C25 64.54	S1520C25F 64.54	S1520C25FSR 89.97	5	0	026
3	S1520C30 71.72	S1520C30F 71.72	S1520C30FSR 115.54	4	0	026
4	S1520C40 96.54	S1520C40F 96.54	S1520C40FSR 141.93	2	0	026
6	S1520C60 199.53	S1520C60F 199.53	S1520C60FSR 253.31	1	0	026
8	S1520C80 333.29	---	---	1	0	026

True Union Utility Swing Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720-05 18.97	S1720-05F 18.97	S1720-05FSR 21.73	35	0	026
3/4	S1720-07 19.55	S1720-07F 19.55	S1720-07FSR 23.54	30	0	026

PVC White True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1	S1720-10 20.37	S1720-10F 20.37	S1720-10FSR 25.89	18	0	026
1-1/4	S1720-12 21.44	S1720-12F 21.44	S1720-12FSR 30.27	12	0	026

Thermoplastic Valves True Union Utility Swing Check Valves & Compression Utility Swing Check Valves



True Union Utility Swing Check Valves

PVC White True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1-1/2	S1720-15 23.57	S1720-15F 23.57	S1720-15FSR 38.71	10	0	026
2	S1720-20 35.41	S1720-20F 35.41	S1720-20FSR 51.74	10	0	026
2-1/2	S1720-25 59.04	S1720-25F 59.04	S1720-25FSR 84.44	2	0	026
3	S1720-30 75.38	S1720-30F 75.38	S1720-30FSR 119.23	2	0	026
4	S1720-40 101.75	S1720-40F 101.75	S1720-40FSR 146.72	1	0	026

PVC Clear True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720C05 24.57	S1720C05F 24.57	S1720C05FSR 27.33	35	0	026
3/4	S1720C07 24.98	S1720C07F 24.98	S1720C07FSR 28.96	30	0	026

PVC Clear True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1	S1720C10 27.29	S1720C10F 27.29	S1720C10FSR 32.80	18	0	026
1-1/4	S1720C12 28.75	S1720C12F 28.75	S1720C12FSR 37.57	12	0	026
1-1/2	S1720C15 30.83	S1720C15F 30.83	S1720C15FSR 45.96	10	0	026
2	S1720C20 43.37	S1720C20F 43.37	S1720C20FSR 59.78	10	0	026
2-1/2	S1720C25 71.22	S1720C25F 71.22	S1720C25FSR 96.64	2	0	026
3	S1720C30 81.97	S1720C30F 81.97	S1720C30FSR 125.80	2	0	026
4	S1720C40 109.29	S1720C40F 109.29	S1720C40FSR 154.64	1	0	026

Compression Utility Swing Check Valves



Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 75 psi
 Maximum Service Temperature
 140°F (60°C)
 Temperature/Pressure De-ratings Apply

- Standard Swing Check Assembly Maintains a Positive Seal
- Convenient Compression Ends for Quick Connections
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Excellent for Pool & Spa, OEM and General Purpose Applications
- Compact, Space-Saving Design
- Replaceable PVC White or Clear Sealed Unit
- High Grade EPDM Seat
- Suitable for Horizontal or Vertical Up-flow Installations
- Pressure Rated to 150 psi @ 73°F Full Flow (open), 75 psi Back Pressure (closed)
- Maximum Service Temperature 140°F (temperature/pressure de-ratings apply)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500-05	1/2	20	0	026	22.17
S1500-07	3/4	35	0	026	23.33
S1500-10	1	20	0	026	24.31
S1500-12	1-1/4	12	0	026	28.55
S1500-15	1-1/2	12	0	026	31.85
S1500-20	2	10	0	026	50.24
S1500-25	2-1/2	5	0	026	83.91
S1500-30	3	4	0	026	108.93
S1500-40	4	2	0	026	167.34

PVC Clear Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500C05	1/2	35	0	026	24.38
S1500C07	3/4	20	0	026	26.24
S1500C10	1	20	0	026	26.78
S1500C12	1-1/4	12	0	026	30.06
S1500C15	1-1/2	12	0	026	33.88
S1500C20	2	10	0	026	50.58
S1500C25	2-1/2	5	0	026	84.84
S1500C30	3	4	0	026	123.92
S1500C40	4	2	0	026	170.74

Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-005	1/2	1	50	299	11.93
CCW-007	3/4	1	50	299	12.14

Compression Coupling Nut Wrenches (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-010	1	1	50	299	12.65
CCW-012	1-1/4	1	50	299	14.32
CCW-015	1-1/2	1	50	299	15.44
CCW-020*	2	1	50	299	17.25
CCW-030**	3	1	25	299	21.22

* CCW-20 - Wrench also fits 2-1/2" Coupling Body

**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Sets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	Set	1	50	299	99.68

Complete Set of Wrenches, Sizes 1/2" - 3"



Thermoplastic Valves Utility Spring Check Valves

(Spring Assisted Swing Check)



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat
Stainless Steel Spring Assisted (non-adjustable)

General Installation Information: Spring check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580-05 32.84	S1580-05F 32.84	S1580-05FSR 35.62	20	0	026
3/4	S1580-07 37.17	S1580-07F 37.17	S1580-07FSR 41.13	20	0	026
1	S1580-10 38.72	S1580-10F 38.72	S1580-10FSR 44.22	20	0	026
1-1/4	S1580-12 40.32	S1580-12F 40.32	S1580-12FSR 49.17	12	0	026
1-1/2	S1580-15 42.92	S1580-15F 42.92	S1580-15FSR 58.02	12	0	026
2	S1580-20 44.99	S1580-20F 44.99	S1580-20FSR 61.39	15	0	026
2-1/2	S1580-25 79.85	S1580-25F 79.85	S1580-25FSR 105.28	4	0	026
3	S1580-30 83.28	S1580-30F 83.28	S1580-30FSR 127.12	4	0	026
4	S1580-40 118.19	S1580-40F 118.19	S1580-40FSR 163.61	2	0	026

PVC Clear Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580C05 33.84	S1580C05F 33.84	S1580C05FSR 36.65	20	0	026
3/4	S1580C07 38.31	S1580C07F 38.31	S1580C07FSR 42.31	20	0	026
1	S1580C10 39.94	S1580C10F 39.94	S1580C10FSR 45.43	20	0	026
1-1/4	S1580C12 41.58	S1580C12F 41.58	S1580C12FSR 50.41	12	0	026
1-1/2	S1580C15 44.05	S1580C15F 44.05	S1580C15FSR 59.19	12	0	026
2	S1580C20 45.72	S1580C20F 45.72	S1580C20FSR 62.11	15	0	026
2-1/2	S1580C25 82.33	S1580C25F 82.33	S1580C25FSR 107.72	5	0	026
3	S1580C30 85.73	S1580C30F 85.73	S1580C30FSR 170.57	4	0	026
4	S1580C40 121.80	S1580C40F 121.80	S1580C40FSR 167.21	2	0	026

Thermoplastic Valves True Union Utility Spring Check Valves & Diaphragm Check Valves



True Union Utility Spring Check Valves (Spring Assisted Swing Check)



Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 75 psi
 Maximum Service Temperature
 140°F (60°C)
 Temperature/Pressure De-ratings Apply
 EPDM Seat
 Stainless Steel Spring Assisted (non-adjustable)

General Installation Information: Spring check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780-05 43.67	S1780-05F 43.67	S1780-05FSR 46.44	20	0	026
3/4	S1780-07 49.54	S1780-07F 49.54	S1780-07FSR 53.52	30	0	026
1	S1780-10 51.63	S1780-10F 51.63	S1780-10FSR 57.12	18	0	026
1-1/4	S1780-12 53.78	S1780-12F 53.78	S1780-12FSR 62.57	12	0	026
1-1/2	S1780-15 57.29	S1780-15F 57.29	S1780-15FSR 72.44	10	0	026
2	S1780-20 59.65	S1780-20F 59.65	S1780-20FSR 76.03	10	0	026
2-1/2	S1780-25 106.46	S1780-25F 106.46	S1780-25FSR 131.83	2	0	026
3	S1780-30 111.06	S1780-30F 111.06	S1780-30FSR 154.89	2	0	026
4	S1780-40 157.59	S1780-40F 157.59	S1780-40FSR 203.04	1	0	026

PVC Clear True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780C05 45.05	S1780C05F 45.05	S1780C05FSR 47.82	20	0	026
3/4	S1780C07 51.09	S1780C07F 51.09	S1780C07FSR 55.07	30	0	026
1	S1780C10 53.22	S1780C10F 53.22	S1780C10FSR 58.76	18	0	026
1-1/4	S1780C12 55.41	S1780C12F 55.41	S1780C12FSR 64.21	12	0	026
1-1/2	S1780C15 58.76	S1780C15F 58.76	S1780C15FSR 74.21	10	0	026
2	S1780C20 60.47	S1780C20F 60.47	S1780C20FSR 77.83	10	0	026
2-1/2	S1780C25 109.76	S1780C25F 109.76	S1780C25FSR 135.19	2	0	026
3	S1780C30 114.48	S1780C30F 114.48	S1780C30FSR 158.31	2	0	026
4	S1780C40 162.48	S1780C40F 162.48	S1780C40FSR 207.93	1	0	026

Diaphragm Check Valves



Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 100 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 Santoprene™ TPE Seat

PVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007	3/4	15	0	004	89.09

PVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007	3/4	15	0	004	89.09

CPVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007C	3/4	15	0	004	117.00

CPVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007C	3/4	15	0	004	117.00

General Installation Information: Diaphragm Check Valves have "normally closed" operation with 1 - 1-1/2 psi opening pressure and can be mounted in any position. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec.



Thermoplastic Valves PVC In-line Adjustable Spring Check Valves



Fipt x Mipt



Mipt x Fipt



Fipt x Fipt



Pressure Rating @ 73°F (23°C), Water
200 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

2 - 14 lbs. Adjustable Spring Tension
(5 to 32 feet of head)
Factory Preset to Approx. 5 psi
(12 feet of head)
Each full turn of adjustment nut = 1 psi
(2.3 feet of head)
Stainless Steel Adjustment Hardware
EPDM Seat

Standard Unit - Female Inlet x Male Outlet

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Fipt x Mipt (Inlet x Outlet)

S1102-05	1/2	30	180	026	10.95
S1102-07	3/4	25	150	026	11.20
S1102-10	1	25	150	026	18.59
S1102-05-07	1/2X3/4	25	150	026	15.98

Male Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Mipt x Fipt (Inlet x Outlet)

S1101-05	1/2	30	180	026	10.95
----------	-----	----	-----	-----	-------

Female Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Fipt x Fipt (Inlet x Outlet)

S1100-07	3/4	25	150	026	11.57
----------	-----	----	-----	-----	-------

Thermoplastic Valves Industrial PVC Backwater Valves



Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves



PVC Backwater Valves Soc x Soc - Valve Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P	2	1	12	055	59.05
S375P	3	2	0	055	59.17
S475P	4	1	0	055	65.55
S675P	6	1	0	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length



PVC Backwater Valves with Extension Kit to Premade Length Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-120 ¹	2X12HT	1	0	055	178.12
S275P-160 ¹	2X16HT	1	0	055	191.59
S275P-200 ¹	2X20HT	1	0	055	205.05
S275P-240 ¹	2X24HT	1	0	055	218.53
S275P-360 ¹	2X36HT	1	0	055	229.52
S275P-480 ¹	2X48HT	1	0	055	252.25
S375P-120 ¹	3X12HT	1	0	055	178.12
S375P-160 ¹	3X16HT	1	0	055	191.59
S375P-200 ¹	3X20HT	1	0	055	205.05
S375P-240 ¹	3X24HT	1	0	055	218.53
S375P-360 ¹	3X36HT	1	0	055	229.52
S375P-480 ¹	3X48HT	1	0	055	252.25
S475P-120 ¹	4X12HT	1	0	055	231.36

PVC Backwater Valves with Extension Kit to Premade Length

Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S475P-160 ¹	4X16HT	1	0	055	249.59
S475P-200 ¹	4X20HT	1	0	055	266.20
S475P-240 ¹	4X24HT	1	0	055	283.85
S475P-360 ¹	4X36HT	1	0	055	298.11
S475P-480 ¹	4X48HT	1	0	055	327.60
S675P-120 ¹	6X12HT	1	0	055	485.82
S675P-160 ¹	6X16HT	1	0	055	524.14
S675P-200 ¹	6X20HT	1	0	055	559.02
S675P-240 ¹	6X24HT	1	0	055	596.16
S675P-360 ¹	6X36HT	1	0	055	626.04
S675P-480 ¹	6X48HT	1	0	055	687.95

¹ - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length



PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-020-120 ¹	2X12HT	1	0	055	55.55
SAEK-020-160 ¹	2X16HT	1	0	055	57.14
SAEK-020-200 ¹	2X20HT	1	0	055	58.65
SAEK-020-240 ¹	2X24HT	1	0	055	61.46
SAEK-020-360 ¹	2X36HT	1	0	055	64.37
SAEK-020-480 ¹	2X48HT	1	0	055	67.52
SAEK-030-120 ¹	3X12HT	1	0	055	60.24
SAEK-030-160 ¹	3X16HT	1	0	055	68.00
SAEK-030-200 ¹	3X20HT	1	0	055	72.04
SAEK-030-240 ¹	3X24HT	1	0	055	81.19
SAEK-030-360 ¹	3X36HT	1	0	055	96.04
SAEK-030-480 ¹	3X48HT	1	0	055	113.59
SAEK-040-120 ¹	4X12HT	1	0	055	89.83
SAEK-040-160 ¹	4X16HT	1	0	055	101.27
SAEK-040-200 ¹	4X20HT	1	0	055	124.92
SAEK-040-240 ¹	4X24HT	1	0	055	136.79



Thermoplastic Valves Industrial PVC Backwater Valves

PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-040-360 ¹	4X36HT	1	0	055	172.06
SAEK-040-480 ¹	4X48HT	1	0	055	198.64
SAEK-060-120 ¹	6X12HT	1	0	055	160.94
SAEK-060-160 ¹	6X16HT	1	0	055	182.92
SAEK-060-200 ¹	6X20HT	1	0	055	207.41
SAEK-060-240 ¹	6X24HT	1	0	055	237.97
SAEK-060-360 ¹	6X36HT	1	0	055	295.39
SAEK-060-480 ¹	6X48HT	1	0	055	366.67

¹ - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components



PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-AK	2	1	8	055	87.00
S375P-AK	3	1	0	055	87.00
S475P-AK	4	1	0	055	101.77
S675P-AK	6	1	0	055	360.38

PVC Backwater Valve Extension Components Only



PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-ECK	2	1	8	055	46.33
S375P-ECK	3	1	0	055	46.33
S475P-ECK	4	1	0	055	60.37
S675P-ECK	6	1	0	055	126.83

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1) (continued)

Table 1: User Supplied Pipe Requirements
For Use With Extension Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe			
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe ¹			
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE ³ 6" D3034 (SDR 35) PVC SEWER PIPE ²				
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE				
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE				

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.

Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.

Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit



Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	2	1	10	055	34.48
S375P-FRK	3	1	10	055	43.48
S475P-FRK	4	1	10	055	50.64
S675P-FRK	6	1	5	055	90.18

PVC Backwater Valve Metric Adapters

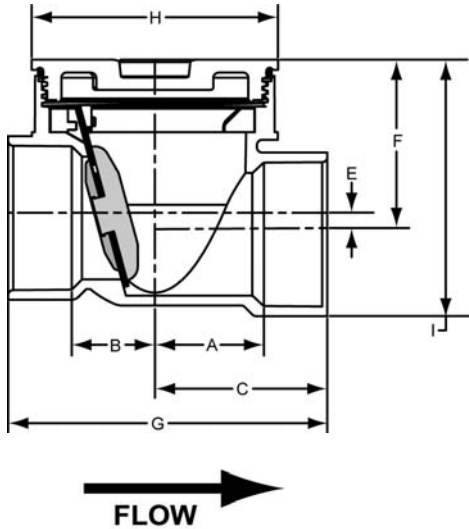


PVC Backwater Valve Metric Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	63mm X 2	50	0	055	15.28
S375MA-090	90mm X 3	25	0	055	16.42
S475MA-110	110mm X 4	10	0	055	19.45
S675MA-160	160mm X 6	4	0	055	44.89

Technical Information

STANDARD VALVE



Standard Valve Dimensions (Inches)

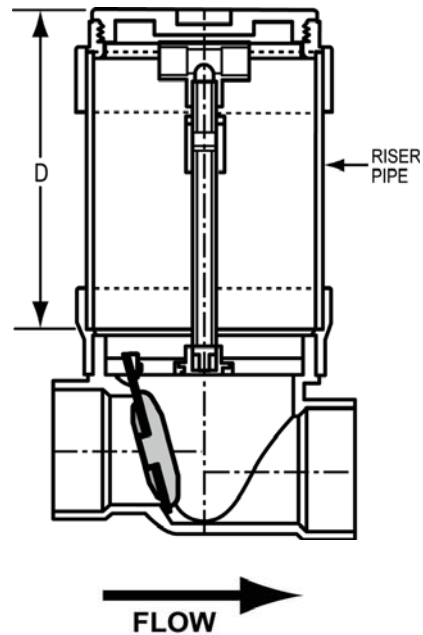
Size	A	B	C	E	F	G	H	I
2	1-13/16	1-3/4	2-5/8	5/16	3-1/4	5-9/32	4-3/16	4-9/16
3	2-5/8	2	4-3/16	13/32	4-1/8	7-3/4	6	6-1/8
4	3-5/8	3-3/4	5-7/16	23/32	5-7/16	10-15/16	8-1/4	7-15/16
6	4-3/4	4-5/8	7-3/4	13/16	7-3/16	15-3/8	11-1/4	10-13/16

Valve with Extension Kit Dimensions (Inches)

HEIGHT-D
12
16
20
24
36
48

D = Top of plug Standard Valve to top of plug with Extension

VALVE WITH EXTENSION KIT





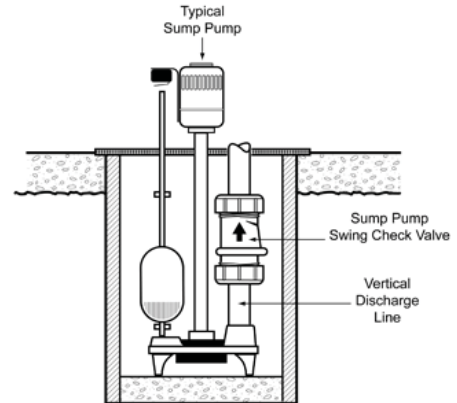
Thermoplastic Valves Sump Pump Swing Check Valve & Quiet Check Valve

Sump Pump Swing Check Valve



- Specifically Designed for Use on Sump Pump Discharge Lines (See Illustration)
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- All Plastic Construction with Elastomer Seals - No Metal Parts
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Suitable for Vertical Up-flow or Horizontal Installations

Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 75 psi
 Maximum Service Temperature
 140°F (60°C)
 Temperature/Pressure De-ratings Apply



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up." Do Not install Check Valve upside down.

PVC Sump Pump Swing Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Compression Ends

Buna-N Gaskets included for both 1-1/4" & 1-1/2" pipe

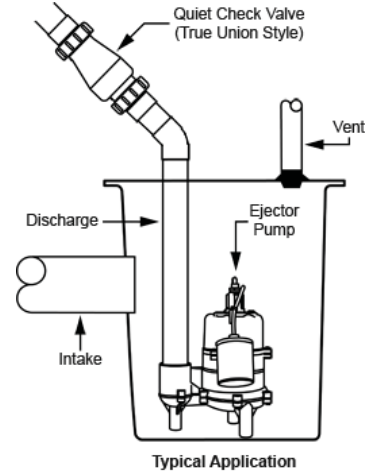
S1400-15	1-1/2 & 1-1/4	16	0	026	18.80
----------	---------------	----	---	-----	-------

Quiet Check Valve



- Designed to Provide Quiet Operation in Sump Pump or Sewage Ejector Pump Systems.
- Spring Controlled Rate of Closing Prevents Slamming and Eliminates Noise.
- Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space.
- 2" Size for Sewage Ejector Systems, 1-1/2" Size for Sump Pump Effluent Systems.

Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 75 psi
 Maximum Service Temperature 140°F (60°C)
 Temperature/Pressure De-ratings Apply



General Installation Information: Install check valve 12"-18" above pump discharge, or as recommended by pump system manufacturer. Be sure check valve installation complies with local codes. Valve may be installed in either vertical up-flow or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up."

PVC Quiet Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Soc x Soc

True Union or Direct Socket End Connection

8622-015	1-1/2	12	0	026	42.11
8622-020	2	10	0	026	60.19

Thermoplastic Valves Swing Check Ball Valve



- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water

Full Flow (open) 150 psi

Back Pressure (closed) 75 psi

Maximum Service Temperature

140°F (60°C)

Temperature/Pressure De-ratings Apply

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion **MUST** be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

PVC Swing Check Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Soc x Soc

7622-015	1-1/2	10	0	026	42.57
7622-020	2	6	0	026	61.09



Thermoplastic Valves Gate Valves



1/2" - 2" Socket/Threaded Style



2-1/2" - 3" Socket Style



4" Socket Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 200 psi
 2-1/2" - 3" 150 psi
 4" 235 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply

PP Gate-Wedge on PVC Valves
 CPVC Gate-Wedge on CPVC Valve
 All Valves Assembled with Silicone-Free,
 Water Soluble Lubricant

See Gate Valve Accessories & Repair Kits
 Section for Additional Options and Features

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005 24.19	2021-005 26.55	2031-005 29.24	12	0	200
3/4	2011-007 29.58	2021-007 32.56	2031-007 34.27	12	0	200
1	2011-010 35.06	2021-010 38.61	2031-010 42.51	12	0	200
1-1/4	2011-012 48.48	2021-012 53.35	2031-012 58.65	6	0	200
1-1/2	2011-015 61.86	2021-015 68.73	2031-015 74.84	6	0	200
2	2011-020 79.45	2021-020 87.47	2031-020 96.16	6	0	200
2-1/2	2011-025 439.27	2021-025 483.19	2031-025 531.53	1	0	201

SR Threaded Ends

3	2011-030SR 439.27	2021-030SR 483.19	2031-030SR 531.53	1	0	201
4	2011-040SR 862.04	2021-040SR 957.83	2031-040SR 1053.58	1	0	201

Socket Ends

1/2	2012-005 24.19	2022-005 26.55	2032-005 29.24	12	0	200
3/4	2012-007 29.58	2022-007 32.56	2032-007 34.27	12	0	200
1	2012-010 35.06	2022-010 38.61	2032-010 42.51	12	0	200
1-1/4	2012-012 48.48	2022-012 53.35	2032-012 58.65	6	0	200
1-1/2	2012-015 61.86	2022-015 68.73	2032-015 74.84	6	0	200
2	2012-020 79.45	2022-020 87.47	2032-020 96.16	6	0	200
2-1/2	2012-025 439.27	2022-025 483.19	2032-025 531.53	1	0	201
3	2012-030 439.27	2022-030 483.19	2032-030 531.53	1	0	201
4	2012-040 862.04	2022-040 957.83	2032-040 1053.58	1	0	201

Flanged Ends

1/2	2013-005 117.13	2023-005 132.82	2033-005 152.23	4	0	200
3/4	2013-007 131.79	2023-007 149.14	2033-007 170.16	4	0	200
1	2013-010 144.72	2023-010 163.48	2033-010 187.76	4	0	200
1-1/4	2013-012 163.01	2023-012 187.15	2033-012 222.11	3	0	200
1-1/2	2013-015 190.27	2023-015 217.19	2033-015 255.16	3	0	200

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
2	2013-020 244.91	2023-020 257.32	2033-020 275.47	2	0	200
2-1/2	2013-025 549.07	2023-025 735.17	2033-025 808.67	1	0	201
3	2013-030 549.07	2023-030 735.17	2033-030 808.67	1	0	201
4	2013-040 1080.78	2023-040 1200.93	2033-040 1321.02	1	0	201

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005C 70.80	2021-005C 78.63	2031-005C 86.54	12	0	202
3/4	2011-007C 76.56	2021-007C 85.04	2031-007C 93.56	12	0	202
1	2011-010C 83.92	2021-010C 93.25	2031-010C 102.54	12	0	202
1-1/4	2011-012C 147.39	2021-012C 163.79	2031-012C 180.17	6	0	202
1-1/2	2011-015C 161.11	2021-015C 179.51	2031-015C 197.47	6	0	202
2	2011-020C 186.39	2021-020C 207.06	2031-020C 227.77	6	0	202
2-1/2	2011-025C 694.04	2021-025C 748.94	2031-025C 813.25	1	0	203

SR Threaded Ends

3	2011-030CSR 931.87	2021-030CSR 1035.13	2031-030CSR 1150.16	1	0	203
4	2011-040CSR 1677.34	2021-040CSR 1863.68	2031-040CSR 2070.76	1	0	203

Socket Ends

1/2	2012-005C 70.80	2022-005C 78.63	2032-005C 86.54	12	0	202
3/4	2012-007C 76.56	2022-007C 85.04	2032-007C 93.56	12	0	202
1	2012-010C 83.92	2022-010C 93.25	2032-010C 102.54	12	0	202
1-1/4	2012-012C 147.39	2022-012C 163.79	2032-012C 180.17	6	0	202
1-1/2	2012-015C 161.11	2022-015C 179.51	2032-015C 197.47	6	0	202
2	2012-020C 186.39	2022-020C 207.06	2032-020C 227.77	6	0	202
2-1/2	2012-025C 694.04	2022-025C 748.94	2032-025C 813.25	1	0	203
3	2012-030C 931.87	2022-030C 1035.13	2032-030C 1150.16	1	0	203
4	2012-040C 1677.34	2022-040C 1863.68	2032-040C 2070.76	1	0	203

Thermoplastic Valves Gate Valves & Plug Gate Valves



Gate Valves

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
1/2	2013-005C 317.23	2023-005C 352.43	2033-005C 387.64	4	0	202
3/4	2013-007C 342.97	2023-007C 381.03	2033-007C 419.15	4	0	202
1	2013-010C 375.86	2023-010C 417.71	2033-010C 459.46	4	0	202
1-1/4	2013-012C 508.35	2023-012C 565.07	2033-012C 621.58	3	0	202
1-1/2	2013-015C 555.24	2023-015C 619.34	2033-015C 681.19	3	0	202

CPVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
2	2013-020C 642.97	2023-020C 714.39	2033-020C 785.85	2	0	202
2-1/2	2013-025C 840.07	2023-025C 1110.14	2033-025C 1245.37	1	0	203
3	2013-030C 1164.81	2023-030C 1294.24	2033-030C 1438.06	1	0	203
4	2013-040C 2096.67	2023-040C 2329.63	2033-040C 2588.49	1	0	203

Plug Gate Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 235 psi
 Flanged 150 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply
 Plug-Style PE Wedge on All Valves
 Rated for Vacuum Service
 All Valves Assembled with Silicone-Free,
 Water Soluble Lubricants

PVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005 24.19	5222-005 26.55	5232-005 29.24	12	0	200
3/4	5212-007 29.58	5222-007 32.56	5232-007 34.27	12	0	200
1	5212-010 35.06	5222-010 38.61	5232-010 42.51	12	0	200
1-1/4	5212-012 48.48	5222-012 53.35	5232-012 58.65	6	0	200
1-1/2	5212-015 61.86	5222-015 68.73	5232-015 74.84	6	0	200
2	5212-020 79.45	5222-020 87.47	5232-020 96.16	6	0	200

PVC Flanged Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	5213-012 163.01	5223-012 187.15	5233-012 222.11	3	0	200
1-1/2	5213-015 190.27	5223-015 217.19	5233-015 255.16	3	0	200
2	5213-020 244.91	5223-020 257.32	5233-020 275.47	2	0	200
6	---	5223-060 2298.84	5233-060 2995.21	1	0	201
8	---	5223-080 2729.45	5233-080 3199.78	1	0	201

PVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005SR 26.92	5221-005SR 29.31	5231-005SR 31.95	12	0	200
3/4	5211-007SR 33.53	5221-007SR 36.51	5231-007SR 38.22	12	0	200
1	5211-010SR 40.51	5221-010SR 44.06	5231-010SR 47.94	12	0	200
1-1/4	5211-012SR 57.22	5221-012SR 62.08	5231-012SR 67.40	6	0	200
1-1/2	5211-015SR 76.83	5221-015SR 83.69	5231-015SR 89.78	6	0	200
2	5211-020SR 95.66	5221-020SR 103.65	5231-020SR 112.39	6	0	200

CPVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005C 70.80	5222-005C 78.63	5232-005C 86.54	12	0	202
3/4	5212-007C 76.56	5222-007C 85.04	5232-007C 93.56	12	0	202
1	5212-010C 83.92	5222-010C 93.25	5232-010C 102.54	12	0	202
1-1/4	5212-012C 147.39	5222-012C 163.79	5232-012C 180.17	6	0	202
1-1/2	5212-015C 161.11	5222-015C 179.51	5232-015C 197.47	6	0	202
2	5212-020C 186.39	5222-020C 207.06	5232-020C 227.77	6	0	202

CPVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005CSR 73.54	5221-005CSR 81.38	5231-005CSR 89.27	12	0	202
3/4	5211-007CSR 80.49	5221-007CSR 88.98	5231-007CSR 97.53	12	0	202
1	5211-010CSR 89.37	5221-010CSR 98.67	5231-010CSR 108.01	12	0	202
1-1/4	5211-012CSR 156.11	5221-012CSR 172.51	5231-012CSR 188.92	6	0	202

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005 117.13	5223-005 132.82	5233-005 152.23	4	0	200
3/4	5213-007 131.79	5223-007 149.14	5233-007 170.16	4	0	200
1	5213-010 144.72	5223-010 163.48	5233-010 187.76	4	0	200



Thermoplastic Valves Plug Gate Valves & Gate Valve Accessories & Repair Kits

Plug Gate Valves

CPVC SR Threaded Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	5211-015CSR 169.85	5221-015CSR 188.21	5231-015CSR 206.18	6	0	202
2	5211-020CSR 202.63	5221-020CSR 223.29	5231-020CSR 244.00	6	0	202

CPVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005C 317.23	5223-005C 352.43	5233-005C 387.64	4	0	202
3/4	5213-007C 342.97	5223-007C 381.03	5233-007C 419.15	4	0	202
1	5213-010C 375.86	5223-010C 417.71	5233-010C 459.46	4	0	202

CPVC Flanged Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	5213-012C 508.35	5223-012C 565.07	5233-012C 620.94	3	0	202
1-1/2	5213-015C 555.24	5223-015C 619.34	5233-015C 681.19	3	0	202
2	5213-020C 642.97	5223-020C 714.39	5233-020C 785.85	2	0	202
6	---	5223-060C 2988.46	5233-060C 3893.84	1	0	203
8	---	5223-080C 3173.98	5233-080C 4102.27	1	0	203

Gate Valve Accessories & Repair Kits

Operator Nut



2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GTN-005 ¹	1/2, 3/4 & 1	10	60	299	43.15
GTN-012 ²	1-1/4, 1-1/2 & 2	10	60	299	64.71
PGTN-012 ³	1-1/4, 1-1/2 & 2	10	60	299	64.71
GTN-030	3	10	80	299	107.86
GTN-040	4	10	60	299	107.86

1 - GTN-005 fits Standard & Plug Style Gate Valves

2 - GTN-012 fits Standard Gate Valves Only

3 - PGTN-012 fits Plug Style Gate Valves Only

Regular Gate Valve O-ring Repair Kits

1/2" - 2" Kit includes:

- 1-Stem O-ring
- 1-Bonnet O-Ring
- 1-Stem Bushing
- 1-Stem Washer

2-1/2" - 3" Kit includes:

- 1-Stem O-ring
- 1-Seal Carrier O-ring
- 1-Stem Bushing
- 1-Stem Washer

4" Kit includes:

- 1-Stem O-ring
- 1-Bonnet O-ring
- 1-Stem Bushing

Regular Gate Valve O-ring Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	GT-BRK-005 6.68	GT-ERK-005 7.76	GT-VRK-005 13.27	1	10	299
3/4	GT-BRK-007 6.68	GT-ERK-007 7.76	GT-VRK-007 13.27	1	10	299

Regular Gate Valve O-ring Repair Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1	GT-BRK-010 6.95	GT-ERK-010 9.01	GT-VRK-010 14.63	1	10	299
1-1/4 & 1-1/2	GT-BRK-015 8.25	GT-ERK-015 12.96	GT-VRK-015 24.45	1	10	299
2	GT-BRK-020 8.91	GT-ERK-020 13.55	GT-VRK-020 25.19	1	10	299
2-1/2 & 3	GT-BRK-030 10.23	GT-ERK-030 14.67	GT-VRK-030 27.51	1	10	299
4	GT-BRK-040 10.80	GT-ERK-040 15.63	GT-VRK-040 32.35	1	10	299

Plug Gate Valve O-ring Repair Kits

1/2" - 2" Kit includes:

- 1-Stem O-ring
- 1-Bonnet O-Ring

Plug Gate Valve O-ring Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2, 3/4 & 1	PGT-BRK-010 3.35	PGT-ERK-010 3.61	PGT-VRK-010 6.84	1	10	299
1-1/4, 1-1/2 & 2	PGT-BRK-020 4.08	PGT-ERK-020 4.77	PGT-VRK-020 8.05	1	10	299

PVC Plug Gate Valve Internal Replacement Cartridge

Internal Replacement Cartridge includes complete, fully assembled Handle/Nut, Stem/O-ring, Bonnet/O-ring, and Gate for direct insertion into existing valve Body.

PVC Plug Gate Valve Internal Replacement Cartridge

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2, 3/4 & 1	5210-010 21.23	5220-010 23.35	5230-010 25.65	1	10	299
1-1/4, 1-1/2 & 2	5210-020 42.61	5220-020 46.85	5230-020 51.55	1	4	299
6	---	5220-060 1463.19	5230-060 1905.89	1	0	299

CPVC Plug Gate Valve Internal Replacement Cartridge

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2, 3/4 & 1	5210-010C 62.18	5220-010C 69.08	5230-010C 76.01	1	10	299
1-1/4, 1-1/2 & 2	5210-020C 129.46	5220-020C 143.84	5230-020C 158.25	1	4	299
6	---	5220-060C 1901.60	5230-060C 2477.71	1	0	299

Thermoplastic Valves PVC Pool Butterfly Valves & Butterfly Valves



PVC Pool Butterfly Valves



Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC White Butterfly Valve Lever Handle EPDM Seats

682311-015	1-1/2	1	0	260	163.68
682311-020	2	1	0	260	169.38
682311-025	2-1/2	1	0	260	175.07
682311-030	3	1	0	260	185.02
682311-040	4	1	0	260	206.37
682311-060	6	1	0	260	306.01
682311-080	8	1	0	260	540.85



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC White Butterfly Valve Gear Operated EPDM Seats

682321-015	1-1/2	1	0	261	546.54
682321-020	2	1	0	261	596.36
682321-025	2-1/2	1	0	261	639.06
682321-030	3	1	0	261	644.76
682321-040	4	1	0	261	676.06
682321-060	6	1	0	261	724.45
682321-080	8	1	0	261	1000.82
682321-100	10	1	0	261	1201.26
682321-120	12	1	0	261	1458.88



Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features



Gear Operator Style

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311-015 280.63	722311-015 280.63	723311-015 585.92	1	0	250
2	721311-020 291.79	722311-020 291.79	723311-020 603.85	1	0	250
2-1/2	721311-025 309.78	722311-025 309.78	723311-025 612.84	1	0	250
3	721311-030 314.28	722311-030 314.28	723311-030 624.07	1	0	250
4	721311-040 363.69	722311-040 363.69	723311-040 781.22	1	0	250
6	721311-060 538.78	722311-060 538.78	723311-060 1248.15	1	0	250
8	721311-080 915.91	722311-080 915.91	723311-080 2114.67	1	0	250

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
1-1/2	721321-015 814.87	722321-015 814.87	723321-015 1034.89	1	0	250
2	721321-020 826.14	722321-020 826.14	723321-020 1055.11	1	0	250
2-1/2	721321-025 837.32	722321-025 837.32	723321-025 1095.48	1	0	250
3	721321-030 850.82	722321-030 850.82	723321-030 1158.38	1	0	250
4	721321-040 893.46	722321-040 893.46	723321-040 1311.01	1	0	250
6	721321-060 1073.08	722321-060 1073.08	723321-060 1782.43	1	0	250
8	721321-080 1450.18	722321-080 1450.18	723321-080 2648.97	1	0	250



Thermoplastic Valves Butterfly Valves & Lug Insert Butterfly Valves

Butterfly Valves

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
10	721321-100 1961.99	722321-100 1961.99	723321-100 4328.08	1	0	250
12	721321-120 2702.82	722321-120 2702.82	723321-120 6218.33	1	0	250

Valve Only

1-1/2	721301-015 244.71	722301-015 244.71	723301-015 511.81	1	0	250
2	721301-020 271.61	722301-020 271.61	723301-020 536.53	1	0	250
2-1/2	721301-025 280.63	722301-025 280.63	723301-025 554.46	1	0	250
3	721301-030 287.36	722301-030 287.36	723301-030 565.69	1	0	250
4	721301-040 332.24	722301-040 332.24	723301-040 709.37	1	0	250
6	721301-060 502.83	722301-060 502.83	723301-060 1149.38	1	0	250
8	721301-080 871.03	722301-080 871.03	723301-080 1939.57	1	0	250
10	721301-100 1746.49	722301-100 1746.49	723301-100 3883.62	1	0	250
12	721301-120 2253.85	722301-120 2253.85	723301-120 5544.83	1	0	250

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311-015C 374.91	722311-015C 374.91	723311-015C 758.78	1	0	252
2	721311-020C 399.58	722311-020C 399.58	723311-020C 783.47	1	0	252
2-1/2	721311-025C 424.31	722311-025C 424.31	723311-025C 850.82	1	0	252
3	721311-030C 462.45	722311-030C 462.45	723311-030C 911.41	1	0	252
4	721311-040C 534.31	722311-040C 534.31	723311-040C 1140.39	1	0	252
6	721311-060C 790.21	722311-060C 790.21	723311-060C 1822.87	1	0	252
8	721311-080C 1342.43	722311-080C 1342.43	723311-080C 3084.48	1	0	252

Gear Operator

1-1/2	721321-015C 932.24	722321-015C 932.24	723321-015C 1273.06	1	0	252
-------	-----------------------	-----------------------	------------------------	---	---	-----

CPVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
2	721321-020C 963.64	722321-020C 963.64	723321-020C 1312.45	1	0	252
2-1/2	721321-025C 978.80	722321-025C 978.80	723321-025C 1379.19	1	0	252
3	721321-030C 992.23	722321-030C 992.23	723321-030C 1441.22	1	0	252
4	721321-040C 1064.07	722321-040C 1064.07	723321-040C 1670.20	1	0	252
6	721321-060C 1324.48	722321-060C 1324.48	723321-060C 2352.64	1	0	252
8	721321-080C 1872.21	722321-080C 1872.21	723321-080C 3614.27	1	0	252
10	721321-100C 2622.01	722321-100C 2622.01	723321-100C 6698.69	1	0	252
12	721321-120C 3704.03	722321-120C 3704.03	723321-120C 8707.85	1	0	252

Valve Only

1-1/2	721301-015C 350.20	722301-015C 350.20	723301-015C 704.92	1	0	252
2	721301-020C 374.91	722301-020C 374.91	723301-020C 720.59	1	0	252
2-1/2	721301-025C 390.60	722301-025C 390.60	723301-025C 752.04	1	0	252
3	721301-030C 422.05	722301-030C 422.05	723301-030C 821.62	1	0	252
4	721301-040C 489.38	722301-040C 489.38	723301-040C 1037.17	1	0	252
6	721301-060C 736.31	722301-060C 736.31	723301-060C 1674.66	1	0	252
8	721301-080C 1275.06	722301-080C 1275.06	723301-080C 2828.60	1	0	252
10	721301-100C 2550.19	722301-100C 2550.19	723301-100C 5670.57	1	0	252
12	721301-120C 3313.43	722301-120C 3313.43	723301-120C 7369.94	1	0	252

Lug Insert Butterfly Valves



Spears® Standard Butterfly Valve with Lug Inserts Factory Assembled

Note: Lug (insert) Valves require attention to flow direction for dead-end service. Flange must be installed on side of valve opposite the hex nut recesses for Single-Side installation. See "True Lug Butterfly Valves," where dead-end service is required in either direction.

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features. Lug Valves Use Same Accessories, Repair Kits, and Overhaul Kits as Standard Butterfly Valves



PVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311K-015 446.91	722311K-015 446.91	723311K-015 639.06	1	0	250
2	721311K-020 456.87	722311K-020 456.87	723311K-020 663.27	1	0	250

PVC - Zinc-Plated Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2-1/2	721311K-025 483.92	722311K-025 483.92	723311K-025 684.60	1	0	250
3	721311K-030 491.04	722311K-030 491.04	723311K-030 723.88	1	0	250

Thermoplastic Valves Lug Insert Butterfly Valves



PVC - Zinc-Plated Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
4	721311K-040 862.51	722311K-040 862.51	723311K-040 1118.72	1	0	250
6	721311K-060 1128.66	722311K-060 1128.66	723311K-060 1599.79	1	0	250
8	721311K-080 1401.95	722311K-080 1401.95	723311K-080 2284.40	1	0	250

Gear Operator

1-1/2	721321K-015 930.84	722321K-015 930.84	723321K-015 1117.29	1	0	250
2	721321K-020 950.76	722321K-020 950.76	723321K-020 1137.21	1	0	250
2-1/2	721321K-025 996.31	722321K-025 996.31	723321K-025 1178.47	1	0	250
3	721321K-030 1010.54	722321K-030 1010.54	723321K-030 1211.22	1	0	250
4	721321K-040 1391.98	722321K-040 1391.98	723321K-040 1733.58	1	0	250
6	721321K-060 1717.93	722321K-060 1717.93	723321K-060 2295.78	1	0	250
8	721321K-080 2018.23	722321K-080 2018.23	723321K-080 3011.71	1	0	250
10	721321K-100 3568.20	722321K-100 3568.20	723321K-100 5713.12	1	0	250
12	721321K-120 4111.91	722321K-120 4111.91	723321K-120 6867.40	1	0	250

Valve Only

1-1/2	721301K-015 401.38	722301K-015 401.38	723301K-015 614.86	1	0	250
2	721301K-020 441.22	722301K-020 441.22	723301K-020 631.95	1	0	250
2-1/2	721301K-025 462.57	722301K-025 462.57	723301K-025 667.53	1	0	250
3	721301K-030 471.11	722301K-030 471.11	723301K-030 674.64	1	0	250
4	721301K-040 844.01	722301K-040 844.01	723301K-040 1094.52	1	0	250
6	721301K-060 1120.15	722301K-060 1120.15	723301K-060 1571.33	1	0	250
8	721301K-080 1376.32	722301K-080 1376.32	723301K-080 2253.08	1	0	250
10	721301K-100 2811.01	722301K-100 2811.01	723301K-100 4533.20	1	0	250
12	721301K-120 3240.84	722301K-120 3240.84	723301K-120 6488.80	1	0	250

CPVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311K-015C 582.12	722311K-015C 582.12	723311K-015C 811.27	1	0	252
2	721311K-020C 599.22	722311K-020C 599.22	723311K-020C 829.78	1	0	252
2-1/2	721311K-025C 607.75	722311K-025C 607.75	723311K-025C 849.72	1	0	252
3	721311K-030C 617.72	722311K-030C 617.72	723311K-030C 872.48	1	0	252
4	721311K-040C 1064.62	722311K-040C 1064.62	723311K-040C 1410.48	1	0	252
6	721311K-060C 1424.72	722311K-060C 1424.72	723311K-060C 1988.36	1	0	252
8	721311K-080C 1757.77	722311K-080C 1757.77	723311K-080C 2900.68	1	0	252

Gear Operator

1-1/2	721321K-015C 1147.19	722321K-015C 1147.19	723321K-015C 1421.86	1	0	252
2	721321K-020C 1168.54	722321K-020C 1168.54	723321K-020C 1453.18	1	0	252
2-1/2	721321K-025C 1184.18	722321K-025C 1184.18	723321K-025C 1475.95	1	0	252
3	721321K-030C 1192.74	722321K-030C 1192.74	723321K-030C 1512.96	1	0	252
4	721321K-040C 1773.41	722321K-040C 1773.41	723321K-040C 2183.33	1	0	252

CPVC - Zinc-Plated Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
6	721321K-060C 2163.41	722321K-060C 2163.41	723321K-060C 2904.95	1	0	252
8	721321K-080C 2542.00	722321K-080C 2542.00	723321K-080C 3988.07	1	0	252
10	721321K-100C 4467.73	722321K-100C 4467.73	723321K-100C 7164.86	1	0	252
12	721321K-120C 5139.53	722321K-120C 5139.53	723321K-120C 7862.28	1	0	252

Valve Only

1-1/2	721301K-015C 556.51	722301K-015C 556.51	723301K-015C 799.88	1	0	252
2	721301K-020C 576.44	722301K-020C 576.44	723301K-020C 818.40	1	0	252
2-1/2	721301K-025C 583.55	722301K-025C 583.55	723301K-025C 836.89	1	0	252
3	721301K-030C 592.08	722301K-030C 592.08	723301K-030C 846.85	1	0	252
4	721301K-040C 1014.81	722301K-040C 1014.81	723301K-040C 1377.75	1	0	252
6	721301K-060C 1407.64	722301K-060C 1407.64	723301K-060C 1974.11	1	0	252
8	721301K-080C 1722.18	722301K-080C 1722.18	723301K-080C 3099.96	1	0	252
10	721301K-100C 3512.68	722301K-100C 3512.68	723301K-100C 5899.57	1	0	252
12	721301K-120C 4052.12	722301K-120C 4052.12	723301K-120C 7687.22	1	0	252

PVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311G-015 509.54	722311G-015 509.54	723311G-015 768.59	1	0	250
2	721311G-020 515.24	722311G-020 515.24	723311G-020 775.68	1	0	250
2-1/2	721311G-025 566.47	722311G-025 566.47	723311G-025 807.01	1	0	250
3	721311G-030 572.17	722311G-030 572.17	723311G-030 815.56	1	0	250
4	721311G-040 1014.81	722311G-040 1014.81	723311G-040 1315.12	1	0	250
6	721311G-060 1329.36	722311G-060 1329.36	723311G-060 1881.61	1	0	250
8	721311G-080 1642.47	722311G-080 1642.47	723311G-080 2687.19	1	0	250

Gear Operator

1-1/2	721321G-015 1039.01	722321G-015 1039.01	723321G-015 1305.16	1	0	250
2	721321G-020 1051.81	722321G-020 1051.81	723321G-020 1326.51	1	0	250
2-1/2	721321G-025 1107.33	722321G-025 1107.33	723321G-025 1386.29	1	0	250
3	721321G-030 1121.56	722321G-030 1121.56	723321G-030 1419.02	1	0	250
4	721321G-040 1635.37	722321G-040 1635.37	723321G-040 2036.74	1	0	250
6	721321G-060 2021.07	722321G-060 2021.07	723321G-060 2701.41	1	0	250
8	721321G-080 2374.05	722321G-080 2374.05	723321G-080 3450.06	1	0	250
10	721321G-100 4194.45	722321G-100 4194.45	723321G-100 6725.08	1	0	250
12	721321G-120 4834.94	722321G-120 4834.94	723321G-120 8360.43	1	0	250

Valve Only

1-1/2	721301G-015 491.04	722301G-015 491.04	723301G-015 728.74	1	0	250
2	721301G-020 500.99	722301G-020 500.99	723301G-020 750.07	1	0	250
2-1/2	721301G-025 546.54	722301G-025 546.54	723301G-025 765.74	1	0	250
3	721301G-030 555.07	722301G-030 555.07	723301G-030 792.78	1	0	250



Thermoplastic Valves Lug Insert Butterfly Valves & True Lug Butterfly Valves - Zinc Plated Lugs

Lug Insert Butterfly Valves

PVC - SS Lug Inserts (continued)

Size	Buna-N			Std Pk	Mstr Pk	Disc Code
Valve Only						
4	721301G-040 994.88	722301G-040 994.88	723301G-040 1286.65	1	0	250
6	721301G-060 1317.97	722301G-060 1317.97	723301G-060 1846.01	1	0	250
8	721301G-080 1622.57	722301G-080 1622.57	723301G-080 2651.60	1	0	250
10	721301G-100 3304.89	722301G-100 3304.89	723301G-100 5330.23	1	0	250
12	721301G-120 3811.58	722301G-120 3811.58	723301G-120 6649.64	1	0	250

CPVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311G-015C 694.56	722311G-015C 694.56	723311G-015C 979.23	1	0	252
2	721311G-020C 703.11	722311G-020C 703.11	723311G-020C 992.03	1	0	252
2-1/2	721311G-025C 713.08	722311G-025C 713.08	723311G-025C 1017.66	1	0	252
3	721311G-030C 727.31	722311G-030C 727.31	723311G-030C 1027.61	1	0	252
4	721311G-040C 1299.47	722311G-040C 1299.47	723311G-040C 1665.24	1	0	252
6	721311G-060C 1696.56	722311G-060C 1696.56	723311G-060C 2401.09	1	0	252
8	721311G-080C 2102.21	722311G-080C 2102.21	723311G-080C 3440.11	1	0	252

Gear Operator

1-1/2	721321G-015C 1379.18	722321G-015C 1379.18	723321G-015C 1709.38	1	0	252
2	721321G-020C 1389.14	722321G-020C 1389.14	723321G-020C 1729.31	1	0	252
2-1/2	721321G-025C 1394.81	722321G-025C 1394.81	723321G-025C 1747.80	1	0	252
3	721321G-030C 1419.02	722321G-030C 1419.02	723321G-030C 1841.75	1	0	252
4	721321G-040C 2043.86	722321G-040C 2043.86	723321G-040C 2564.77	1	0	252
6	721321G-060C 1670.95	722321G-060C 2524.94	723321G-060C 3423.03	1	0	252
8	721321G-080C 2919.18	722321G-080C 2919.18	723321G-080C 4615.76	1	0	252

CPVC - SS Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
10	721321G-100C 5269.05	722321G-100C 5269.05	723321G-100C 8531.23	1	0	252
12	721321G-120C 6088.85	722321G-120C 6088.85	723321G-120C 10501.07	1	0	252

Valve Only

1-1/2	721301G-015C 657.56	722301G-015C 657.56	723301G-015C 956.46	1	0	252
2	721301G-020C 676.06	722301G-020C 676.06	723301G-020C 964.98	1	0	252
2-1/2	721301G-025C 683.19	722301G-025C 683.19	723301G-025C 994.88	1	0	252
3	721301G-030C 697.41	722301G-030C 697.41	723301G-030C 1004.85	1	0	252
4	721301G-040C 1262.45	722301G-040C 1262.45	723301G-040C 1619.71	1	0	252
6	721301G-060C 1646.75	722301G-060C 1646.75	723301G-060C 2315.68	1	0	252
8	721301G-080C 2048.12	722301G-080C 2048.12	723301G-080C 3408.79	1	0	252
10	721301G-100C 4154.60	722301G-100C 4154.60	723301G-100C 6561.40	1	0	252
12	721301G-120C 4776.59	722301G-120C 4776.59	723301G-120C 8077.21	1	0	252

True Lug Butterfly Valves - Zinc Plated Lugs



Pressure Rating @ 73°F (23°C), Water

1-1/2" - 12" 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits

Section for Additional Options and Features

PVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311Z-015 637.80	722311Z-015 637.80	723311Z-015 914.57	1	0	250
2	721311Z-020 652.32	722311Z-020 652.32	723311Z-020 950.06	1	0	250
2-1/2	721311Z-025 690.91	722311Z-025 690.91	723311Z-025 980.57	1	0	250

PVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
3	721311Z-030 701.45	722311Z-030 701.45	723311Z-030 993.40	1	0	250
4	721311Z-040 1233.73	722311Z-040 1233.73	723311Z-040 1599.16	1	0	250
6	721311Z-060 1614.42	722311Z-060 1614.42	723311Z-060 2286.72	1	0	250

Thermoplastic Valves True Lug Butterfly Valves - Zinc Plated Lugs & True Lug Butterfly Valves - SS Lugs



True Lug Butterfly Valves - Zinc Plated Lugs

PVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Lever Handle

8	721311Z-080 2003.91	722311Z-080 2003.91	723311Z-080 3264.42	1	0	250
---	------------------------	------------------------	------------------------	---	---	-----

Gear Operator

1-1/2	721321Z-015 1035.86	722321Z-015 1035.86	723321Z-015 1316.49	1	0	250
2	721321Z-020 1057.96	722321Z-020 1057.96	723321Z-020 1339.41	1	0	250
2-1/2	721321Z-025 1108.71	722321Z-025 1108.71	723321Z-025 1388.58	1	0	250
3	721321Z-030 1121.72	722321Z-030 1121.72	723321Z-030 1423.33	1	0	250
4	721321Z-040 1638.38	722321Z-040 1638.38	723321Z-040 2039.96	1	0	250
6	721321Z-060 2021.85	722321Z-060 2021.85	723321Z-060 2702.67	1	0	250
8	721321Z-080 2375.36	722321Z-080 2375.36	723321Z-080 3544.83	1	0	250
10	721321Z-100 4197.85	722321Z-100 4197.85	723321Z-100 6723.55	1	0	250
12	721321Z-120 4838.20	722321Z-120 4838.20	723321Z-120 8080.51	1	0	250

Valve Only

1-1/2	721301Z-015 573.36	722301Z-015 573.36	723301Z-015 879.98	1	0	250
2	721301Z-020 631.09	722301Z-020 631.09	723301Z-020 902.61	1	0	250
2-1/2	721301Z-025 664.28	722301Z-025 664.28	723301Z-025 954.40	1	0	250
3	721301Z-030 673.01	722301Z-030 673.01	723301Z-030 963.38	1	0	250
4	721301Z-040 1208.07	722301Z-040 1208.07	723301Z-040 1565.17	1	0	250
6	721301Z-060 1602.52	722301Z-060 1602.51	723301Z-060 2246.29	1	0	250
8	721301Z-080 1968.05	722301Z-080 1968.05	723301Z-080 3219.98	1	0	250
10	721301Z-100 4016.72	722301Z-100 4016.72	723301Z-100 6476.74	1	0	250
12	721301Z-120 4631.53	722301Z-120 4631.53	723301Z-120 7380.32	1	0	250

CPVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Lever Handle

1-1/2	721311Z-015C 831.47	722311Z-015C 831.47	723311Z-015C 1160.59	1	0	252
2	721311Z-020C 855.23	722311Z-020C 855.23	723311Z-020C 1186.13	1	0	252
2-1/2	721311Z-025C 865.63	722311Z-025C 865.63	723311Z-025C 1215.89	1	0	252
3	721311Z-030C 883.83	722311Z-030C 883.83	723311Z-030C 1246.73	1	0	252

CPVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Lever Handle

4	721311Z-040C 1521.24	722311Z-040C 1521.24	723311Z-040C 2014.87	1	0	252
6	721311Z-060C 2035.80	722311Z-060C 2035.80	723311Z-060C 2842.44	1	0	252
8	721311Z-080C 2512.91	722311Z-080C 2512.91	723311Z-080C 4145.80	1	0	252

Gear Operator

1-1/2	721321Z-015C 1351.15	722321Z-015C 1351.15	723321Z-015C 1675.05	1	0	252
2	721321Z-020C 1375.75	722321Z-020C 1375.75	723321Z-020C 1708.88	1	0	252
2-1/2	721321Z-025C 1392.52	722321Z-025C 1392.52	723321Z-025C 1737.09	1	0	252
3	721321Z-030C 1402.01	722321Z-030C 1402.01	723321Z-030C 1780.64	1	0	252
4	721321Z-040C 2087.35	722321Z-040C 2087.35	723321Z-040C 2570.33	1	0	252
6	721321Z-060C 2547.52	722321Z-060C 2547.52	723321Z-060C 3418.87	1	0	252
8	721321Z-080C 2992.95	722321Z-080C 2992.95	723321Z-080C 4693.09	1	0	252
10	721321Z-100C 5180.15	722321Z-100C 5180.15	723321Z-100C 8431.21	1	0	252
12	721321Z-120C 6047.79	722321Z-120C 6047.79	723321Z-120C 9250.78	1	0	252

Valve Only

1-1/2	721301Z-015C 796.82	722301Z-015C 796.82	723301Z-015C 1143.28	1	0	252
2	721301Z-020C 824.25	722301Z-020C 824.25	723301Z-020C 1170.71	1	0	252
2-1/2	721301Z-025C 833.03	722301Z-025C 833.03	723301Z-025C 1197.72	1	0	252
3	721301Z-030C 844.17	722301Z-030C 844.17	723301Z-030C 1211.07	1	0	252
4	721301Z-040C 1448.64	722301Z-040C 1448.64	723301Z-040C 1970.57	1	0	252
6	721301Z-060C 2012.74	722301Z-060C 2012.74	723301Z-060C 2821.35	1	0	252
8	721301Z-080C 2462.00	722301Z-080C 2462.00	723301Z-080C 4050.73	1	0	252
10	721301Z-100C 5020.88	722301Z-100C 5020.88	723301Z-100C 8050.56	1	0	252
12	721301Z-120C 5789.41	722301Z-120C 5789.41	723301Z-120C 8714.75	1	0	252

True Lug Butterfly Valves - SS Lugs

PVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Lever Handle

1-1/2	721311L-015 727.88	722311L-015 727.88	723311L-015 1099.09	1	0	250
2	721311L-020 736.22	722311L-020 736.22	723311L-020 1109.53	1	0	250
2-1/2	721311L-025 809.62	722311L-025 809.62	723311L-025 1153.64	1	0	250
3	721311L-030 818.03	722311L-030 818.03	723311L-030 1166.02	1	0	250
4	721311L-040 1451.39	722311L-040 1451.39	723311L-040 1878.96	1	0	250
6	721311L-060 1899.12	722311L-060 1899.12	723311L-060 2688.66	1	0	250

PVC - Stainless Steel Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	--------	------	-----	--------	---------	-----------

Lever Handle

8	721311L-080 2348.03	722311L-080 2348.03	723311L-080 3840.49	1	0	250
---	------------------------	------------------------	------------------------	---	---	-----

Gear Operator

1-1/2	721321L-015 1222.96	722321L-015 1222.96	723321L-015 1536.49	1	0	250
2	721321L-020 1239.15	722321L-020 1239.15	723321L-020 1562.08	1	0	250
2-1/2	721321L-025 1304.36	722321L-025 1304.36	723321L-025 1633.62	1	0	250
3	721321L-030 1319.63	722321L-030 1319.63	723321L-030 1672.00	1	0	250
4	721321L-040 1925.15	722321L-040 1925.15	723321L-040 2397.57	1	0	250



Thermoplastic Valves True Lug Butterfly Valves - SS Lugs & Polypropylene Butterfly Valves

True Lug Butterfly Valves - SS Lugs

PVC - Stainless Steel Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
6	721321L-060 2378.57	722321L-060 2378.57	723321L-060 3179.59	1	0	250
8	721321L-080 2793.99	722321L-080 2793.99	723321L-080 4060.64	1	0	250
10	721321L-100 4936.32	722321L-100 4936.32	723321L-100 7912.26	1	0	250
12	721321L-120 5689.55	722321L-120 5689.55	723321L-120 9837.38	1	0	250

Valve Only

1-1/2	721301L-015 701.03	722301L-015 701.03	723301L-015 1041.07	1	0	250
2	721301L-020 715.78	722301L-020 715.78	723301L-020 1072.65	1	0	250
2-1/2	721301L-025 781.48	722301L-025 781.48	723301L-025 1093.31	1	0	250
3	721301L-030 791.71	722301L-030 791.71	723301L-030 1133.39	1	0	250
4	721301L-040 1421.01	722301L-040 1421.01	723301L-040 1838.22	1	0	250
6	721301L-060 1882.91	722301L-060 1882.91	723301L-060 2637.41	1	0	250
8	721301L-080 2317.64	722301L-080 2317.64	723301L-080 3788.13	1	0	250
10	721301L-100 4720.77	722301L-100 4720.77	723301L-100 7614.92	1	0	250
12	721301L-120 5445.81	722301L-120 5445.81	723301L-120 9501.73	1	0	250

CPVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311L-015C 993.58	722311L-015C 993.58	723311L-015C 1400.85	1	0	252
2	721311L-020C 1005.03	722311L-020C 1005.03	723311L-020C 1418.92	1	0	252
2-1/2	721311L-025C 1020.14	722311L-025C 1020.14	723311L-025C 1453.58	1	0	252
3	721311L-030C 1038.93	722311L-030C 1038.93	723311L-030C 1469.16	1	0	252
4	721311L-040C 1857.78	722311L-040C 1857.78	723311L-040C 2380.64	1	0	252
6	721311L-060C 2426.68	722311L-060C 2426.68	723311L-060C 3430.73	1	0	252
8	721311L-080C 3005.44	722311L-080C 3005.44	723311L-080C 4915.85	1	0	252

CPVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
1-1/2	721321L-015C 1624.49	722321L-015C 1624.49	723321L-015C 2012.85	1	0	252
2	721321L-020C 1636.25	722321L-020C 1636.25	723321L-020C 2036.41	1	0	252
2-1/2	721321L-025C 1643.51	722321L-025C 1643.51	723321L-025C 2056.75	1	0	252
3	721321L-030C 1670.87	722321L-030C 1670.87	723321L-030C 2168.79	1	0	252
4	721321L-040C 2406.42	722321L-040C 2406.42	723321L-040C 3018.28	1	0	252
6	721321L-060C 2973.22	722321L-060C 2973.22	723321L-060C 4028.49	1	0	252
8	721321L-080C 3436.65	722321L-080C 3436.65	723321L-080C 5432.64	1	0	252
10	721321L-100C 6200.03	722321L-100C 6200.03	723321L-100C 10038.27	1	0	252
12	721321L-120C 7167.71	722321L-120C 7167.71	723321L-120C 12355.75	1	0	252

Valve Only

1-1/2	721301L-015C 939.91	722301L-015C 939.91	723301L-015C 1368.45	1	0	252
2	721301L-020C 966.72	722301L-020C 966.72	723301L-020C 1378.93	1	0	252
2-1/2	721301L-025C 976.86	722301L-025C 976.86	723301L-025C 1422.62	1	0	252
3	721301L-030C 996.75	722301L-030C 996.75	723301L-030C 1436.00	1	0	252
4	721301L-040C 1804.15	722301L-040C 1804.15	723301L-040C 2316.16	1	0	252
6	721301L-060C 2353.64	722301L-060C 2353.64	723301L-060C 3309.96	1	0	252
8	721301L-080C 2927.17	722301L-080C 2927.17	723301L-080C 4682.14	1	0	252
10	721301L-100C 5937.24	722301L-100C 5937.24	723301L-100C 9373.96	1	0	252
12	721301L-120C 6825.32	722301L-120C 6825.32	723301L-120C 11540.83	1	0	252

Polypropylene Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

Lever Handle

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721311L-015P 504.43	722311L-015P 504.43	723311L-015P 1047.92	1	0	256
2	721311L-020P 509.53	722311L-020P 509.53	723311L-020P 1069.31	1	0	256

Lever Handle (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	721311L-025P 532.53	722311L-025P 532.53	723311L-025P 1087.55	1	0	256
3	721311L-030P 543.79	722311L-030P 543.79	723311L-030P 1108.84	1	0	256

Thermoplastic Valves Polypropylene Butterfly Valves & Large Diameter Butterfly Valves



Polypropylene Butterfly Valves

Lever Handle (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
4	721311-040P 606.41	722311-040P 606.41	723311-040P 1384.55	1	0	256
6	721311-060P 947.55	722311-060P 947.55	723311-060P 2189.28	1	0	256
8	721311-080P 1611.42	722311-080P 1611.42	723311-080P 3717.36	1	0	256

Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721301-015P 466.19	722301-015P 466.19	723301-015P 924.76	1	0	256
2	721301-020P 475.69	722301-020P 475.69	723301-020P 941.56	1	0	256
2-1/2	721301-025P 493.96	722301-025P 493.96	723301-025P 976.32	1	0	256
3	721301-030P 509.32	722301-030P 509.32	723301-030P 1001.89	1	0	256
4	721301-040P 582.67	722301-040P 582.67	723301-040P 1242.76	1	0	256
6	721301-060P 891.04	722301-060P 891.04	723301-060P 2010.09	1	0	256
8	721301-080P 1531.21	722301-080P 1531.21	723301-080P 3404.53	1	0	256
10	721301-100P 3058.38	722301-100P 3058.38	723301-100P 6822.46	1	0	256
12	721301-120P 3957.38	722301-120P 3957.38	723301-120P 9744.93	1	0	256

Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	721321-020P 1450.40	722321-020P 1450.40	723321-020P 1843.71	1	0	256
2-1/2	721321-025P 1469.71	722321-025P 1469.71	723321-025P 1940.52	1	0	256
3	721321-030P 1498.03	722321-030P 1498.03	723321-030P 2038.75	1	0	256
4	721321-040P 1596.08	722321-040P 1596.08	723321-040P 2319.01	1	0	256
6	721321-060P 1864.45	722321-060P 1864.45	723321-060P 3138.24	1	0	256
8	721321-080P 2547.86	722321-080P 2547.86	723321-080P 4685.58	1	0	256
10	721321-100P 3425.92	722321-100P 3425.92	723321-100P 7623.22	1	0	256
12	721321-120P 4744.19	722321-120P 4744.19	723321-120P 11141.25	1	0	256

Large Diameter Butterfly Valves

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply

Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water



Size	Psi
14	100
16	85
18	70
20	50
24	50



PVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140 6062.52	723321-140 14732.79	1	0	251

CPVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140C 8296.33	723321-140C 20160.83	1	0	253

Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140P 6381.79	723321-140P 15508.33	1	0	257
16	722321-160P 24883.37	723321-160P 26953.13	1	0	257
18	722321-180P 27410.01	723321-180P 31405.12	1	0	257
20	722321-200P 30753.47	723321-200P 37381.61	1	0	257
24	722321-240P 34834.44	723321-240P 50252.52	1	0	257



Thermoplastic Valves Wafer Butterfly Valves



Lever Handle



Gear Operator

Wafer Butterfly Valve laying lengths will directly replace common Cast Iron valves (matches Keystone Model 228 and Bray Series 30 Butterfly Valves).

IMPORTANT NOTE

All PVC and CPVC valves have built-in Santoprene™ Thermoplastic Elastomer (TPE) Flange Gaskets for use with choice of Buna-N, EPDM, or FKM Seats on PVC valves and choice of EPDM or FKM Seats on CPVC valves.

Pressure Rating @ 73°F (23°C), Water
150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

PVC

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	751311-020 291.79	752311-020 291.79	753311-020 603.85	1	0	250
2-1/2	751311-025 309.78	752311-025 309.78	753311-025 612.84	1	0	250
3	751311-030 314.28	752311-030 314.28	753311-030 624.07	1	0	250
4	751311-040 363.69	752311-040 363.69	753311-040 781.22	1	0	250
6	751311-060 538.78	752311-060 538.78	753311-060 1248.15	1	0	250
8	751311-080 915.91	752311-080 915.91	753311-080 2114.67	1	0	250

Gear Operator

2	751321-020 826.14	752321-020 826.14	753321-020 1055.11	1	0	250
2-1/2	751321-025 837.32	752321-025 837.32	753321-025 1095.48	1	0	250
3	751321-030 850.82	752321-030 850.82	753321-030 1158.38	1	0	250
4	751321-040 893.46	752321-040 893.46	753321-040 1311.01	1	0	250
6	751321-060 1073.08	752321-060 1073.08	753321-060 1782.43	1	0	250
8	751321-080 1450.18	752321-080 1450.18	753321-080 2648.97	1	0	250
10	751321-100 1954.23	752321-100 1954.23	753321-100 3210.89	1	0	250
12	751321-120 2370.75	752321-120 2370.75	753321-120 3793.67	1	0	250

Valve Only

2	751301-020 271.61	752301-020 271.61	753301-020 536.53	1	0	250
2-1/2	751301-025 280.63	752301-025 280.63	753301-025 554.46	1	0	250
3	751301-030 287.36	752301-030 287.36	753301-030 565.69	1	0	250
4	751301-040 332.24	752301-040 332.24	753301-040 709.37	1	0	250
6	751301-060 502.83	752301-060 502.83	753301-060 1149.38	1	0	250
8	751301-080 871.03	752301-080 871.03	753301-080 1939.57	1	0	250
10	751301-100 1746.49	752301-100 1746.49	753301-100 3883.58	1	0	250
12	751301-120 2253.85	752301-120 2253.85	753301-120 5544.83	1	0	250

CPVC

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle					
2	752311-020C 399.58	753311-020C 783.47	1	0	252
2-1/2	752311-025C 424.31	753311-025C 850.82	1	0	252
3	752311-030C 462.45	753311-030C 911.41	1	0	252
4	752311-040C 534.31	753311-040C 1140.39	1	0	252
6	752311-060C 790.21	753311-060C 1822.87	1	0	252
8	752311-080C 1342.43	753311-080C 3084.48	1	0	252

Gear Operator

2	752321-020C 963.64	753321-020C 1312.45	1	0	252
2-1/2	752321-025C 978.11	753321-025C 1379.19	1	0	252
3	752321-030C 992.23	753321-030C 1441.22	1	0	252
4	752321-040C 1064.07	753321-040C 1670.20	1	0	252
6	752321-060C 1324.48	753321-060C 2352.64	1	0	252
8	752321-080C 1872.21	753321-080C 3614.27	1	0	252
10	752321-100C 2622.01	753321-100C 6698.69	1	0	252
12	752321-120C 3704.03	753321-120C 8707.85	1	0	252

Valve Only

2	752301-020C 374.91	753301-020C 720.59	1	0	252
2-1/2	752301-025C 390.60	753301-025C 752.04	1	0	252
3	752301-030C 422.05	753301-030C 821.62	1	0	252
4	752301-040C 489.38	753301-040C 1037.17	1	0	252
6	752301-060C 736.31	753301-060C 1674.66	1	0	252
8	752301-080C 1275.06	753301-080C 2828.60	1	0	252
10	752301-100C 2550.19	753301-100C 5670.57	1	0	252
12	752301-120C 3313.43	753301-120C 7369.94	1	0	252

Thermoplastic Valves High Purity TFM-Lined Butterfly Valves & Butterfly Valve Accessories & Repair Kits



High Purity TFM-Lined Butterfly Valves



Pressure Rating @ 73°F (23°C), Water
2" - 6" 150 psi
Maximum Service Temperature
200°F (93°C)

TFM-Lined

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

FKM O-ring Seal

TFM PTFE Lined with backing O-rings, no fluid contact with elastomers or body

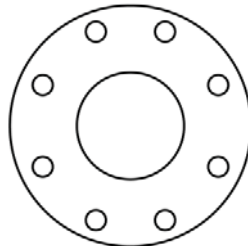
253322-020	2	1	0	254	2880.75
253322-030	3	1	0	254	3148.89
253322-040	4	1	0	254	4033.28
253322-060	6	1	0	254	5398.89

Butterfly Valve Accessories & Repair Kits

Flange Gaskets Selection Guide

Order Gaskets & Bolts Kits Separately

- 1/8" Full-Faced design with ANSI Class 150 Bolt Patterns
- Pressure Rated to 150 psi @ 73°F
- Available in Buna-N (Nitrile), EPDM, or FKM



Note: Do not order for Wafer Butterfly Valves.
Gasket is Built-in.

Flange Size (in.)	Number of Bolt Holes	Gasket Part Number		
		Buna-N (Nitrile)	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	1/2	1	25	017	4.27
GK2-007	3/4	1	25	017	4.55
GK2-010	1	1	25	017	4.75
GK2-012	1-1/4	1	25	017	4.99
GK2-015	1-1/2	1	25	017	5.36
GK2-020	2	1	25	017	6.54
GK2-025	2-1/2	1	25	017	7.85
GK2-030	3	1	25	017	11.54
GK2-040	4	1	25	017	13.14
GK2-050	5	1	25	017	16.43

EPDM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-060	6	1	25	017	17.24
GK2-080	8	1	25	017	22.97
GK2-100	10	1	25	017	29.93
GK2-120	12	1	25	017	41.18

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	1/2	1	25	017	15.25
GK3-007	3/4	1	25	017	18.11
GK3-010	1	1	25	017	20.01
GK3-012	1-1/4	1	5	017	22.59
GK3-015	1-1/2	1	25	017	28.49
GK3-020	2	1	25	017	39.83
GK3-025	2-1/2	1	25	017	53.27
GK3-030	3	1	25	017	119.04
GK3-040	4	1	25	017	137.42
GK3-050	5	1	25	017	160.20
GK3-060	6	1	25	017	181.75
GK3-080	8	1	25	017	258.94
GK3-100	10	1	25	017	344.42
GK3-120	12	1	25	017	485.28

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	1/2	1	25	017	3.22
GK1-007	3/4	1	25	017	3.69
GK1-010	1	1	25	017	3.80
GK1-012	1-1/4	1	25	017	3.89
GK1-015	1-1/2	1	25	017	4.18
GK1-020	2	1	25	017	4.67
GK1-025	2-1/2	1	25	017	5.14
GK1-030	3	1	25	017	7.91
GK1-040	4	1	25	017	8.84
GK1-050	5	1	25	017	10.48
GK1-060	6	1	25	017	10.77
GK1-080	8	1	25	017	14.20
GK1-100	10	1	25	017	18.02
GK1-120	12	1	25	017	24.31

Made in the U.S.A.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Page 442

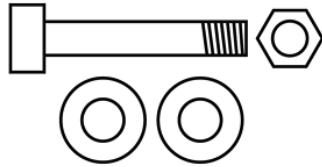


Thermoplastic Valves Butterfly Valve Accessories & Repair Kits

Bolt Kit Selection Guide

Kit Contains All Bolts, Nuts, & Flat Washers for Specified Valve Size

- For Connecting Valve Between Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316



Order Gaskets separately for Standard valves; gaskets are already included with Wafer Butterfly Valves.

Standard Butterfly Valve Hardware Kit						
Valve Size (in.)	Bolts Per Kit	Bolt Diameter (in.-TPI)	Bolt Length (in.)	Hardware Kit Part Number		
				Zinc Plate Steel	Type 316 Stainless	Type 304 Stainless
1-1/2	4	1/2-13	4-1/2	BFHK-015	BFHK1-015	BFHK2-015
2	4	5/8-11	5	BFHK-020	BFHK1-020	BFHK2-020
2-1/2 & 3	4	5/8-11	5-1/2	BFHK-030	BFHK1-030	BFHK2-030
4	8	5/8-11	6	BFHK-040	BFHK1-040	BFHK2-040
6	8	3/4-10	7	BFHK-060	BFHK1-060	BFHK2-060
8	8	3/4-10	7-1/2	BFHK-080	BFHK1-080	BFHK2-080
10 & 12	12	7/8-9	8-1/2	BFHK-120	BFHK1-120	BFHK2-120

Wafer Butterfly Valve Hardware Kit						
Valve Size (in.)	Bolts Per Kit	Bolt Diameter (in.-TPI)	Bolt Length (in.)	Hardware Kit Part Number		
				Zinc Plate Steel	Type 316 Stainless	Type 304 Stainless
2	4	5/8-11	4-1/2	WBHK-020	WBHK1-020	WBHK2-020
2-1/2 & 3	4	5/8-11	5	WBHK-030	WBHK1-030	WBHK2-030
4	8	5/8-11	5-1/2	WBHK-040	WBHK1-040	WBHK2-040
6	8	3/4-10	6	WBHK-060	WBHK1-060	WBHK2-060
8	8	3/4-10	7	WBHK-080	WBHK1-080	WBHK2-080
10	12	7/8-9	7-1/2	WBHK-100	WBHK1-100	WBHK2-100
12	12	7/8-9	8	WBHK-120	WBHK1-120	WBHK2-120

Standard Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Connection of Valve Between 2-Spears® Flanges

Includes Bolts, Nuts & Flat Washers

BFHK-015	1-1/2	1	10	017	11.34
BFHK-020	2	1	10	017	27.16
BFHK-030	2-1/2 & 3	1	5	017	48.74
BFHK-040	4	1	5	017	75.96
BFHK-060	6	1	3	017	97.47
BFHK-080	8	1	3	017	107.55
BFHK-120	10 & 12	1	0	017	153.13

Standard Butterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Connection of Valve Between 2-Spears® Flanges

Includes Bolts, Nuts & Flat Washers

BFHK1-015	1-1/2	1	10	017	39.79
BFHK1-020	2	1	10	017	55.65
BFHK1-030	2-1/2 & 3	1	10	017	66.24
BFHK1-040	4	1	5	017	303.62
BFHK1-060	6	1	3	017	355.28

Standard Butterfly Valve Bolt Kit - Type 316 Stainless Steel (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Connection of Valve Between 2-Spears® Flanges

Includes Bolts, Nuts & Flat Washers

BFHK1-080	8	1	3	017	415.89
BFHK1-120	10 & 12	1	0	017	681.98

Standard Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Connection of Valve Between 2-Spears® Flanges

Includes Bolts, Nuts & Flat Washers

BFHK2-015	1-1/2	1	10	017	36.14
BFHK2-020	2	1	10	017	50.27
BFHK2-030	2-1/2 & 3	1	10	017	60.37
BFHK2-040	4	1	5	017	118.22
BFHK2-060	6	1	3	017	150.41
BFHK2-080	8	1	3	017	165.05
BFHK2-120	10 & 12	1	0	017	401.00

True-Lug Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Connects 1-Side of True-Lug Valve to 1-Spears® Flange

Includes Bolt & Washers

Use 2-Kits For Dual Spears® Flanges

BFHKL-015	1-1/2	1	10	017	30.32
BFHKL-020	2	1	10	017	39.64
BFHKL-025	2-1/2	1	5	017	45.43
BFHKL-030	3	1	5	017	55.58
BFHKL-040	4	1	5	017	101.58
BFHKL-080	6&8	1	3	017	201.61
BFHKL-120	10&12	1	0	017	272.11

True-Lug Butterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Connects 1-Side of True-Lug Valve to 1-Spears® Flange

Includes Bolts & Flat Washers

Use 2-Kits For Dual Spears® Flanges

BFHKL1-015	1-1/2	1	10	017	62.06
BFHKL1-020	2	1	10	017	62.91
BFHKL1-025	2-1/2	1	10	017	68.63
BFHKL1-030	3	1	10	017	78.53
BFHKL1-040	4	0	0	017	164.72
BFHKL1-080	6&8	1	3	017	238.11
BFHKL1-120	10&12	1	0	017	578.32

True-Lug Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Connects 1-Side of True-Lug Valve to 1-Spears® Flange

Includes Bolts & Flat Washers

Use 2-Kits For Dual Spears® Flanges

BFHKL2-015	1-1/2	1	10	017	37.05
BFHKL2-020	2	1	10	017	45.05
BFHKL2-025	2-1/2	1	10	017	56.95
BFHKL2-030	3	1	10	017	70.21
BFHKL2-040	4	1	5	017	128.95
BFHKL2-080	6&8	1	3	017	218.21
BFHKL2-120	10&12	1	0	017	402.42

Thermoplastic Valves Butterfly Valve Accessories & Repair Kits



Wafer Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Connection of Valve Between 2-Spears® Flanges
Includes Bolts, Nuts & Flat Washers

Note: Do not order Gaskets, these are included with Wafer Butterfly Valves

WBHK-020	2	1	10	017	10.62
WBHK-030	2-1/2 & 3	1	10	017	12.28
WBHK-040	4	1	5	017	25.93
WBHK-060	6	1	3	017	39.94
WBHK-080	8	1	0	017	53.86
WBHK-100	10	1	0	017	93.37
WBHK-120	12	1	0	017	109.20

Wafer Butterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Connection of Valve Between 2-Spears® Flanges
Includes Bolts, Nuts & Flat Washers

Note: Do not order Gaskets, these are included with Wafer Butterfly Valves

WBHK1-020	2	1	10	017	51.31
WBHK1-030	2-1/2 & 3	1	10	017	66.26
WBHK1-040	4	1	5	017	132.51
WBHK1-060	6	1	3	017	214.74
WBHK1-080	8	1	0	017	272.81
WBHK1-100	10	1	0	017	726.86
WBHK1-120	12	1	0	017	915.76

Wafer Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Connection of Valve Between 2-Spears® Flanges
Includes Bolts, Nuts & Flat Washers

Note: Do not order Gaskets, these are included with Wafer Butterfly Valves

WBHK2-020	2	1	10	017	33.14
WBHK2-030	2-1/2 & 3	1	10	017	44.68
WBHK2-040	4	1	5	017	84.64
WBHK2-060	6	1	3	017	113.59
WBHK2-080	8	1	0	017	150.96
WBHK2-100	10	1	0	017	357.54
WBHK2-120	12	1	0	017	475.41

Gear Operator Kits



For Wafer Style Butterfly Valves, replace the "GO" prefix with "GOW" in the part number (e.g., GOW-020). Pricing is as indicated.

Contact Spears® for Kit Pricing and Availability on 14" & Larger Valves

Gear Operator Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GO-015	1-1/2	1	2	299	683.19
GO-020	2	1	2	299	683.19

Gear Operator Kits (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GO-030	3	1	2	299	683.19
GO-040	4	1	2	299	683.19
GO-060	6	1	2	299	712.27
GO-080	8	1	2	299	712.27
GO-100	10	1	2	299	1277.39
GO-120	12	1	0	299	1277.39
GO-140	14-24	1	0	299	1537.27

Powder Coated

GOP-015	1-1/2	1	2	299	1099.35
GOP-020	2	1	2	299	1099.35
GOP-030	3	1	2	299	1099.35
GOP-040	4	1	2	299	1099.35
GOP-060	6	1	2	299	1128.43
GOP-080	8	1	2	299	1128.43
GOP-100	10	1	0	299	1693.55
GOP-120	12	1	0	299	1693.55

Lever Handle



Lever Handle Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFH-015	1-1/2	1	10	299	54.80
BFH-020	2 OR 2-1/2	1	10	299	54.80
BFH-030	3	1	10	299	58.24
BFH-040	4	1	10	299	69.01
BFH-060	6	1	10	299	129.45
BFH-080	8	1	10	299	168.28

T-Handle



T-Handle Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFTH-020	2	1	10	299	50.42
BFTH-030	3	1	10	299	58.24
BFTH-040	4	1	10	299	82.17

Speed Handle



Speed Handle For Gear Operator

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SH-120	1-1/2 - 12	10	0	299	100.62



Thermoplastic Valves Butterfly Valve Accessories & Repair Kits

Operator Nut



2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GTN-040	4	10	60	299	107.86

Note: Operator Nut is used with Valve Gear Operator. Size 4 fits all Butterfly valve sizes 1-1/2" through 24".

Stem Stop



Gear Operator Positive Stem Stop

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PSS-120	1-1/2 - 12	50	0	299	29.87

Lug Insert Sets



Lug Insert Sets (For PVC/CPVC Standard Valves Only)

Size	Stainless Steel	Zinc Plated	Std Pk	Mstr Pk	Disc Code
1-1/2	LUG1-015 453.01	LUG2-015 103.55	1	10	299
2 OR 2-1/2	LUG1-020 453.01	LUG2-020 103.55	1	10	299
3	LUG1-030 453.01	LUG2-030 103.55	1	10	299
4	LUG1-040 901.77	LUG2-040 207.08	1	5	299
6 OR 8	LUG1-080 1139.05	LUG2-080 422.84	1	5	299
10 OR 12	LUG1-120 2882.21	LUG2-120 862.95	1	5	299

Chainwheel Operators

For Wafer Style Butterfly Valves, replace the "CO" prefix with "COW" in the part number (e.g., COW-020). Pricing is as indicated.



Contact Spears®
for
larger sizes

Valve not
included

Order "valve only" (without operator)
for use with Chainwheel Operator.

How to Order Chain									
Required chain length is based on chain drop at 3 ft. from floor									
Floor-to-Chainwheel Height	7'	8'	9'	10'	11'	12'	13'	14'	15'
Required Chain Length	10'	12'	14'	16'	18'	20'	22'	24'	26'

Chainwheel Operators

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CO-020	2	1	2	299	1168.20
CO-025	2-1/2	1	0	299	1168.20
CO-030	3	1	2	299	1246.07
CO-040	4	1	2	299	1246.07
CO-060	6	1	2	299	1246.07
CO-080	8	1	2	299	1246.07
CO-100	10	1	0	299	1791.22
CO-120	12	1	0	299	1791.22

Lock-Link Chain for Chainwheel Operators (price per foot)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BC-1	BRASS	1	0	901	20.65
GC-1	HOT-DIP GALVANIZED	1	100	901	6.27
SC-1	STAINLESS STEEL	1	0	901	44.09

Stem Extensions



Valve not
included

Basic Stem Extension height is 24" and is manufactured in standard 6" increments (heights less than 24" are at the same price). Intermediate Stem Extension heights are available and are priced to the next full 6" increment. Stem Extensions over 120" in height are manufactured and shipped in 2-piece sections. Please contact your servicing Spears® Regional Distribution Center.

For Wafer Style Butterfly Valves, replace the "BFSE" prefix with "BFSEW" in the part number (e.g., BFSEW-020-240). Pricing is as indicated.

Contact Spears® for pricing and availability on Stem Extensions for 14" & Larger Butterfly Valves.

Stem Extensions

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFSE-015-240	1-1/2X24	1	0	299	1022.58
BFSE-015-300	1-1/2X30	1	0	299	1085.84

Thermoplastic Valves
Butterfly Valve Accessories & Repair Kits



Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFSE-015-360	1-1/2X36	1	0	299	1149.12
BFSE-015-420	1-1/2X42	1	0	299	1212.40
BFSE-015-480	1-1/2X48	1	0	299	1275.67
BFSE-015-540	1-1/2X54	1	0	299	1338.95
BFSE-015-600	1-1/2X60	1	0	299	1402.23
BFSE-015-660	1-1/2X66	1	0	299	1465.49
BFSE-015-720	1-1/2X72	1	0	299	1528.77
BFSE-015-780	1-1/2X78	1	0	299	1592.06
BFSE-015-840	1-1/2X84	1	0	299	1655.33
BFSE-015-900	1-1/2X90	1	0	299	1718.61
BFSE-015-960	1-1/2X96	1	0	299	1781.89
BFSE-015-1020	1-1/2X102	1	0	299	1845.16
BFSE-015-1080	1-1/2X108	1	0	299	1908.43
BFSE-015-1140	1-1/2X114	1	0	299	1971.71
BFSE-015-1200	1-1/2X120	1	0	299	2034.97
BFSE-020-240	2X24	1	0	299	1022.58
BFSE-020-300	2X30	1	0	299	1085.84
BFSE-020-360	2X36	1	0	299	1149.12
BFSE-020-420	2X42	1	0	299	1212.40
BFSE-020-480	2X48	1	0	299	1275.67
BFSE-020-540	2X54	1	0	299	1338.95
BFSE-020-600	2X60	1	0	299	1402.23
BFSE-020-660	2X66	1	0	299	1465.49
BFSE-020-720	2X72	1	0	299	1528.77
BFSE-020-780	2X78	1	0	299	1592.03
BFSE-020-840	2X84	1	0	299	1655.33
BFSE-020-900	2X90	1	0	299	1718.61
BFSE-020-960	2X96	1	0	299	1781.89
BFSE-020-1020	2X102	1	0	299	1845.16
BFSE-020-1080	2X108	1	0	299	1908.43
BFSE-020-1140	2X114	1	0	299	1971.71
BFSE-020-1200	2X120	1	0	299	2034.97
BFSE-030-240	3X24	1	0	299	1022.58
BFSE-030-300	3X30	1	0	299	1085.84
BFSE-030-360	3X36	1	0	299	1149.12
BFSE-030-420	3X42	1	0	299	1212.40
BFSE-030-480	3X48	1	0	299	1275.67
BFSE-030-540	3X54	1	0	299	1338.95
BFSE-030-600	3X60	1	0	299	1402.23
BFSE-030-660	3X66	1	0	299	1465.49
BFSE-030-720	3X72	1	0	299	1573.63
BFSE-030-780	3X78	1	0	299	1592.06
BFSE-030-840	3X84	1	0	299	1655.33
BFSE-030-900	3X90	1	0	299	1718.61
BFSE-030-960	3X96	1	0	299	1781.89
BFSE-030-1020	3X102	1	0	299	1845.16
BFSE-030-1080	3X108	1	0	299	1908.43
BFSE-030-1140	3X114	1	0	299	1971.71
BFSE-030-1200	3X120	1	0	299	2034.97
BFSE-040-240	4X24	1	0	299	1022.58
BFSE-040-300	4X30	1	0	299	1108.24
BFSE-040-360	4X36	1	0	299	1149.12
BFSE-040-420	4X42	1	0	299	1071.27
BFSE-040-480	4X48	1	0	299	1275.67
BFSE-040-540	4X54	1	0	299	1338.95
BFSE-040-600	4X60	1	0	299	1402.23
BFSE-040-660	4X66	1	0	299	1465.49
BFSE-040-720	4X72	1	0	299	1528.77
BFSE-040-780	4X78	1	0	299	1592.06
BFSE-040-840	4X84	1	0	299	1655.33
BFSE-040-900	4X90	1	0	299	1718.61
BFSE-040-960	4X96	1	0	299	1781.89
BFSE-040-1020	4X102	1	0	299	1845.16
BFSE-040-1080	4X108	1	0	299	1908.43
BFSE-040-1140	4X114	1	0	299	1971.71
BFSE-040-1200	4X120	1	0	299	2034.97

Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFSE-060-240	6X24	1	0	299	1022.58
BFSE-060-300	6X30	1	0	299	1085.84
BFSE-060-360	6X36	1	0	299	1149.12
BFSE-060-420	6X42	1	0	299	1212.40
BFSE-060-480	6X48	1	0	299	1275.67
BFSE-060-540	6X54	1	0	299	1338.95
BFSE-060-600	6X60	1	0	299	1402.23
BFSE-060-660	6X66	1	0	299	1465.49
BFSE-060-720	6X72	1	0	299	1528.77
BFSE-060-780	6X78	1	0	299	1592.06
BFSE-060-840	6X84	1	0	299	1655.33
BFSE-060-900	6X90	1	0	299	1718.61
BFSE-060-960	6X96	1	0	299	1781.89
BFSE-060-1020	6X102	1	0	299	2016.54
BFSE-060-1080	6X108	1	0	299	2165.41
BFSE-060-1140	6X114	1	0	299	2184.26
BFSE-060-1200	6X120	1	0	299	2220.81
BFSE-080-240	8X24	1	0	299	1022.58
BFSE-080-300	8X30	1	0	299	1085.84
BFSE-080-360	8X36	1	0	299	1149.12
BFSE-080-420	8X42	1	0	299	1212.40
BFSE-080-480	8X48	1	0	299	1275.67
BFSE-080-540	8X54	1	0	299	1338.95
BFSE-080-600	8X60	1	0	299	1402.23
BFSE-080-660	8X66	1	0	299	1465.49
BFSE-080-720	8X72	1	0	299	1528.77
BFSE-080-780	8X78	1	0	299	1592.06
BFSE-080-840	8X84	1	0	299	1655.33
BFSE-080-900	8X90	1	0	299	1718.61
BFSE-080-960	8X96	1	0	299	1781.89
BFSE-080-1020	8X102	1	0	299	2115.69
BFSE-080-1080	8X108	1	0	299	2205.46
BFSE-080-1140	8X114	1	0	299	2245.25
BFSE-080-1200	8X120	1	0	299	2401.89
BFSE-100-240	10X24	1	0	299	1430.88
BFSE-100-300	10X30	1	0	299	1524.92
BFSE-100-360	10X36	1	0	299	1642.63
BFSE-100-420	10X42	1	0	299	1698.35
BFSE-100-480	10X48	1	0	299	1873.01
BFSE-100-540	10X54	1	0	299	2047.65
BFSE-100-600	10X60	1	0	299	2222.27
BFSE-100-660	10X66	1	0	299	2396.94
BFSE-100-720	10X72	1	0	299	2571.59
BFSE-100-780	10X78	1	0	299	2746.22
BFSE-100-840	10X84	1	0	299	2920.86
BFSE-100-900	10X90	1	0	299	3095.55
BFSE-100-960	10X96	1	0	299	3270.15
BFSE-100-1020	10X102	1	0	299	3444.80
BFSE-100-1080	10X108	1	0	299	3619.44
BFSE-100-1140	10X114	1	0	299	3794.08
BFSE-100-1200	10X120	1	0	299	3968.73
BFSE-120-240	12X24	1	0	299	2474.80
BFSE-120-300	12X30	1	0	299	2538.37
BFSE-120-360	12X36	1	0	299	2613.85
BFSE-120-420	12X42	1	0	299	2702.82
BFSE-120-480	12X48	1	0	299	2852.17
BFSE-120-540	12X54	1	0	299	2852.07
BFSE-120-600	12X60	1	0	299	2941.40
BFSE-120-720	12X72	1	0	299	3120.94
BFSE-120-780	12X78	1	0	299	3201.04
BFSE-120-840	12X84	1	0	299	3269.94
BFSE-120-900	12X90	1	0	299	3270.15
BFSE-120-960	12X96	1	0	299	3466.15
BFSE-120-1020	12X102	1	0	299	3444.80
BFSE-120-1080	12X108	1	0	299	3619.44
BFSE-120-1140	12X114	1	0	299	3794.08



Thermoplastic Valves Butterfly Valve Accessories & Repair Kits

Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFSE-120-1200	12X120	1	0	299	3968.73

Butterfly Valve Seat Repair Kits

Important Repair & Overhaul Kit Ordering Note

Ongoing Butterfly Valve design improvements have resulted in variations to repair kits. Standard cataloged kits are for current 72 part number series, dry-stem type valve revision. Kits for previous revisions are available and can be determined by valve serial number. When ordering kits, please specify valve size, material (PVC, CPVC, PP), Standard, Lug or True Lug type valve, Buna-N, EPDM or FKM elastomer material, and valve serial number stamped on the bottom of the valve body to insure proper kit selection. Stainless Steel Stems are normally not replaced, but can be ordered separately on request.

Seat Repair Kits for Standard Valve include:

1-Seat

1-Seal Carrier

Repair Kits for Wafer Valve include:

1-Seat

2-Flange Gaskets

Seat Repair Kits for 14" & Larger Valves include:

1-Seat

PVC Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BRK-015 19.40	BF-ERK-015 19.44	BF-VRK-015 114.97	1	10	299
2	BF-BRK-020 20.27	BF-ERK-020 20.83	BF-VRK-020 121.42	1	10	299
2-1/2	BF-BRK-025 21.41	BF-ERK-025 21.44	BF-VRK-025 131.23	1	10	299
3	BF-BRK-030 22.28	BF-ERK-030 24.78	BF-VRK-030 141.34	1	10	299
4	BF-BRK-040 34.57	BF-ERK-040 38.43	BF-VRK-040 171.38	1	10	299
6	BF-BRK-060 73.69	BF-ERK-060 81.87	BF-VRK-060 439.42	1	10	299
8	BF-BRK-080 92.14	BF-ERK-080 102.35	BF-VRK-080 503.54	1	5	299
10	BF-BRK-100 120.96	BF-ERK-100 134.41	BF-VRK-100 603.26	1	10	299
12	BF-BRK-120 164.88	BF-ERK-120 183.22	BF-VRK-120 708.55	1	10	299

CPVC Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BRK-015C 19.95	BF-ERK-015C 22.42	BF-VRK-015C 125.34	1	10	299
2	BF-BRK-020C 20.58	BF-ERK-020C 23.46	BF-VRK-020C 133.15	1	10	299
2-1/2	BF-BRK-025C 22.39	BF-ERK-025C 25.26	BF-VRK-025C 143.64	1	10	299
3	BF-BRK-030C 24.56	BF-ERK-030C 27.27	BF-VRK-030C 155.45	1	10	299
4	BF-BRK-040C 38.04	BF-ERK-040C 42.26	BF-VRK-040C 188.52	1	10	299
6	BF-BRK-060C 81.04	BF-ERK-060C 90.03	BF-VRK-060C 483.33	1	10	299
8	BF-BRK-080C 100.58	BF-ERK-080C 111.77	BF-VRK-080C 553.87	1	5	299
10	BF-BRK-100C 133.08	BF-ERK-100C 147.86	BF-VRK-100C 663.54	1	10	299
12	BF-BRK-120C 181.40	BF-ERK-120C 201.54	BF-VRK-120C 779.37	1	10	299

PP Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BRK-015P 20.49	BF-ERK-015P 23.59	BF-VRK-015P 132.26	1	10	299
2	BF-BRK-020P 21.69	BF-ERK-020P 25.19	BF-VRK-020P 138.64	1	10	299
2-1/2	BF-BRK-025P 24.94	BF-ERK-025P 27.19	BF-VRK-025P 147.15	1	10	299

PP Standard Valve Seat Repair Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3	BF-BRK-030P 26.73	BF-ERK-030P 28.97	BF-VRK-030P 165.04	1	10	299
4	BF-BRK-040P 39.63	BF-ERK-040P 45.34	BF-VRK-040P 196.59	1	10	299
6	BF-BRK-060P 84.02	BF-ERK-060P 97.61	BF-VRK-060P 494.66	1	10	299
8	BF-BRK-080P 123.87	BF-ERK-080P 137.96	BF-VRK-080P 582.18	1	10	299
10	BF-BRK-100P 144.06	BF-ERK-100P 164.73	BF-VRK-100P 674.07	1	10	299
12	BF-BRK-120P 223.23	BF-ERK-120P 248.42	BF-VRK-120P 804.23	1	10	299
14	---	BF-ERK-140P 1461.38	BF-VRK-140P 5944.25	1	15	299
16	---	BF-ERK-160P 2435.63	BF-VRK-160P 6753.28	1	15	299
18	---	BF-ERK-180P 3291.39	BF-VRK-180P 7943.39	1	15	299
20	---	BF-ERK-200P 3698.06	BF-VRK-200P 9454.96	1	15	299
24	---	BF-ERK-240P 5281.67	BF-VRK-240P 12604.92	1	15	299

PVC & CPVC Wafer Butterfly Valve Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-BRK-020 14.19	BFW-ERK-020 14.58	BFW-VRK-020 85.00	1	10	299
2-1/2	BFW-BRK-025 14.99	BFW-ERK-025 15.01	BFW-VRK-025 91.86	1	10	299
3	BFW-BRK-030 15.60	BFW-ERK-030 17.35	BFW-VRK-030 98.94	1	10	299
4	BFW-BRK-040 24.20	BFW-ERK-040 26.91	BFW-VRK-040 119.97	1	10	299
6	BFW-BRK-060 51.59	BFW-ERK-060 57.32	BFW-VRK-060 307.60	1	10	299
8	BFW-BRK-080 64.49	BFW-ERK-080 71.64	BFW-VRK-080 352.47	1	10	299

Standard Valve Overhaul Kits

Standard Valve Overhaul Kits include:

1-Seat

1-Disc Timing Stop

1-Stem Bushing

1-Lower Stem Bearing

2-Stem O-rings

1-Upper Disc O-ring

1-Seal Carrier

1-Stem Nut

1-Hex Washer

1-Round Washer

2-Bushing O-rings

1-Lower Disc O-ring

Kits with Disc option include additional replacement Disc

PVC Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOK-015 33.55	BF-EOK-015 38.02	BF-VOK-015 125.84	1	10	299
2	BF-BOK-020 43.48	BF-EOK-020 52.85	BF-VOK-020 142.80	1	10	299
2-1/2	BF-BOK-025 48.37	BF-EOK-025 64.14	BF-VOK-025 152.65	1	10	299
3	BF-BOK-030 56.91	BF-EOK-030 69.38	BF-VOK-030 167.36	1	10	299
4	BF-BOK-040 64.15	BF-EOK-040 80.51	BF-VOK-040 194.51	1	10	299
6	BF-BOK-060 89.13	BF-EOK-060 98.05	BF-VOK-060 476.02	1	10	299
8	BF-BOK-080 112.31	BF-EOK-080 140.72	BF-VOK-080 542.29	1	10	299
10	BF-BOK-100 161.31	BF-EOK-100 189.52	BF-VOK-100 624.83	1	10	299
12	BF-BOK-120 189.05	BF-EOK-120 218.29	BF-VOK-120 817.58	1	10	299

Thermoplastic Valves Butterfly Valve Accessories & Repair Kits



CPVC Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOK-015C 40.63	BF-EOK-015C 44.27	BF-VOK-015C 145.69	1	10	299
2	BF-BOK-020C 51.08	BF-EOK-020C 64.38	BF-VOK-020C 161.41	1	10	299
2-1/2	BF-BOK-025C 63.52	BF-EOK-025C 69.69	BF-VOK-025C 172.59	1	10	299
3	BF-BOK-030C 72.26	BF-EOK-030C 80.81	BF-VOK-030C 186.88	1	10	299
4	BF-BOK-040C 79.69	BF-EOK-040C 99.52	BF-VOK-040C 220.18	1	10	299
6	BF-BOK-060C 113.84	BF-EOK-060C 126.27	BF-VOK-060C 569.18	1	10	299
8	BF-BOK-080C 127.16	BF-EOK-080C 154.67	BF-VOK-080C 632.57	1	10	299
10	BF-BOK-100C 181.94	BF-EOK-100C 213.28	BF-VOK-100C 710.11	1	10	299
12	BF-BOK-120C 236.18	BF-EOK-120C 274.33	BF-VOK-120C 905.06	1	10	299

CPVC Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOKD-015C 46.54	BF-EOKD-015C 49.71	BF-VOKD-015C 151.62	1	10	299
2	BF-BOKD-020C 71.16	BF-EOKD-020C 81.13	BF-VOKD-020C 171.46	1	10	299
2-1/2	BF-BOKD-025C 78.02	BF-EOKD-025C 109.17	BF-VOKD-025C 197.04	1	10	299
3	BF-BOKD-030C 86.26	BF-EOKD-030C 113.05	BF-VOKD-030C 233.71	1	10	299
4	BF-BOKD-040C 91.86	BF-EOKD-040C 118.02	BF-VOKD-040C 300.31	1	10	299
6	BF-BOKD-060C 119.64	BF-EOKD-060C 148.91	BF-VOKD-060C 634.94	1	10	299
8	BF-BOKD-080C 181.67	BF-EOKD-080C 215.92	BF-VOKD-080C 682.36	1	10	299
10	BF-BOKD-100C 289.86	BF-EOKD-100C 321.26	BF-VOKD-100C 768.27	1	10	299
12	BF-BOKD-120C 335.04	BF-EOKD-120C 355.74	BF-VOKD-120C 987.32	1	10	299

PP Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOK-015P 42.31	BF-EOK-015P 46.26	BF-VOK-015P 150.57	1	10	299
2	BF-BOK-020P 54.19	BF-EOK-020P 57.51	BF-VOK-020P 166.11	1	10	299
2-1/2	BF-BOK-025P 68.00	BF-EOK-025P 81.34	BF-VOK-025P 183.62	1	10	299
3	BF-BOK-030P 89.47	BF-EOK-030P 101.12	BF-VOK-030P 206.64	1	10	299
4	BF-BOK-040P 96.26	BF-EOK-040P 107.91	BF-VOK-040P 243.87	1	10	299
6	BF-BOK-060P 119.15	BF-EOK-060P 143.64	BF-VOK-060P 599.29	1	10	299
8	BF-BOK-080P 143.74	BF-EOK-080P 177.01	BF-VOK-080P 647.38	1	10	299
10	BF-BOK-100P 194.46	BF-EOK-100P 230.64	BF-VOK-100P 768.81	1	10	299
12	BF-BOK-120P 267.33	BF-EOK-120P 292.29	BF-VOK-120P 942.63	1	10	299
14	---	BF-EOK-140P 1719.32	BF-VOK-140P 6459.93	1	15	299
16	---	BF-EOK-160P 2818.55	BF-VOK-160P 7267.72	1	15	299
18	---	BF-EOK-180P 3757.99	BF-VOK-180P 9688.39	1	15	299
20	---	BF-EOK-200P 4221.43	BF-VOK-200P 11533.69	1	15	299
24	---	BF-EOK-240P 6028.61	BF-VOK-240P 15377.07	1	15	299

PP Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOKD-015P 46.86	BF-EOKD-015P 54.49	BF-VOKD-015P 172.06	1	10	299
2	BF-BOKD-020P 75.57	BF-EOKD-020P 84.60	BF-VOKD-020P 194.42	1	10	299
2-1/2	BF-BOKD-025P 81.52	BF-EOKD-025P 123.58	BF-VOKD-025P 221.65	1	10	299
3	BF-BOKD-030P 88.24	BF-EOKD-030P 128.59	BF-VOKD-030P 259.35	1	10	299
4	BF-BOKD-040P 95.15	BF-EOKD-040P 134.41	BF-VOKD-040P 318.98	1	10	299
6	BF-BOKD-060P 124.61	BF-EOKD-060P 162.78	BF-VOKD-060P 678.69	1	10	299
8	BF-BOKD-080P 202.12	BF-EOKD-080P 236.33	BF-VOKD-080P 729.79	1	10	299
10	BF-BOKD-100P 309.13	BF-EOKD-100P 344.66	BF-VOKD-100P 829.29	1	10	299
12	BF-BOKD-120P 347.02	BF-EOKD-120P 364.94	BF-VOKD-120P 1063.20	1	10	299
14	---	BF-EOKD-140P 2146.75	BF-VOKD-140P 6746.77	1	0	299
16	---	BF-EOKD-160P 3517.61	BF-VOKD-160P 7616.88	1	0	299
18	---	BF-EOKD-180P 4690.04	BF-VOKD-180P 10154.52	1	0	299
20	---	BF-EOKD-200P 5269.01	BF-VOKD-200P 12088.69	1	0	299
24	---	BF-EOKD-240P 7526.69	BF-VOKD-240P 16118.20	1	0	299

PVC Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOKD-015 43.08	BF-EOKD-015 47.55	BF-VOKD-015 134.31	1	10	299
2	BF-BOKD-020 59.88	BF-EOKD-020 70.63	BF-VOKD-020 165.80	1	10	299
2-1/2	BF-BOKD-025 63.00	BF-EOKD-025 77.24	BF-VOKD-025 178.96	1	10	299
3	BF-BOKD-030 68.29	BF-EOKD-030 97.91	BF-VOKD-030 202.54	1	10	299
4	BF-BOKD-040 74.98	BF-EOKD-040 108.01	BF-VOKD-040 242.80	1	10	299
6	BF-BOKD-060 113.93	BF-EOKD-060 128.07	BF-VOKD-060 535.32	1	10	299
8	BF-BOKD-080 150.69	BF-EOKD-080 205.88	BF-VOKD-080 600.48	1	10	299
10	BF-BOKD-100 257.58	BF-EOKD-100 291.91	BF-VOKD-100 664.01	1	10	299
12	BF-BOKD-120 315.91	BF-EOKD-120 336.32	BF-VOKD-120 873.46	1	10	299

Wafer Butterfly Valve Overhaul Kits

Wafer Valve Overhaul Kits include:

- 1-Seat
- 2-Flange Gaskets
- 2-Stem Bushing O-rings
- 2-Stem Bushing Washers
- 2-Stem Bushings

Kits with Disc option include additional replacement Disc

PVC & CPVC Wafer Butterfly Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-BOK-020 30.44	BFW-EOK-020 37.00	BFW-VOK-020 99.96	1	10	299
2-1/2	BFW-BOK-025 33.86	BFW-EOK-025 44.89	BFW-VOK-025 106.85	1	10	299
3	BFW-BOK-030 39.83	BFW-EOK-030 48.57	BFW-VOK-030 117.15	1	10	299
4	BFW-BOK-040 44.91	BFW-EOK-040 56.36	BFW-VOK-040 136.16	1	10	299



Thermoplastic Valves Butterfly Valve Accessories & Repair Kits

PVC & CPVC Wafer Butterfly Valve Overhaul Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
6	BFW-BOK-060 62.39	BFW-EOK-060 68.64	BFW-VOK-060 333.21	1	10	299
8	BFW-BOK-080 78.61	BFW-EOK-080 98.51	BFW-VOK-080 379.61	1	10	299

PVC Wafer Butterfly Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-BOKD-020 41.92	BFW-EOKD-020 49.44	BFW-VOKD-020 116.06	1	10	299
2-1/2	BFW-BOKD-025 44.11	BFW-EOKD-025 54.07	BFW-VOKD-025 125.27	1	10	299
3	BFW-BOKD-030 47.81	BFW-EOKD-030 68.54	BFW-VOKD-030 141.78	1	10	299
4	BFW-BOKD-040 52.48	BFW-EOKD-040 75.61	BFW-VOKD-040 169.96	1	10	299
6	BFW-BOKD-060 79.75	BFW-EOKD-060 89.65	BFW-VOKD-060 374.73	1	10	299
8	BFW-BOKD-080 105.48	BFW-EOKD-080 144.12	BFW-VOKD-080 420.34	1	10	299

CPVC Wafer Butterfly Valve Overhaul Kits with Disc PVC True Lug Valve Overhaul Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-EOKD-020C 56.79	BFW-VOKD-020C 120.02	1	10	299
2-1/2	BFW-EOKD-025C 76.42	BFW-VOKD-025C 137.93	1	10	299
3	BFW-EOKD-030C 79.14	BFW-VOKD-030C 163.59	1	10	299
4	BFW-EOKD-040C 82.61	BFW-VOKD-040C 210.21	1	10	299
6	BFW-EOKD-060C 104.23	BFW-VOKD-060C 444.45	1	10	299
8	BFW-EOKD-080C 151.14	BFW-VOKD-080C 477.65	1	10	299

True Lug Valve Overhaul Kits include:

- | | |
|------------------------------|---------------------|
| 1-Seat | 1-Seal Carrier |
| 1-Disc Timing Stop | 1-Stem Nut |
| 1-Stem Bushing | 1-Hex Washer |
| 1-Lower Stem Bearing | 1-Round Washer |
| 2-Stem O-rings | 2-Bushing O-rings |
| 1-Upper Disc O-ring | 1-Lower Disc O-ring |
| 1-Seal Carrier Flange O-ring | |
- Kits with Disc option include additional replacement Disc

PVC True Lug Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOK-015 34.56	BFT-EOK-015 39.19	BFT-VOK-015 129.76	1	10	299
2	BFT-BOK-020 44.77	BFT-EOK-020 54.44	BFT-VOK-020 147.22	1	10	299
2-1/2	BFT-BOK-025 49.95	BFT-EOK-025 66.13	BFT-VOK-025 157.39	1	10	299
3	BFT-BOK-030 58.67	BFT-EOK-030 71.52	BFT-VOK-030 172.52	1	10	299
4	BFT-BOK-040 66.14	BFT-EOK-040 83.01	BFT-VOK-040 200.51	1	10	299
6	BFT-BOK-060 91.87	BFT-EOK-060 100.76	BFT-VOK-060 490.74	1	10	299
8	BFT-BOK-080 115.77	BFT-EOK-080 145.07	BFT-VOK-080 559.09	1	10	299
10	BFT-BOK-100 166.32	BFT-EOK-100 195.38	BFT-VOK-100 659.61	1	10	299
12	BFT-BOK-120 194.78	BFT-EOK-120 225.05	BFT-VOK-120 842.85	1	15	299

CPVC True Lug Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOK-015C 41.85	BFT-EOK-015C 45.64	BFT-VOK-015C 150.20	1	10	299
2	BFT-BOK-020C 52.65	BFT-EOK-020C 66.38	BFT-VOK-020C 166.41	1	10	299
2-1/2	BFT-BOK-025C 65.48	BFT-EOK-025C 71.88	BFT-VOK-025C 177.91	1	10	299
3	BFT-BOK-030C 74.49	BFT-EOK-030C 83.32	BFT-VOK-030C 192.66	1	10	299
4	BFT-BOK-040C 82.17	BFT-EOK-040C 102.61	BFT-VOK-040C 226.97	1	10	299
6	BFT-BOK-060C 117.32	BFT-EOK-060C 130.19	BFT-VOK-060C 586.75	1	10	299
8	BFT-BOK-080C 131.08	BFT-EOK-080C 159.44	BFT-VOK-080C 652.13	1	10	299
10	BFT-BOK-100C 187.59	BFT-EOK-100C 218.15	BFT-VOK-100C 732.05	1	10	299
12	BFT-BOK-120C 243.52	BFT-EOK-120C 297.91	BFT-VOK-120C 933.05	1	15	299

PVC True Lug Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOKD-015 44.41	BFT-EOKD-015 49.01	BFT-VOKD-015 138.40	1	10	299
2	BFT-BOKD-020 61.73	BFT-EOKD-020 72.81	BFT-VOKD-020 170.94	1	10	299
2-1/2	BFT-BOKD-025 64.93	BFT-EOKD-025 79.66	BFT-VOKD-025 184.52	1	10	299
3	BFT-BOKD-030 70.40	BFT-EOKD-030 100.88	BFT-VOKD-030 208.81	1	10	299
4	BFT-BOKD-040 77.29	BFT-EOKD-040 111.36	BFT-VOKD-040 250.29	1	10	299
6	BFT-BOKD-060 117.47	BFT-EOKD-060 131.89	BFT-VOKD-060 551.89	1	10	299
8	BFT-BOKD-080 155.36	BFT-EOKD-080 179.32	BFT-VOKD-080 619.05	1	10	299
10	BFT-BOKD-100 265.56	BFT-EOKD-100 300.93	BFT-VOKD-100 684.55	1	10	299
12	BFT-BOKD-120 325.67	BFT-EOKD-120 346.72	BFT-VOKD-120 900.51	1	10	299

CPVC True Lug Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOKD-015C 47.94	BFT-EOKD-015C 51.27	BFT-VOKD-015C 156.27	1	10	299
2	BFT-BOKD-020C 73.34	BFT-EOKD-020C 83.64	BFT-VOKD-020C 176.79	1	10	299
2-1/2	BFT-BOKD-025C 80.42	BFT-EOKD-025C 112.56	BFT-VOKD-025C 203.93	1	10	299
3	BFT-BOKD-030C 88.92	BFT-EOKD-030C 116.61	BFT-VOKD-030C 240.92	1	10	299
4	BFT-BOKD-040C 94.73	BFT-EOKD-040C 121.65	BFT-VOKD-040C 309.60	1	10	299
6	BFT-BOKD-060C 123.34	BFT-EOKD-060C 153.56	BFT-VOKD-060C 654.59	1	10	299
8	BFT-BOKD-080C 187.32	BFT-EOKD-080C 222.58	BFT-VOKD-080C 703.47	1	10	299
10	BFT-BOKD-100C 298.84	BFT-EOKD-100C 331.18	BFT-VOKD-100C 792.69	1	10	299
12	BFT-BOKD-120C 345.40	BFT-EOKD-120C 366.73	BFT-VOKD-120C 1017.85	1	10	299

Contact Spears® for pricing on the following additional accessories:

- PTFE Seat Sleeves
- PTFE Coated Valve Stems

Thermoplastic Valves Globe Valves



Pressure Rating @ 73°F (23°C), Water
2-1/2" - 6" 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free,

Water Soluble Lubricant

Suitable for Vacuum Service

Internal Repair Kit includes 1-Bonnet O-ring along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem/O-rings, Seat & Seal Carrier components. Install in valve using existing valve Bolts/Nuts/Washers, and Handle/Nut.

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6013-025 608.27	6023-025 643.73	6033-025 693.48	1	0	620
3	6013-030 697.26	6023-030 728.15	6033-030 810.33	1	0	620
4	6013-040 791.04	6023-040 945.64	6033-040 1039.07	1	0	620
6	6013-060 1216.55	6023-060 1454.71	6033-060 1483.69	1	0	620

CPVC Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6023-025C 976.00	6033-025C 1025.04	1	0	622
3	6023-030C 1024.57	6033-030C 1138.97	1	0	622
4	6023-040C 1330.67	6033-040C 1462.78	1	0	622
6	6023-060C 2071.91	6033-060C 2089.43	1	0	622

PVC Internal Repair Kit

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-BRK-025 202.35	GL-ERK-025 489.42	GL-VRK-025 544.35	1	0	299
3	GL-BRK-030 225.51	GL-ERK-030 542.27	GL-VRK-030 604.42	1	0	299
4	GL-BRK-040 264.58	GL-ERK-040 635.91	GL-VRK-040 699.16	1	0	299
6	GL-BRK-060 576.49	GL-ERK-060 977.16	GL-VRK-060 997.16	1	0	299

CPVC Internal Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-ERK-025C 689.17	GL-VRK-025C 765.76	1	0	299
3	GL-ERK-030C 788.38	GL-VRK-030C 865.75	1	0	299
4	GL-ERK-040C 893.94	GL-VRK-040C 983.81	1	0	299
6	GL-ERK-060C 1276.81	GL-VRK-060C 1404.99	1	0	299



Thermoplastic Valves Needle Valves



Pressure Rating @ 73°F (23°C), Water
PVC or CPVC 235 psi
PP 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002 71.27	5592-002 71.27	---	1	18	218
3/8	5591-003 71.27	5592-003 71.27	5591-003SR 65.01	1	18	218
1/2	5591-005 79.11	5592-005 79.11	5591-005SR 81.23	1	18	218

Angle Pattern

1/4	5691-002 71.27	5692-002 71.27	---	1	18	218
3/8	5691-003 71.27	5692-003 71.27	---	1	18	218
1/2	5691-005 79.11	5692-005 79.11	5691-005SR 81.23	1	18	218

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002C 83.94	5592-002C 83.94	---	1	18	219
3/8	5591-003C 83.94	5592-003C 83.94	5591-003CSR 83.75	1	18	219
1/2	5591-005C 88.77	5592-005C 88.77	5591-005CSR 91.04	1	18	219

Angle Pattern

1/4	5691-002C 83.94	5692-002C 83.94	---	1	18	219
3/8	5691-003C 83.94	5692-003C 83.94	---	1	18	219
1/2	5691-005C 88.77	5692-005C 88.77	5691-005CSR 91.04	1	18	219

PP Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002P 78.54	---	---	1	18	219
3/8	5591-003P 78.54	---	---	1	18	219
1/2	---	---	5591-005PSR 86.85	1	18	219

Angle Pattern

1/4	5691-002P 78.54	---	---	1	18	219
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219

Thermoplastic Valves Diaphragm Valves



Socket/Threaded Style



Flanged Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
1/2" - 4" Flanged
& Valves w/PTFE 150 psi
Diaphragms
6" 100 psi
8" 75 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section
for Additional Options and Features

Contact Spears® for Pricing on
Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings
(for True Union Style Valves)



Spigot Style



PP Thread Style

PVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005 138.17	2739-005 153.52	2729T-005 220.23	2739T-005 244.36	2739VT-005 301.41	1	12	270
3/4	2729-007 156.82	2739-007 174.26	2729T-007 235.19	2739T-007 263.92	2739VT-007 325.84	1	8	270
1	2729-010 193.27	2739-010 212.38	2729T-010 339.29	2739T-010 351.71	2739VT-010 415.07	1	8	270
1-1/4	2729-012 289.32	2739-012 344.00	2729T-012 466.44	2739T-012 494.42	2739VT-012 559.41	1	4	270
1-1/2	2729-015 304.11	2739-015 351.93	2729T-015 497.96	2739T-015 522.87	2739VT-015 579.77	1	4	270
2	2729-020 359.78	2739-020 426.36	2729T-020 567.82	2739T-020 596.35	2739VT-020 727.21	1	0	270

PVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005SR 138.17	2731-005SR 153.52	2721T-005SR 220.23	2731T-005SR 244.36	2731VT-005SR 301.41	1	12	270
3/4	2721-007SR 156.82	2731-007SR 174.26	2721T-007SR 235.19	2731T-007SR 263.92	2731VT-007SR 325.84	1	8	270
1	2721-010SR 193.27	2731-010SR 212.38	2721T-010SR 339.29	2731T-010SR 351.71	2731VT-010SR 415.07	1	8	270
1-1/4	2721-012SR 289.32	2731-012SR 344.00	2721T-012SR 466.44	2731T-012SR 494.42	2731VT-012SR 559.41	1	4	270
1-1/2	2721-015SR 304.11	2731-015SR 351.93	2721T-015SR 497.96	2731T-015SR 522.87	2731VT-015SR 579.77	1	4	270
2	2721-020SR 359.78	2731-020SR 426.36	2721T-020SR 567.82	2731T-020SR 596.35	2731VT-020SR 727.21	1	0	270

PVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005 134.69	2737-005 149.64	2797T-005 212.65	2797VT-005 246.13	1	12	270
3/4	2727-007 151.76	2737-007 167.95	2797T-007 226.91	2797VT-007 270.23	1	8	270
1	2727-010 188.36	2737-010 205.13	2797T-010 331.25	2797VT-010 385.63	1	8	270
1-1/4	2727-012 280.05	2737-012 337.34	2797T-012 455.60	2797VT-012 506.20	1	4	270
1-1/2	2727-015 296.52	2737-015 343.13	2797T-015 485.58	2797VT-015 554.63	1	4	270
2	2727-020 348.61	2737-020 411.64	2797T-020 550.78	2797VT-020 677.99	1	0	270



Thermoplastic Valves Diaphragm Valves

PVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005 220.62	2733-005 238.83	2793T-005 301.41	2793VT-005 330.85	4	0	270
3/4	2723-007 247.91	2733-007 254.18	2793T-007 325.84	2793VT-007 367.59	4	0	270
1	2723-010 278.91	2733-010 311.92	2793T-010 415.07	2793VT-010 465.51	4	0	270
1-1/4	2723-012 378.85	2733-012 419.41	2793T-012 559.41	2793VT-012 617.51	1	4	270
1-1/2	2723-015 383.39	2733-015 428.03	2793T-015 579.77	2793VT-015 644.24	1	4	270
2	2723-020 455.72	2733-020 487.52	2793T-020 650.22	2793VT-020 743.36	1	0	270
2-1/2	2723-025 636.56	2733-025 727.61	2793T-025 1005.45	2793VT-025 1151.62	1	0	271
3	2723-030 851.09	2733-030 945.73	2793T-030 1318.47	2793VT-030 1458.88	1	0	271
4	2723-040 1178.95	2733-040 1285.62	2793T-040 1827.12	2793VT-040 2030.06	1	0	271
6	2723-060 2848.21	2733-060 3334.72	2793T-060 4731.41	2793VT-060 5199.41	1	0	271
8	2723-080 5694.80	2733-080 6000.89	2793T-080 7022.07	2793VT-080 7888.94	1	0	271

CPVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005C 244.62	2739-005C 313.51	2729T-005C 351.63	2739T-005C 378.55	2739VT-005C 418.69	1	12	272
3/4	2729-007C 272.25	2739-007C 334.25	2729T-007C 388.35	2739T-007C 405.93	2739VT-007C 448.98	1	8	272
1	2729-010C 314.22	2739-010C 406.44	2729T-010C 472.16	2739T-010C 492.53	2739VT-010C 540.93	1	8	272
1-1/4	2729-012C 471.96	2739-012C 561.55	2729T-012C 651.60	2739T-012C 674.64	2739VT-012C 733.86	1	4	272
1-1/2	2729-015C 485.93	2739-015C 568.46	2729T-015C 661.72	2739T-015C 699.96	2739VT-015C 756.38	1	4	272
2	2729-020C 517.58	2739-020C 648.78	2729T-020C 727.66	2739T-020C 806.34	2739VT-020C 891.86	1	0	272

CPVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005CSR 244.62	2731-005CSR 313.51	2721T-005CSR 351.63	2731T-005CSR 378.55	2731VT-005CSR 418.69	1	12	272
3/4	2721-007CSR 272.25	2731-007CSR 334.25	2721T-007CSR 388.35	2731T-007CSR 405.93	2731VT-007CSR 448.98	1	8	272
1	2721-010CSR 314.22	2731-010CSR 406.44	2721T-010CSR 472.16	2731T-010CSR 492.53	2731VT-010CSR 540.93	1	8	272
1-1/4	2721-012CSR 471.96	2731-012CSR 561.55	2721T-012CSR 651.60	2731T-012CSR 674.64	2731VT-012CSR 733.86	1	4	272
1-1/2	2721-015CSR 485.93	2731-015CSR 568.46	2721T-015CSR 661.72	2731T-015CSR 699.96	2731VT-015CSR 756.38	1	4	272
2	2721-020CSR 517.58	2731-020CSR 648.78	2721T-020CSR 727.66	2731T-020CSR 806.34	2731VT-020CSR 891.86	1	0	272

CPVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005C 238.46	2737-005C 303.65	2797T-005C 341.72	2797VT-005C 381.72	1	12	272
3/4	2727-007C 264.71	2737-007C 323.88	2797T-007C 376.61	2797VT-007C 416.62	1	8	272
1	2727-010C 307.49	2737-010C 395.07	2797T-010C 460.20	2797VT-010C 507.17	1	8	272
1-1/4	2727-012C 460.04	2737-012C 546.16	2797T-012C 634.12	2797VT-012C 702.56	1	4	272
1-1/2	2727-015C 470.28	2737-015C 551.86	2797T-015C 645.07	2797VT-015C 713.87	1	4	272
2	2727-020C 504.53	2737-020C 632.13	2797T-020C 709.15	2797VT-020C 783.86	1	0	272

Thermoplastic Valves Diaphragm Valves



CPVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005C 295.77	2733-005C 326.63	2793T-005C 426.35	2793VT-005C 472.87	4	0	272
3/4	2723-007C 330.71	2733-007C 365.27	2793T-007C 455.83	2793VT-007C 504.24	4	0	272
1	2723-010C 407.22	2733-010C 455.39	2793T-010C 560.14	2793VT-010C 621.29	4	0	272
1-1/4	2723-012C 520.28	2733-012C 596.04	2793T-012C 707.06	2793VT-012C 781.59	1	4	272
1-1/2	2723-015C 527.19	2733-015C 610.71	2793T-015C 844.60	2793VT-015C 930.33	1	4	272
2	2723-020C 590.43	2733-020C 662.17	2793T-020C 938.46	2793VT-020C 1042.25	1	0	272
2-1/2	2723-025C 1072.56	2733-025C 1197.84	2793T-025C 1852.20	2793VT-025C 2190.55	1	0	273
3	2723-030C 1618.78	2733-030C 1798.63	2793T-030C 2436.57	2793VT-030C 2694.60	1	0	273
4	2723-040C 2223.06	2733-040C 2469.55	2793T-040C 3238.77	2793VT-040C 3455.46	1	0	273
6	2723-060C 4069.32	2733-060C 5834.95	2793T-060C 7122.09	2793VT-060C 9280.51	1	0	273
8	2723-080C 8133.81	2733-080C 10503.55	2793T-080C 10621.16	2793VT-080C 11800.37	1	0	273

PP - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005PSR 141.92	2731-005PSR 157.88	2721T-005PSR 226.87	2731T-005PSR 238.82	2731VT-005PSR 270.09	1	12	280
3/4	2721-007PSR 161.63	2731-007PSR 179.32	2721T-007PSR 237.53	2731T-007PSR 252.03	2731VT-007PSR 295.88	1	8	280
1	2721-010PSR 199.94	2731-010PSR 220.29	2721T-010PSR 346.26	2731T-010PSR 364.27	2731VT-010PSR 384.35	1	8	280
1-1/4	2721-012PSR 303.65	2731-012PSR 338.13	2721T-012PSR 474.08	2731T-012PSR 497.04	2731VT-012PSR 551.59	1	4	280
1-1/2	2721-015PSR 317.62	2731-015PSR 352.59	2721T-015PSR 505.57	2731T-015PSR 530.11	2731VT-015PSR 570.94	1	4	280
2	2721-020PSR 369.41	2731-020PSR 410.53	2721T-020PSR 576.81	2731T-020PSR 605.21	2731VT-020PSR 657.75	1	0	280

PP - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2-1/2	2723-025P 680.55	2733-025P 752.06	2793T-025P 1070.76	2793VT-025P 1195.80	1	0	281
3	2723-030P 973.09	2733-030P 1075.14	2793T-030P 1480.80	2793VT-030P 1651.21	1	0	281
4	2723-040P 1400.18	2733-040P 1541.54	2793T-040P 1973.94	2793VT-040P 2189.40	1	0	281
6	2723-060P 3465.21	2733-060P 3850.23	2793T-060P 4947.32	2793VT-060P 5592.09	1	0	281
8	2723-080P 8626.77	2733-080P 7766.52	2793T-080P 8980.86	2793VT-080P 15133.51	1	0	281



Thermoplastic Valves Tee-Style "Zero Dead-Leg" Diaphragm Valves



Valves are produced to order in Diaphragm Valve sizes 1/2" - 2" and virtually any user specified Mainline Socket Tee size available.

Tee-Style Valve material options include PVC, CPVC, or Low Extractable PVC.

Valve End Connection options include Spigot, Socket & Thread, or patented Special Reinforced (SR) Female Plastic Thread.

Diaphragm Options include EPDM, FKM, PTFE with bonded EPDM backing, or PTFE with bonded FKM backing.

Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm)
235 psi with Elastomer Diaphragms
150 psi with PTFE Diaphragms

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR SELECTION ASSISTANCE & PRICING

Quick View Selection Chart

The following Base Part Numbers must be completed according to desired configuration size. Contact Spears® for the appropriate Tee size x Valve size code designations to replace the "xxx" in each.

Diaphragm Material	PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxx	2729ZD-xxx	2721ZD-xxxSR	1/2" – 2" 235 psi
FKM	2737ZD-xxx	2739ZD-xxx	2731ZD-xxxSR	
PTFE, EPDM Backing	2797TZD-xxx	2729TZD-xxx	2721TZD-xxxSR	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxx	2739VTZD-xxx	2731VTZD-xxxSR	

Diaphragm Material	CPVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxC	2729ZD-xxxC	2721ZD-xxxC SR	1/2" – 2" 235 psi
FKM	2737ZD-xxxC	2739ZD-xxxC	2731ZD-xxxC SR	
PTFE, EPDM Backing	2797TZD-xxxC	2729TZD-xxxC	2721TZD-xxxC SR	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxxC	2739VTZD-xxxC	2731VTZD-xxxC SR	

Diaphragm Material	Low Extractable PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxBL	2729ZD-xxxBL	2721ZD-xxxSRBL	1/2" – 2" 235 psi
FKM	2737ZD-xxxBL	2739ZD-xxxBL	2731ZD-xxxSRBL	
PTFE, EPDM Backing	2797TZD-xxxBL	2729TZD-xxxBL	2721TZD-xxxSRBL	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxxBL	2739VTZD-xxxBL	2731VTZD-xxxSRBL	

Note: Low Extractable PVC Valves are typically used with elastomer backed PTFE Diaphragms to maintain purity in most applications. Tee-Style Zero Dead-Leg Diaphragm Valves are a non-stock configuration. All orders are non-cancelable, non-returnable.

Thermoplastic Valves Diaphragm Valve Repair Kits



True Union Style Diaphragm Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
O-rings & Elastomer Diaphragm					
1/2	DV-ERK-005 48.20	DV-VRK-005 105.40	1	10	299
3/4	DV-ERK-007 54.73	DV-VRK-007 114.24	1	10	299
1	DV-ERK-010 68.46	DV-VRK-010 126.84	1	10	299
1-1/4 OR 1-1/2	DV-ERK-015 94.45	DV-VRK-015 214.43	1	10	299
2	DV-ERK-020 112.41	DV-VRK-020 255.15	1	10	299

O-rings & EPDM Backed PTFE Diaphragm

1/2	DV-TERK-005 128.29	DV-TVVK-005 133.76	1	10	299
3/4	DV-TERK-007 143.19	DV-TVVK-007 148.60	1	10	299
1	DV-TERK-010 172.77	DV-TVVK-010 174.85	1	10	299
1-1/4 OR 1-1/2	DV-TERK-015 236.68	DV-TVVK-015 239.53	1	10	299
2	DV-TERK-020 276.03	DV-TVVK-020 283.85	1	10	299

O-rings & FKM Backed PTFE Diaphragm

1/2	DV-VTERK-005 147.72	DV-VTVRK-005 164.99	1	10	299
3/4	DV-VTERK-007 154.84	DV-VTVRK-007 174.87	1	10	299
1	DV-VTERK-010 190.40	DV-VTVRK-010 211.69	1	10	299
1-1/4 OR 1-1/2	DV-VTERK-015 332.40	DV-VTVRK-015 344.31	1	5	299
2	DV-VTERK-020 337.97	DV-VTVRK-020 488.32	1	5	299

True Union Diaphragm Repair Kits include:

- 1-Diaphragm
- 2-End Connector O-rings
- Contact Spears® for Pricing on Additional Specialty Diaphragms
- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)

Diaphragm Only - Elastomer

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	27-39-00541A 38.47	27-39-00542A 82.61	1	0	901
3/4	27-39-00741A 62.71	27-39-00742A 102.11	1	0	901
1	27-39-01041A 55.51	27-39-01042A 129.20	1	0	901
1-1/4 OR 1-1/2	27-39-01541 62.41	27-39-01542 168.26	1	0	901
2	27-39-02041 90.07	27-39-02042 207.06	1	0	901
3	27-39-03041 185.43	27-39-03042 528.11	1	0	901
4	27-39-04041 211.92	27-39-04042 900.20	1	0	901
6	27-39-06041 457.25	27-39-06042 2842.76	1	0	901
8	27-39-08041 744.68	27-39-08042 5141.15	1	0	901

Diaphragm Only - PTFE with Elastomer Backing

Size	PTFE/EPDM	PTFE/FKM	Std Pk	Mstr Pk	Disc Code
1/2	27-39-00565A 111.42	27-39-00566A 128.42	100	0	299
3/4	27-39-00765A 124.64	27-39-00766A 133.83	25	0	299
1	27-39-01065A 139.02	27-39-01066A 165.27	25	0	299

Diaphragm Only - PTFE with Elastomer Backing (continued)

Size	PTFE/EPDM	PTFE/FKM	Std Pk	Mstr Pk	Disc Code
1-1/4 OR 1-1/2	27-39-01565 206.74	27-39-01566 336.64	100	0	299
2	27-39-02065 240.78	27-39-02066 379.28	100	0	299
3	27-39-03065 660.63	27-39-03066 819.35	15	0	299
4	27-39-04065 1283.15	27-39-04066 1409.06	10	0	299
6	27-39-06065 2835.58	27-39-06066 3152.88	1	5	299
8	27-39-08065 5140.74	27-39-08066 5662.62	1	0	299



Thermoplastic Valves Y-Pattern Valves



Socket Style



True Union Style

Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" 150 psi
 3" - 4" 90 psi
 Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)
 Temperature/Pressure De-ratings Apply

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005 83.76	1732-005 88.61	1	12	620
3/4	1722-007 98.27	1732-007 104.72	1	8	620
1	1722-010 117.59	1732-010 125.64	1	8	620
1-1/4	1722-012 143.38	1732-012 157.88	1	4	620
1-1/2	1722-015 191.71	1732-015 202.98	1	0	620
2	1722-020 272.25	1732-020 289.99	2	0	620
3	1722-030 586.39	1732-030 637.95	1	0	620
4	1722-040 995.58	1732-040 1084.20	1	0	620

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005CL 83.76	1732-005CL 88.61	1	12	621
3/4	1722-007CL 98.27	1732-007CL 104.72	1	8	621
1	1722-010CL 117.59	1732-010CL 125.64	1	8	621
1-1/4	1722-012CL 143.38	1732-012CL 157.88	1	4	621
1-1/2	1722-015CL 191.71	1732-015CL 202.98	1	0	621
2	1722-020CL 272.25	1732-020CL 289.99	2	0	621
3	1722-030CL 586.39	1732-030CL 637.95	1	0	621
4	1722-040CL 995.58	1732-040CL 1084.20	1	0	621

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005SR 86.99	1731-005SR 91.83	1	8	620
3/4	1721-007SR 103.09	1731-007SR 109.55	1	8	620
1	1721-010SR 124.05	1731-010SR 132.11	1	8	620
1-1/4	1721-012SR 169.14	1731-012SR 178.81	1	0	620
1-1/2	1721-015SR 207.80	1731-015SR 217.48	1	0	620
2	1721-020SR 293.20	1731-020SR 307.71	1	0	620
3	1721-030SR 629.88	1731-030SR 681.44	1	0	620
4	1721-040SR 1040.69	1731-040SR 1129.28	1	0	620

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CLSR 86.99	1731-005CLSR 91.83	1	8	621
3/4	1721-007CLSR 103.09	1731-007CLSR 109.55	1	8	621
1	1721-010CLSR 124.05	1731-010CLSR 132.11	1	8	621
1-1/4	1721-012CLSR 169.14	1731-012CLSR 178.81	1	0	621
1-1/2	1721-015CLSR 207.80	1731-015CLSR 217.48	1	0	621
2	1721-020CLSR 293.20	1731-020CLSR 307.71	1	0	621
3	1721-030CLSR 629.88	1731-030CLSR 681.44	1	0	621
4	1721-040CLSR 1040.69	1731-040CLSR 1129.28	1	0	621

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005 117.59	1733-005 122.43	1	8	620
3/4	1723-007 135.32	1733-007 141.77	1	4	620
1	1723-010 159.47	1733-010 165.93	1	4	620
1-1/4	1723-012 186.86	1733-012 199.76	1	0	620
1-1/2	1723-015 235.20	1733-015 246.49	1	0	620
2	1723-020 330.23	1733-020 346.36	1	0	620
3	1723-030 644.40	1733-030 695.95	1	0	620
4	1723-040 1279.09	1733-040 1356.44	1	0	620

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005CL 117.59	1733-005CL 122.43	1	8	621
3/4	1723-007CL 135.32	1733-007CL 141.77	1	8	621
1	1723-010CL 159.47	1733-010CL 165.93	1	4	621
1-1/4	1723-012CL 186.86	1733-012CL 199.76	1	0	621
1-1/2	1723-015CL 235.20	1733-015CL 246.49	1	0	621
2	1723-020CL 330.23	1733-020CL 346.36	1	0	621
3	1723-030CL 644.40	1733-030CL 695.95	1	0	621
4	1723-040CL 1279.09	1733-040CL 1356.44	1	0	621

Thermoplastic Valves Y-Pattern Valves



CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005C 117.59	1732-005C 124.05	1	12	622
3/4	1722-007C 138.55	1732-007C 148.21	1	8	622
1	1722-010C 165.93	1732-010C 177.22	1	8	622
1-1/4	1722-012C 204.59	1732-012C 217.48	1	4	622
1-1/2	1722-015C 270.65	1732-015C 286.74	1	0	622
2	1722-020C 383.40	1732-020C 409.18	2	0	622
3	1722-030C 821.60	1732-030C 892.48	1	0	622
4	1722-040C 1393.48	1732-040C 1517.53	1	0	622

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CSR 120.82	1731-005CSR 128.89	1	8	622
3/4	1721-007CSR 143.38	1731-007CSR 153.04	1	8	622
1	1721-010CSR 173.98	1731-010CSR 177.22	1	8	622
1-1/4	1721-012CSR 212.65	1731-012CSR 228.77	1	0	622
1-1/2	1721-015CSR 291.58	1731-015CSR 307.71	1	0	622
2	1721-020CSR 407.57	1731-020CSR 430.15	1	0	622
3	1721-030CSR 881.20	1731-030CSR 953.68	1	0	622
4	1721-040CSR 1388.65	1731-040CSR 1580.38	1	0	622

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005C 193.32	1733-005C 199.76	1	8	622
3/4	1723-007C 220.71	1733-007C 230.36	1	8	622
1	1723-010C 267.41	1733-010C 278.69	1	4	622
1-1/4	1723-012C 320.58	1733-012C 331.87	1	0	622
1-1/2	1723-015C 433.36	1733-015C 449.46	1	0	622
2	1723-020C 552.57	1733-020C 578.35	1	0	622
3	1723-030C 1063.25	1733-030C 1135.74	1	0	622
4	1723-040C 1725.34	1733-040C 1834.91	1	0	622

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005 99.87	173A-005 104.72	1	8	620
3/4	172A-007 115.98	173A-007 122.43	1	8	620
1	172A-010 138.55	173A-010 148.21	1	4	620
1-1/4	172A-012 169.14	173A-012 185.27	2	0	620
1-1/2	172A-015 225.54	173A-015 238.42	2	0	620
2	172A-020 318.98	173A-020 341.54	1	0	620
3	172A-030 689.49	173A-030 749.12	1	0	620
4	172A-040 1171.18	173A-040 1274.31	1	0	620

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005 99.87	173B-005 104.72	1	8	620
3/4	172B-007 115.98	173B-007 122.43	1	8	620
1	172B-010 138.55	173B-010 148.21	1	4	620
1-1/4	172B-012 169.14	173B-012 185.27	2	0	620
1-1/2	172B-015 225.54	173B-015 238.42	1	0	620
2	172B-020 318.98	173B-020 341.54	1	0	620
3	172B-030 689.49	173B-030 749.12	1	0	620
4	172B-040 1171.18	173B-040 1274.31	1	0	620

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005SR 103.09	173B-005SR 107.93	1	8	620
3/4	172B-007SR 120.82	173B-007SR 128.89	1	8	620
1	172B-010SR 146.60	173B-010SR 154.66	1	4	620
1-1/4	172B-012SR 199.76	173B-012SR 211.03	1	0	620
1-1/2	172B-015SR 244.86	173B-015SR 256.15	1	0	620
2	172B-020SR 344.75	173B-020SR 362.47	1	0	620
3	172B-030SR 741.03	173B-030SR 802.25	1	0	620
4	172B-040SR 1224.34	173B-040SR 1329.06	1	0	620

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005CL 99.87	173A-005CL 104.72	1	8	621
3/4	172A-007CL 115.98	173A-007CL 122.43	1	8	621
1	172A-010CL 138.55	173A-010CL 148.21	1	4	621
1-1/4	172A-012CL 169.14	173A-012CL 185.27	2	0	621
1-1/2	172A-015CL 225.54	173A-015CL 238.42	2	0	621
2	172A-020CL 318.98	173A-020CL 341.54	1	0	621
3	172A-030CL 689.49	173A-030CL 749.12	1	0	621
4	172A-040CL 1171.18	173A-040CL 1274.31	1	0	621

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CL 99.87	173B-005CL 104.72	1	8	621
3/4	172B-007CL 115.98	173B-007CL 122.43	1	8	621
1	172B-010CL 138.55	173B-010CL 148.21	1	4	621
1-1/4	172B-012CL 169.14	173B-012CL 185.27	2	0	621
1-1/2	172B-015CL 225.54	173B-015CL 238.42	1	0	621
2	172B-020CL 318.98	173B-020CL 341.54	1	0	621
3	172B-030CL 689.49	173B-030CL 749.12	1	0	621
4	172B-040CL 1171.18	173B-040CL 1274.31	1	0	621



Thermoplastic Valves Y-Pattern Valves

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CLSR 103.09	173B-005CLSR 107.93	1	8	621
3/4	172B-007CLSR 120.82	173B-007CLSR 128.89	1	8	621
1	172B-010CLSR 146.60	173B-010CLSR 154.66	1	4	621
1-1/4	172B-012CLSR 199.76	173B-012CLSR 211.03	2	0	621
1-1/2	172B-015CLSR 244.86	173B-015CLSR 256.15	1	0	621
2	172B-020CLSR 344.75	173B-020CLSR 362.47	1	0	621
3	172B-030CLSR 741.03	173B-030CLSR 802.25	1	0	621
4	172B-040CLSR 1224.34	173B-040CLSR 1329.06	1	0	621

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005C 138.55	173A-005C 146.60	1	8	622
3/4	172A-007C 162.71	173A-007C 173.98	1	8	622
1	172A-010C 194.93	173A-010C 207.80	1	4	622
1-1/4	172A-012C 240.03	173A-012C 256.15	2	0	622
1-1/2	172A-015C 318.98	173A-015C 336.69	2	0	622
2	172A-020C 451.07	173A-020C 481.68	1	0	622
3	172A-030C 966.60	173A-030C 1050.37	1	0	622
4	172A-040C 1638.37	173A-040C 1784.97	1	0	622

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005C 138.55	173B-005C 146.60	1	8	622
3/4	172B-007C 162.71	173B-007C 173.98	1	8	622
1	172B-010C 194.93	173B-010C 207.80	1	4	622
1-1/4	172B-012C 240.03	173B-012C 256.15	2	0	622
1-1/2	172B-015C 318.98	173B-015C 336.69	2	0	622
2	172B-020C 451.07	173B-020C 481.68	1	0	622
3	172B-030C 966.60	173B-030C 1050.37	1	0	622
4	172B-040C 1638.37	173B-040C 1784.97	1	0	622

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CSR 141.77	173B-005CSR 151.43	1	8	622
3/4	172B-007CSR 169.14	173B-007CSR 180.43	1	8	622
1	172B-010CSR 204.59	173B-010CSR 207.80	1	4	622
1-1/4	172B-012CSR 249.71	173B-012CSR 269.02	1	0	622
1-1/2	172B-015CSR 343.13	173B-015CSR 362.47	1	0	622
2	172B-020CSR 480.06	173B-020CSR 505.83	1	0	622
3	172B-030CSR 1035.85	173B-030CSR 1121.25	1	0	622
4	172B-040CSR 1633.53	173B-040CSR 1859.06	1	0	622

Thermoplastic Valves Y-Pattern Valve Repair Kits



Internal Repair Kit includes 1-Stem O-ring, 1-Seal Carrier O-ring, along with a factory assembled (required) internal component replacement unit consisting of Stem assembled with Seat & Seal Carrier components. Install in valve using existing valve Bonnet, Bonnet Nut, and Handle/Nut. True Union style valve kits include an additional 2-End Connector O-rings.

PVC Y-Pattern Valve Internal Repair Kits

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Disc Code
1/2	YV-ERK-005 26.00	YV-VRK-005 27.60	YV-UERK-005 27.37	YV-UVRK-005 29.05	1	10	299
3/4	YV-ERK-007 35.06	YV-VRK-007 37.52	YV-UERK-007 36.91	YV-UVRK-007 39.48	1	10	299
1	YV-ERK-010 45.99	YV-VRK-010 48.35	YV-UERK-010 48.40	YV-UVRK-010 50.87	1	10	299
1-1/4	YV-ERK-012 69.95	YV-VRK-012 75.02	YV-UERK-012 73.62	YV-UVRK-012 78.97	1	10	299
1-1/2	YV-ERK-015 132.56	YV-VRK-015 139.71	YV-UERK-015 147.86	YV-UVRK-015 147.87	1	10	299
2	YV-ERK-020 162.05	YV-VRK-020 170.22	YV-UERK-020 170.57	YV-UVRK-020 179.17	1	4	299
3	YV-ERK-030 226.75	YV-VRK-030 238.82	YV-UERK-030 238.71	YV-UVRK-030 251.39	1	10	299
4	YV-ERK-040 388.17	YV-VRK-040 409.80	YV-UERK-040 408.58	YV-UVRK-040 431.36	1	10	299

CPVC Y-Pattern Valve Internal Repair Kits

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Disc Code
1/2	YV-ERK-005C 33.27	YV-VRK-005C 35.33	YV-UERK-005C 35.03	YV-UVRK-005C 37.18	1	10	299
3/4	YV-ERK-007C 44.89	YV-VRK-007C 48.01	YV-UERK-007C 47.24	YV-UVRK-007C 50.55	1	10	299
1	YV-ERK-010C 58.87	YV-VRK-010C 61.86	YV-UERK-010C 61.97	YV-UVRK-010C 65.09	1	10	299
1-1/4	YV-ERK-012C 89.55	YV-VRK-012C 96.03	YV-UERK-012C 92.60	YV-UVRK-012C 101.11	1	10	299
1-1/2	YV-ERK-015C 169.67	YV-VRK-015C 178.78	YV-UERK-015C 178.61	YV-UVRK-015C 188.21	1	10	299
2	YV-ERK-020C 207.43	YV-VRK-020C 217.87	YV-UERK-020C 218.36	YV-UVRK-020C 229.34	1	4	299
3	YV-ERK-030C 290.23	YV-VRK-030C 305.68	YV-UERK-030C 305.54	YV-UVRK-030C 321.76	1	10	299
4	YV-ERK-040C 496.86	YV-VRK-040C 524.54	YV-UERK-040C 523.01	YV-UVRK-040C 552.15	1	10	299



Thermoplastic Valves Sewer Disconnect

Spears® Sewer Disconnect functions as both cleanout and disconnect device, plus helps prevent sewage backup during hurricanes and floods. Complete unit consists of body and plunger (sold separately - both parts are required for proper use). The plunger can be screwed into the body to block solids waste flow. The plunger should be removed from the body and stored when not in use to prevent accidental closing (i.e., from ground vibration, etc.).

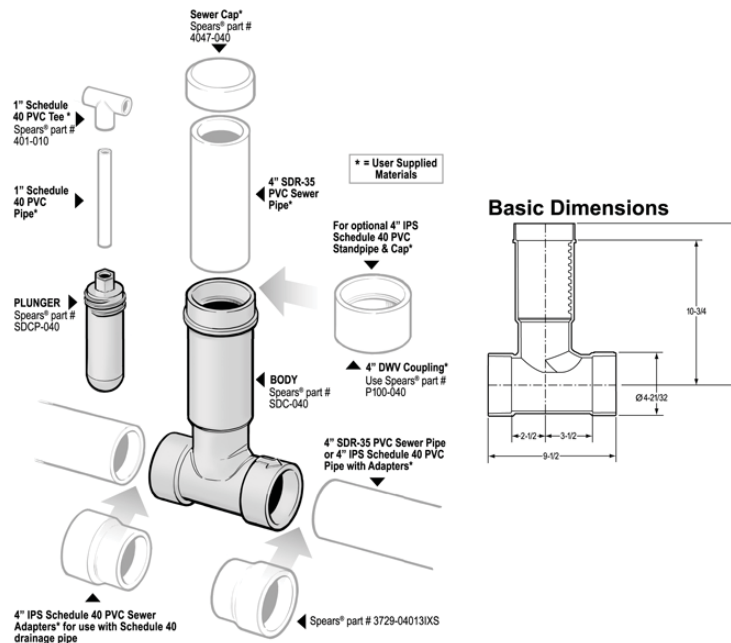


- Connects directly to 4" SDR-35 (or any ASTM D3034/D2729) PVC Sewer Pipe.
- Easily adapted to 4" Schedule 40 PVC Drainage Pipe with addition of IPS x Sewer Adapters, Socket x Spigot, Spears® part no. 3729-04013IXS.
- User-supplied standpipe can be installed to grade using PVC Sewer Pipe connected to the body branch socket and a Sewer Cap to close off (Spears® part no. 4047-040). Optionally, user-supplied Schedule 40 Pipe can be used for standpipe with addition of a Schedule 40 DWV Socket Coupling (Spears® part no. P100-040) and Cap (Spears® part no. P116-040).
- T-handle for Plunger operation can be easily fabricated from user-supplied 1" Schedule 40 Pipe and Tee fitting (Spears® part no. 401-010).



Note - the unit restricts flow by approximately 85%. As a result, the unit must be located in the sewer line where solids are present. Full disconnect is not achieved without solids in the flow.

Auxiliary Components (Purchased Separately)



Sewer Disconnect Body

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Sewer Socket X Sewer Socket.

Requires Separate Purchase of SDCP-040 Plunger

Requires Purchase of SDCP-040 Plunger

SDC-040	4	6	0	055	72.66
---------	---	---	---	-----	-------

Sewer Disconnect Plunger

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

For Use With Sewer Disconnect

Body. Requires Separate Purchase of SDC-040 Body

Requires Purchase of SDC-040 Body

SDCP-040	4	12	0	055	25.02
----------	---	----	---	-----	-------

Optional IPS x SEWER Adapter

IPS Socket x Sewer Spigot for adapting Sewer Disconnect Body to Schedule 40 drainage pipe



3729-04013IXS	4	1	90	399	17.51
---------------	---	---	----	-----	-------

Thermoplastic Valves Industrial PVC Backwater Valves



Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves



PVC Backwater Valves Soc x Soc - Valve Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P	2	1	12	055	59.05
S375P	3	2	0	055	59.17
S475P	4	1	0	055	65.55
S675P	6	1	0	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length



PVC Backwater Valves with Extension Kit to Premade Length Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-120 ¹	2X12HT	1	0	055	178.12
S275P-160 ¹	2X16HT	1	0	055	191.59
S275P-200 ¹	2X20HT	1	0	055	205.05
S275P-240 ¹	2X24HT	1	0	055	218.53
S275P-360 ¹	2X36HT	1	0	055	229.52
S275P-480 ¹	2X48HT	1	0	055	252.25
S375P-120 ¹	3X12HT	1	0	055	178.12
S375P-160 ¹	3X16HT	1	0	055	191.59
S375P-200 ¹	3X20HT	1	0	055	205.05
S375P-240 ¹	3X24HT	1	0	055	218.53
S375P-360 ¹	3X36HT	1	0	055	229.52
S375P-480 ¹	3X48HT	1	0	055	252.25
S475P-120 ¹	4X12HT	1	0	055	231.36

PVC Backwater Valves with Extension Kit to Premade Length

Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S475P-160 ¹	4X16HT	1	0	055	249.59
S475P-200 ¹	4X20HT	1	0	055	266.20
S475P-240 ¹	4X24HT	1	0	055	283.85
S475P-360 ¹	4X36HT	1	0	055	298.11
S475P-480 ¹	4X48HT	1	0	055	327.60
S675P-120 ¹	6X12HT	1	0	055	485.82
S675P-160 ¹	6X16HT	1	0	055	524.14
S675P-200 ¹	6X20HT	1	0	055	559.02
S675P-240 ¹	6X24HT	1	0	055	596.16
S675P-360 ¹	6X36HT	1	0	055	626.04
S675P-480 ¹	6X48HT	1	0	055	687.95

¹ - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length



PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-020-120 ¹	2X12HT	1	0	055	55.55
SAEK-020-160 ¹	2X16HT	1	0	055	57.14
SAEK-020-200 ¹	2X20HT	1	0	055	58.65
SAEK-020-240 ¹	2X24HT	1	0	055	61.46
SAEK-020-360 ¹	2X36HT	1	0	055	64.37
SAEK-020-480 ¹	2X48HT	1	0	055	67.52
SAEK-030-120 ¹	3X12HT	1	0	055	60.24
SAEK-030-160 ¹	3X16HT	1	0	055	68.00
SAEK-030-200 ¹	3X20HT	1	0	055	72.04
SAEK-030-240 ¹	3X24HT	1	0	055	81.19
SAEK-030-360 ¹	3X36HT	1	0	055	96.04
SAEK-030-480 ¹	3X48HT	1	0	055	113.59
SAEK-040-120 ¹	4X12HT	1	0	055	89.83
SAEK-040-160 ¹	4X16HT	1	0	055	101.27
SAEK-040-200 ¹	4X20HT	1	0	055	124.92
SAEK-040-240 ¹	4X24HT	1	0	055	136.79



Thermoplastic Valves Industrial PVC Backwater Valves

PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-040-360 ¹	4X36HT	1	0	055	172.06
SAEK-040-480 ¹	4X48HT	1	0	055	198.64
SAEK-060-120 ¹	6X12HT	1	0	055	160.94
SAEK-060-160 ¹	6X16HT	1	0	055	182.92
SAEK-060-200 ¹	6X20HT	1	0	055	207.41
SAEK-060-240 ¹	6X24HT	1	0	055	237.97
SAEK-060-360 ¹	6X36HT	1	0	055	295.39
SAEK-060-480 ¹	6X48HT	1	0	055	366.67

¹ - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components



PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-AK	2	1	8	055	87.00
S375P-AK	3	1	0	055	87.00
S475P-AK	4	1	0	055	101.77
S675P-AK	6	1	0	055	360.38

PVC Backwater Valve Extension Components Only



PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-ECK	2	1	8	055	46.33
S375P-ECK	3	1	0	055	46.33
S475P-ECK	4	1	0	055	60.37
S675P-ECK	6	1	0	055	126.83

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1) (continued)

Table 1: User Supplied Pipe Requirements
For Use With Extension Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe			
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe ¹			
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE ³ 6" D3034 (SDR 35) PVC SEWER PIPE ²				
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE				
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE				

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.

Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.

Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit



Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	2	1	10	055	34.48
S375P-FRK	3	1	10	055	43.48
S475P-FRK	4	1	10	055	50.64
S675P-FRK	6	1	5	055	90.18

PVC Backwater Valve Metric Adapters

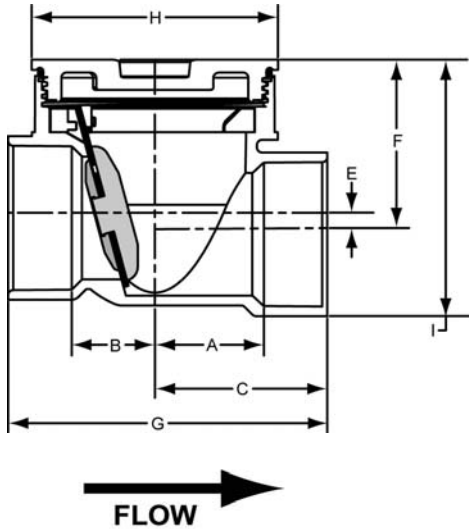


PVC Backwater Valve Metric Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	63mm X 2	50	0	055	15.28
S375MA-090	90mm X 3	25	0	055	16.42
S475MA-110	110mm X 4	10	0	055	19.45
S675MA-160	160mm X 6	4	0	055	44.89

Technical Information

STANDARD VALVE



Standard Valve Dimensions (Inches)

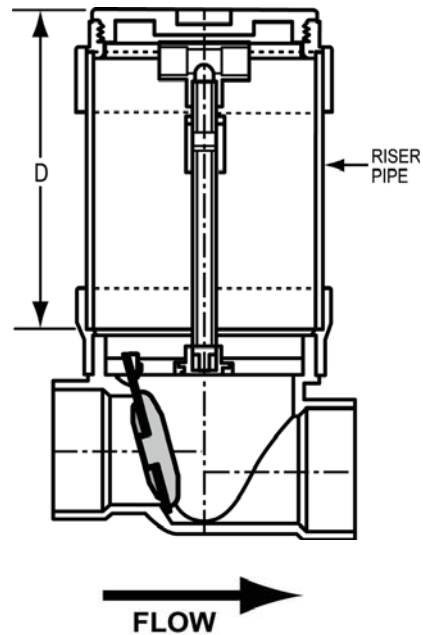
Size	A	B	C	E	F	G	H	I
2	1-13/16	1-3/4	2-5/8	5/16	3-1/4	5-9/32	4-3/16	4-9/16
3	2-5/8	2	4-3/16	13/32	4-1/8	7-3/4	6	6-1/8
4	3-5/8	3-3/4	5-7/16	23/32	5-7/16	10-15/16	8-1/4	7-15/16
6	4-3/4	4-5/8	7-3/4	13/16	7-3/16	15-3/8	11-1/4	10-13/16

Valve with Extension Kit Dimensions (Inches)

HEIGHT-D
12
16
20
24
36
48

D = Top of plug Standard Valve to top of plug with Extension

VALVE WITH EXTENSION KIT





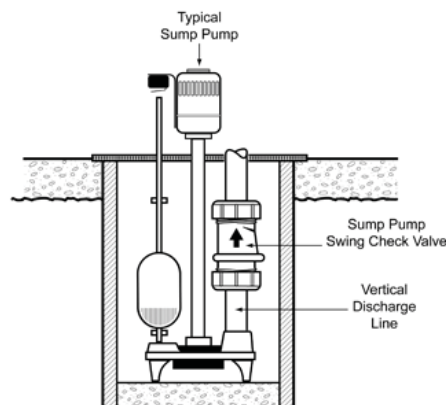
Thermoplastic Valves Sump Pump Swing Check Valve & Quiet Check Valve

Sump Pump Swing Check Valve



- Specifically Designed for Use on Sump Pump Discharge Lines (See Illustration)
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- All Plastic Construction with Elastomer Seals - No Metal Parts
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Suitable for Vertical Up-flow or Horizontal Installations

Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 75 psi
 Maximum Service Temperature
 140°F (60°C)
 Temperature/Pressure De-ratings Apply



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up." Do Not install Check Valve upside down.

PVC Sump Pump Swing Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Compression Ends

Buna-N Gaskets included for both 1-1/4" & 1-1/2" pipe

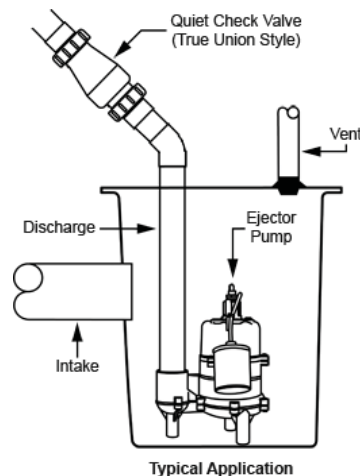
S1400-15	1-1/2 & 1-1/4	16	0	026	18.80
----------	---------------	----	---	-----	-------

Quiet Check Valve



- Designed to Provide Quiet Operation in Sump Pump or Sewage Ejector Pump Systems.
- Spring Controlled Rate of Closing Prevents Slamming and Eliminates Noise.
- Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space.
- 2" Size for Sewage Ejector Systems, 1-1/2" Size for Sump Pump Effluent Systems.

Pressure Rating @ 73°F (23°C), Water
 Full Flow (open) 150 psi
 Back Pressure (closed) 75 psi
 Maximum Service Temperature 140°F (60°C)
 Temperature/Pressure De-ratings Apply



General Installation Information: Install check valve 12"-18" above pump discharge, or as recommended by pump system manufacturer. Be sure check valve installation complies with local codes. Valve may be installed in either vertical up-flow or horizontal positions on pump discharge line. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up."

PVC Quiet Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Soc x Soc

True Union or Direct Socket End Connection

8622-015	1-1/2	12	0	026	42.11
8622-020	2	10	0	026	60.19

Thermoplastic Valves Swing Check Ball Valve



- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water

Full Flow (open) 150 psi

Back Pressure (closed) 75 psi

Maximum Service Temperature

140°F (60°C)

Temperature/Pressure De-ratings Apply

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion **MUST** be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

PVC Swing Check Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Soc x Soc

7622-015	1-1/2	10	0	026	42.57
7622-020	2	6	0	026	61.09



Actuated Valves Actuated Valve Information

Spears® Makes Valve Actuation Simple. . .

Sold in Pre-Matched Valve & Actuator Packages

Spears® makes actuation easy by matching each valve type and size with the appropriate actuator for proper operating torque and cycle time to assure optimum performance.

Accessory Add-ons Provide Custom Actuation Configurations

Spears® Premium Actuation Packages can be fully customized to user specifications by addition of selected control accessories purchased separately. Select from our wide variety of accessories and options or contact Spears® for virtually any special actuation need, even if not specified.

Complete Packages Factory Assembled - Ready for Installation

All actuation packages include valve, actuator mounting, coupling, and precision actuator factory assembled with any purchased accessories, ready for installation.

Easy Steps to Locate Desired Product

This catalog provides pricing for both Spears® economical Electro Series Actuated Ball Valves and Spears® full featured Premium Electric and Premium Pneumatic actuated valve packages with optional accessories. Actuated valve packages are listed in separate sections by valve type (ball, butterfly, diaphragm) and actuation type (electric, pneumatic). Optional accessories are listed and priced separately for assembly with the desired package. A complete listing of content is located at the end of this catalog. See Spears® Actuated Thermoplastic Valves Product Guide & Engineering Specification, for additional technical information on valve packages and accessories.

Step 1: Select and Locate Desired Actuated Valve Type

Section I: Ball Valves
Section II: Butterfly Valves
Section III: Diaphragm Valves

Step 2: Select and Locate Desired Actuation Type within Valve Section

Electric Actuated
Pneumatic Actuated

Step 3: Select and Locate Desired Material Type Pricing Table

PVC
CPVC
Polypropylene

Step 4: Select and Locate Specific Part Number & Pricing According to Listed Options

Individual pricing tables for actuated valve packages are organized by valve Size, Elastomer type (O-ring, seat, etc.), and valve configuration options such as End Connector (Joint) or other specified criteria. Unit List Price Each is located immediately below the Part Number. Product Discount Code is located in the far right column.

Step 5: Select and Locate Desired Accessories (see important ordering information below)

Electric Actuator Accessories
Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves
Pneumatic Actuator Accessories for Diaphragm Valves

Ordering Premium Valve Packages with Accessory Add-ons - IMPORTANT -

Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. **When Accessories are ordered for assembly with an actuated valve package, the suffix "-A" must be added to the actuated valve package part number being ordered.** Do not add this suffix if no accessories are being ordered or if ordering Electro Series Ball Valves. Example: Package part

number **21101A112-005** would be ordered as **21101A112-005-A** **REQUIRED ORDER SEQUENCE:** Order line items should begin with the actuated valve package part number (with -A suffix) and be immediately followed by the selected accessory part number(s) as the next line item(s). This sequential listing of valve package and applicable accessories on the order assures that selected accessories are properly assembled with the selected package. Failure to follow this simple practice may result in unnecessary delays.

Actuated Valve Packages Overview

Typical Package Illustration	Valve Type	Basic Valve Options				Actuation Package Available		
		Basic Valve Material	Size Range (inch)	Seal Material Options	End Connector Options	Premium Electric Actuation	Premium Pneumatic Actuation	Electro Series Actuation
	True Union 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
	Compact 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
	Butterfly Valves	PVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		CPVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		PP	1-1/2 - 24 ¹	EPDM FKM	Flanged	X	X	
	Diaphragm Valves	PVC	1/2 - 4 ²	Buna-N EPDM FKM PTFE	Socket ³ Thread ³ Spigot ⁴ Flanged	X	X	
		CPVC	1/2 - 4 ²	Buna-N EPDM FKM PTFE	Socket Thread Spigot Flanged	X	X	
		PP	1/2 - 4 ²	EPDM FKM	Thread Flanged	X	X	

Notes: 1 - Butterfly Valves also available in sizes 30" - 60", quoted and produced to order. Contact Spears®.

2 - 2-1/2" to 4" Diaphragm Valves available in Flanged ends only.

3 - 1/2" - 2" Socket and Thread Diaphragm Valves are True Union style.

4 - Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

Actuated Valves Actuated Valve Information



The following table illustrates actuator features for Premium Electric actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this price sheet. Features specified as "Accessory" are included as package add-ons in this price sheet. Features specified as "Options" must be special ordered (contact Spears® for pricing).

Electric Actuator Features Overview

Standard 2-Position Electric Actuator Features	Electro Series Ball Valves	Premium Electric TU Ball Valves	Premium Electric Butterfly Valves	Premium Electric Diaphragm Valves
Motor Rotation	Unidirectional	Reversing	Reversing	Reversing
NEMA Rating	4X	4	4	4
Enclosure Material	PP	Powder Coated Aluminum	Powder Coated Aluminum	Powder Coated Aluminum
Enclosure Conduit Entry	1/2NPT	1/2NPT	1/2NPT	1/2NPT
Voltage	115 VAC	115 VAC	115 VAC	115 VAC
Pre wired to terminal strip	Wired direct	Standard	Standard	Standard
Thermal Overload Protection	Standard	Standard	Standard	Standard
Basic Manual Override	—	Standard (1/2" – 2")	—	(Option)
Dec clutchable Manual Override	—	Standard (2-1/2" – 4")	Standard	Standard (2" – 4")
Limit Switches (SPDT)	1	2	2	2
Mounting Position	Any	Any	Any	Any
Permanent Lubrication	Standard	Standard	Standard	Standard
Friction Brake	—	—	Standard	—
Feedback Potentiometer	—	Standard	Standard	Standard
Options & Accessories				
24 VAC	Option	Option	Option	Option
230 VAC	Option	Option	Option	Option
230 VAC 3-phase, 60 Hz	—	Option	Option	Option
230 VAC 3-phase, 50 Hz	—	Option	Option	Option
460 VAC 3-phase, 60 Hz	—	—	Option	—
460 VAC 3-phase, 50 Hz	—	—	Option	—
12 VDC	Option	Option	Option	Option
24 VDC	Option	Option	Option	Option
NEMA 4X, 7, 9 Rating	(4X Standard)	Option	Option	Option
Basic Manual Override	—	Standard (1/2" – 2")	—	Option
Dec clutchable Manual Override	—	Option (Standard on 4" – 6")	(Standard)	Option
Duty Cycle Upgrade	Option	Option	Option	Option
Spring Return (Fail Safe)	—	Option	Option	—
Positioner Board (Modulating)	—	Accessory	Accessory	Accessory
Additional Limit Switch Sets	—	Accessory	Accessory	Accessory
LED Indicator Lights	—	Accessory	Accessory	Accessory
Position Indicator (visual)	Standard	Standard	Standard	Accessory
Heater & Thermostat	—	Accessory	Accessory	Accessory
Torque Sensor	—	Accessory	Accessory	Standard
Speed Controller	—	Accessory	Accessory	Accessory
Timer Board	—	Accessory	Accessory	Accessory
Transmitter	—	Accessory	Accessory	Accessory
Controller Interface	—	Accessory	Accessory	Accessory
"2-Wire" Control Relay	Accessory	Accessory	Accessory	—
Friction Brake	—	Accessory	Standard	Accessory
ID Tag-SS	Accessory	Accessory	Accessory	Accessory

The following table illustrates actuator features for Premium Pneumatic actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this price sheet. Features specified as "Accessory" are included as package add-ons in this price sheet. Features specified as "Options" must be special ordered (contact Spears® for pricing).

Please contact Spears® for any desired features or accessories not specified.

Pneumatic Actuator Features Overview

Standard Pneumatic Actuator Features	Premium Pneumatic TU Ball Valves	Premium Pneumatic Butterfly Valves	Premium Pneumatic Diaphragm Valves
Type	Dual Piston, Rack & Pinion	Dual Piston, Rack & Pinion	Linear Piston
Enclosure Material (ends/body)	Epoxy Coated/Hard Anodized Aluminum	Epoxy Coated/Hard Anodized Aluminum	PES-Polyestersulphone PP-Polypropylene
Standard Operation	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed/Open
Standard Operating Pressure	80 psi	80 psi	80 psi
Air Connection Size	1/8"	1/8"	1/8"
Basic Manual Override	Standard	Standard	(Option)
Options & Accessories			
Air-Spring Open	Option	Option	Option
40 psi Operating Pressure	Option	Option	—
60 psi Operating Pressure	Option	Option	Option
Basic Manual Override	(Standard)	(Standard)	Option
Dec clutchable Manual Override	Option	Option	—
Pneumatic Positioner	Accessory	Accessory	Accessory
Electro-Pneumatic Positioner	Accessory	Accessory	Accessory
Dome Position Indicator	Accessory	Accessory	Accessory
Pointer Indicator	Accessory	Accessory	—
3 & 4-Way Solenoid Valve	Accessory	Accessory	Accessory
Dual Power Solenoid Valve	Accessory	Accessory	—
Limit Switches	Accessory	Accessory	Accessory
Output Signal Limit Switches	Accessory	Accessory	—
3-Way "Dribble" Control Limit Switches	Accessory	Accessory	—
Stainless Steel Pressure Gauge Set	Accessory	Accessory	Accessory
Stem Extension	Accessory	Accessory	Accessory
ID Tag-SS	Accessory	Accessory	Accessory



Actuated Valves Actuated Valve Information

Additional Actuated Valve Configurations, Options & Accessories Not Specified

Spears® can provide virtually any actuation need for Spears® valves. The following actuated valve configurations, options and accessories not currently specified in this price sheet are a few of those available on a special order basis. See the *Accessories* sections for standard configuration and accessory options. Please contact Spears® for additional technical information or other custom actuation needs. Certain special order options and custom Actuation Packages may require extended lead times. Please contact Spears® for details.

Special Actuated Ball Valves

- Compact Ball Valves
- Single Entry Ball Valves
- True Union 2000 3-Way Vertical & Horizontal Ball Valves
- Vented Ball Valves

Special Actuated Butterfly Valves

- Tandem 3-Way - two valves operated from one actuator, both closing or both opening at the same time
- Tandem Diverting - two valves operated from one actuator, one opening while the other closes
- "No Seat" actuated Butterfly Valves for duct (damper) applications
- Polypropylene 30" to 60" Actuated Valves (custom produced)

Actuated Gate Valves

- PVC & CPVC Construction
- Sizes 1/2" - 4"
- Socket, Thread, Flange End Connections

Special Actuator Options

- Actuators Only
- Actuator Brackets Only
- Actuator Stem Extensions
- Double Powder Coated Electric Enclosures
- Stainless Steel Pneumatic Enclosures
- Electric Spring Return Open or Close with No Override
- Battery Back-up Electric Actuators

Special Switch Sets & Solenoids

- Single Limit Switch & Bracket Only (no actuator) for manual valves
- Double Limit Switch & Bracket Only (no actuator) for manual valves
- Dual Coil 5-Way Solenoid Valves

Replacement Parts Many replacement parts are available for Spears® electric and pneumatic actuators and valves. Contact Spears® for specific parts needed.

Actuated Valves Electro Actuated Compact 2000 Ball Valve



General purpose industrial grade sealed unit design, 1/4-turn shutoff. Basic On-Off operation.



- Maintenance-free
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Compact 2000 Ball Valve

O-ring Joint	EPDM			FKM			Disc Code
	Socket Part # Price Each	Thread Part # Price Each	Flanged Part # Price Each	Socket Part # Price Each	Thread Part # Price Each	Flanged Part # Price Each	
Size							
1/2	E1404-005 452.61	E1406-005 452.61	E1408-005 557.42	E1405-005 498.81	E1407-005 498.81	E1409-005 587.83	496
3/4	E1404-007 463.71	E1406-007 463.71	E1408-007 586.16	E1405-007 515.36	E1407-007 515.36	E1409-007 616.72	496
1	E1404-010 472.03	E1406-010 472.03	E1408-010 604.24	E1405-010 523.54	E1407-010 523.54	E1409-010 635.27	496
1-1/4	E1504-012 488.69	E1506-012 488.69	E1508-012 636.49	E1505-012 552.26	E1507-012 552.26	E1509-012 670.07	496
1-1/2	E1504-015 502.61	E1506-015 502.61	E1508-015 648.42	E1505-015 563.01	E1507-015 563.01	E1509-015 686.42	496
2	E1504-020 524.78	E1506-020 524.78	E1508-020 705.54	E1505-020 585.32	E1507-020 585.32	E1509-020 744.75	496

CPVC

O-ring Joint	EPDM			FKM			Disc Code
	Socket Part # Price Each	Thread Part # Price Each	Flanged Part # Price Each	Socket Part # Price Each	Thread Part # Price Each	Flanged Part # Price Each	
Size							
1/2	E1404-005C 460.93	E1406-005C 460.93	E1408-005C 575.63	E1405-005C 514.89	E1407-005C 514.89	E1409-005C 607.20	498
3/4	E1404-007C 477.59	E1406-007C 477.59	E1408-007C 608.88	E1405-007C 535.89	E1407-007C 535.89	E1409-007C 637.03	498
1	E1404-010C 499.80	E1406-010C 499.80	E1408-010C 624.16	E1405-010C 544.46	E1407-010C 544.46	E1409-010C 656.29	498
1-1/4	E1504-012C 530.35	E1506-012C 530.35	E1508-012C 671.94	E1505-012C 574.18	E1507-012C 574.18	E1509-012C 696.34	498
1-1/2	E1504-015C 541.43	E1506-015C 541.43	E1508-015C 680.32	E1505-015C 581.44	E1507-015C 581.44	E1509-015C 709.23	498
2	E1504-020C 588.66	E1506-020C 588.66	E1508-020C 733.05	E1505-020C 604.03	E1507-020C 604.03	E1509-020C 769.78	498



Actuated Valves Electro Actuated True Union 2000 Standard Ball Valve



General Purpose True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- PTFE/HDPE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated True Union 2000 Standard Ball Valve

O-ring Joint	EPDM			FKM			Disc Code
	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005 469.73	E1451-005SR 470.59	E1457-005 577.91	E1454-005 517.58	E1452-005SR 518.55	E1458-005 636.74	500
3/4	E1453-007 479.98	E1451-007SR 481.93	E1457-007 606.21	E1454-007 536.13	E1452-007SR 538.09	E1458-007 675.55	500
1	E1453-010 494.41	E1451-010SR 494.41	E1457-010 632.88	E1454-010 548.11	E1452-010SR 550.23	E1458-010 701.72	500
1-1/4	E1553-012 506.39	E1551-012SR 512.47	E1557-012 658.42	E1554-012 584.32	E1552-012SR 590.29	E1558-012 759.53	500
1-1/2	E1553-015 535.73	E1551-015SR 542.20	E1557-015 691.06	E1554-015 599.61	E1552-015SR 606.21	E1558-015 773.62	500
2	E1553-020 567.65	E1551-020SR 574.68	E1557-020 760.69	E1554-020 631.15	E1552-020SR 637.77	E1558-020 845.79	500

CPVC

O-ring Joint	EPDM			FKM			Disc Code
	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005C 486.67	E1451-005CSR 489.37	E1457-005C 601.96	E1454-005C 543.46	E1452-005CSR 546.14	E1458-005C 671.75	502
3/4	E1453-007C 508.45	E1451-007CSR 512.24	E1457-007C 645.41	E1454-007C 569.79	E1452-007CSR 573.66	E1458-007C 722.78	502
1	E1453-010C 534.46	E1451-010CSR 534.46	E1457-010C 691.06	E1454-010C 582.42	E1452-010CSR 587.76	E1458-010C 752.34	502
1-1/4	E1553-012C 567.12	E1551-012CSR 575.62	E1557-012C 748.33	E1554-012C 615.14	E1552-012CSR 623.73	E1558-012C 810.85	502
1-1/2	E1553-015C 585.08	E1551-015CSR 599.73	E1557-015C 773.72	E1554-015C 629.98	E1552-015CSR 644.54	E1558-015C 831.43	502
2	E1553-020C 649.45	E1551-020CSR 665.21	E1557-020C 829.85	E1554-020C 670.01	E1552-020CSR 685.85	E1558-020C 897.02	502

Actuated Valves

Electro Actuated True Union 2000 Industrial Ball Valve



Industrial grade True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Industrial Ball Valve

O-ring Joint	EPDM			FKM			Disc Code
	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1459-005 481.93	E1463-005SR 484.63	E1465-005 586.83	E1460-005 531.21	E1464-005SR 533.91	E1466-005 620.09	500
3/4	E1459-007 494.45	E1463-007SR 498.29	E1465-007 616.88	E1460-007 552.27	E1464-007SR 556.13	E1466-007 653.66	500
1	E1459-010 511.58	E1463-010SR 516.92	E1465-010 642.60	E1460-010 567.29	E1464-010SR 572.62	E1466-010 679.02	500
1-1/4	E1559-012 530.28	E1563-012SR 538.83	E1565-012 678.07	E1560-012 630.67	E1564-012SR 639.24	E1566-012 731.83	500
1-1/2	E1559-015 564.60	E1563-015SR 579.25	E1565-015 710.45	E1560-015 631.74	E1564-015SR 646.38	E1566-015 755.06	500
2	E1559-020 605.75	E1563-020SR 621.61	E1565-020 786.48	E1560-020 672.71	E1564-020SR 688.57	E1566-020 831.81	500

CPVC

O-ring Joint	EPDM			FKM			Disc Code
	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1459-005C 502.83	E1463-005CSR 505.55	E1465-005C 617.59	E1460-005C 561.39	E1464-005CSR 566.80	E1466-005C 653.31	502
3/4	E1459-007C 528.92	E1463-007CSR 532.74	E1465-007C 660.09	E1460-007C 592.45	E1464-007CSR 613.32	E1466-007C 698.83	502
1	E1459-010C 558.72	E1463-010CSR 564.04	E1465-010C 683.11	E1460-010C 609.47	E1464-010CSR 614.74	E1466-010C 721.15	502
1-1/4	E1559-012C 605.81	E1563-012CSR 614.42	E1565-012C 732.93	E1560-012C 658.12	E1564-012CSR 666.68	E1566-012C 780.33	502
1-1/2	E1559-015C 625.94	E1563-015CSR 640.59	E1565-015C 780.16	E1560-015C 660.13	E1564-015CSR 674.84	E1566-015C 806.54	502
2	E1559-020C 738.12	E1563-020CSR 754.00	E1565-020C 879.42	E1560-020C 771.15	E1564-020CSR 787.20	E1566-020C 905.27	502



Actuated Valves Premium Actuated True Union 2000 Industrial Ball Valve - Electric



Industrial grade True Union design, 1/4-turn shutoff for a wide range of applications. Full-featured actuator can be custom configured with add-on accessories.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 1/2" - 4" 235 psi @ 73°F (23°C)
- 6" and all flanged 150 psi @ 73°F (23°C)
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Manual Override (shown)
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21101A112-005 720.51	23101A112-005 721.55	24101A112-005 741.43	21201A112-005 725.96	23201A112-005 727.02	24201A112-005 746.07	500
3/4	21101A112-007 729.38	23101A112-007 731.88	24101A112-007 759.98	21201A112-007 735.86	23201A112-007 738.38	24201A112-007 767.71	500
1	21101A112-010 746.72	23101A112-010 749.20	24101A112-010 784.84	21201A112-010 754.51	23201A112-010 756.98	24201A112-010 792.87	500
1-1/4	21101A112-012 772.99	23101A112-012 780.52	24101A112-012 803.41	21201A112-012 799.19	23201A112-012 806.72	24201A112-012 817.33	500
1-1/2	21101A112-015 792.38	23101A112-015 1336.04	24101A112-015 835.93	21201A112-015 804.95	23201A112-015 813.06	24201A112-015 849.82	500
2	21101A112-020 873.03	23101A112-020 881.82	24101A112-020 973.51	21201A112-020 888.25	23201A112-020 896.92	24201A112-020 988.76	500
2-1/2	21101A111-025 1475.65	23101A111-025 1499.34	24101A111-025 1649.87	21201A111-025 1578.53	23201A111-025 1602.16	24201A111-025 1657.55	500
3	21101A111-030 1567.91	23101A111-030 1591.59	24101A111-030 1698.76	21201A111-030 1610.37	23201A111-030 1634.02	24201A111-030 1822.61	500
4	21101A121-040 2613.54	23101A121-040 2641.18	24101A121-040 2999.19	21201A121-040 3113.97	23201A121-040 2712.91	24201A121-040 3163.31	500
6	21101A121-060 3687.17	23101A121-060 3726.60	24101A121-060 4488.31	21201A121-060 3840.14	23201A121-060 3879.58	24201A121-060 4838.42	500

CPVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21102A112-005 736.07	23102A112-005 737.09	24102A112-005 780.85	21202A112-005 743.20	23202A112-005 744.27	24202A112-005 783.19	502
3/4	21102A112-007 752.76	23102A112-007 755.28	24102A112-007 805.46	21202A112-007 761.75	23202A112-007 764.28	24202A112-007 811.02	502
1	21102A112-010 774.45	23102A112-010 776.98	24102A112-010 831.09	21202A112-010 785.16	23202A112-010 787.67	24202A112-010 840.55	502
1-1/4	21102A112-012 831.26	23102A112-012 838.84	24102A112-012 906.72	21202A112-012 848.37	23202A112-012 855.94	24202A112-012 914.69	502
1-1/2	21102A112-015 839.88	23102A112-015 847.97	24102A112-015 929.55	21202A112-015 857.82	23202A112-015 865.97	24202A112-015 937.95	502
2	21102A112-020 938.60	23102A112-020 947.41	24102A112-020 1072.15	21202A112-020 970.95	23202A112-020 979.77	24202A112-020 1138.96	502
2-1/2	21102A111-025 1670.93	23102A111-025 1694.59	24102A111-025 1838.94	21202A111-025 1724.76	23202A111-025 1748.42	24202A111-025 1969.71	502
3	21102A111-030 1753.01	23102A111-030 1776.65	24102A111-030 2140.89	21202A111-030 1816.01	23202A111-030 1839.69	24202A111-030 2162.66	502
4	21102A121-040 2995.65	23102A121-040 3023.28	24102A121-040 3642.98	21202A121-040 3109.84	23202A121-040 3137.44	24202A121-040 3709.97	502
6	21102A121-060 4480.42	23102A121-060 4540.36	24102A121-060 5860.36	21202A121-060 4723.29	23202A121-060 4783.21	24202A121-060 6002.27	502

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.

Actuated Valves **Premium Actuated True Union 2000 Industrial Ball Valve - Pneumatic**



Industrial grade True Union design, 1/4-turn shutoff for a wide range of applications. Full-featured actuator can be custom configured with add-on accessories.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 1/2" - 4" 235 psi @ 73°F (23°C)
- 6" and all flanged
- 150 psi @ 73°F (23°C)
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC

O-ring Joint	EPDM			FKM			Disc Code
Size	Socket Part # Price Each	SR Thread Part # Price Each	Flanged Part # Price Each	Socket Part # Price Each	SR Thread Part # Price Each	Flanged Part # Price Each	
1/2 Air to Air	21101H101-005 392.45	23101H101-005 393.49	24101H101-005 413.37	21201H101-005 397.92	23201H101-005 398.99	24201H101-005 418.04	530
1/2 Air to Spring	21101J101-005 461.86	23101J101-005 462.91	24101J101-005 482.77	21201J101-005 467.32	23201J101-005 468.39	24201J101-005 487.43	530
3/4 Air to Air	21101H101-007 401.36	23101H101-007 403.84	24101H101-007 431.96	21201H101-007 407.80	23201H101-007 410.36	24201H101-007 439.68	530
3/4 Air to Spring	21101J101-007 470.75	23101J101-007 473.26	24101J101-007 501.35	21201J101-007 477.23	23201J101-007 479.75	24201J101-007 509.08	530
1 Air to Air	21101H101-010 418.65	23101H101-010 421.17	24101H101-010 456.82	21201H101-010 426.46	23201H101-010 428.95	24201H101-010 464.86	530
1 Air to Spring	21101J101-010 488.06	23101J101-010 490.55	24101J101-010 526.19	21201J101-010 495.85	23201J101-010 498.33	24201J101-010 738.39	530
1-1/4 Air to Air	21101H101-012 444.96	23101H101-012 452.48	24101H101-012 475.40	21201H101-012 471.18	23201H101-012 478.71	24201H101-012 489.29	530
1-1/4 Air to Spring	21101J101-012 514.36	23101J101-012 521.88	24101J101-012 544.78	21201J101-012 540.56	23201J101-012 548.09	24201J101-012 558.67	530
1-1/2 Air to Air	21101H101-015 464.35	23101H101-015 472.45	24101H101-015 507.87	21201H101-015 476.88	23201H101-015 485.05	24201H101-015 521.78	530
1-1/2 Air to Spring	21101J101-015 533.73	23101J101-015 541.83	24101J101-015 577.27	21201J101-015 546.29	23201J101-015 554.43	24201J101-015 591.17	530
2 Air to Air	21101H101-020 545.01	23101H101-020 553.80	24101H101-020 645.47	21201H101-020 560.23	23201H101-020 568.87	24201H101-020 660.72	530
2 Air to Spring	21101J101-020 708.85	23101J101-020 717.80	24101J101-020 809.51	21201J101-020 724.26	23201J101-020 732.88	24201J101-020 824.74	530
2-1/2 Air to Air	21101H101-025 841.67	23101H101-025 865.37	24101H101-025 1015.93	21201H101-025 944.54	23201H101-025 968.19	24201H101-025 1023.56	530
2-1/2 Air to Spring	21101J101-025 977.31	23101J101-025 1000.98	24101J101-025 1151.54	21201J101-025 1080.15	23201J101-025 1103.82	24201J101-025 1159.22	530
3 Air to Air	21101H101-030 933.93	23101H101-030 957.60	24101H101-030 1064.77	21201H101-030 976.38	23201H101-030 1000.05	24201H101-030 1188.63	530
3 Air to Spring	21101J101-030 1069.57	23101J101-030 1093.26	24101J101-030 1200.39	21201J101-030 1111.99	23201J101-030 1135.66	24201J101-030 1324.24	530
4 Air to Air	21101H101-040 1323.49	23101H101-040 1407.91	24101H101-040 1709.15	21201H101-040 1395.23	23201H101-040 1422.86	24201H101-040 1873.27	530
4 Air to Spring	21101J101-040 1582.14	23101J101-040 1609.78	24101J101-040 1967.78	21201J101-040 1653.85	23201J101-040 1681.48	24201J101-040 2131.91	530
6 Air to Air	21101H101-060 2371.91	23101H101-060 2411.34	24101H101-060 3173.04	21201H101-060 2524.87	23201H101-060 2564.28	24201H101-060 3523.15	530
6 Air to Spring	21101J101-060 2879.72	23101J101-060 2919.14	24101J101-060 3680.86	21201J101-060 3032.68	23201J101-060 3072.11	24201J101-060 4030.98	530
NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.							
For Air to Spring <u>OPEN</u> , change letter "J" to letter "K" in listed part number.							

CPVC

O-ring Joint	EPDM			FKM			Disc Code
Size	Socket Part # Price Each	SR Thread Part # Price Each	Flanged Part # Price Each	Socket Part # Price Each	SR Thread Part # Price Each	Flanged Part # Price Each	
1/2 Air to Air	21102H101-005 408.04	23102H101-005 409.08	24102H101-005 452.80	21202H101-005 415.19	23202H101-005 416.25	24202H101-005 455.16	532
1/2 Air to Spring	21102J101-005 477.43	23102J101-005 478.47	24102J101-005 522.20	21202J101-005 484.57	23202J101-005 485.64	24202J101-005 838.69	532
3/4 Air to Air	21102H101-007 424.73	23102H101-007 427.24	24102H101-007 477.43	21202H101-007 433.72	23202H101-007 436.24	24202H101-007 482.98	532
3/4 Air to Spring	21102J101-007 494.11	23102J101-007 496.64	24102J101-007 546.83	21202J101-007 503.11	23202J101-007 505.62	24202J101-007 872.37	532



Actuated Valves
Premium Actuated True Union 2000 Industrial Ball Valve - Pneumatic

CPVC (continued)

O-ring Joint	EPDM			FKM			Disc Code
Size	Socket Part # Price Each	SR Thread Part # Price Each	Flanged Part # Price Each	Socket Part # Price Each	SR Thread Part # Price Each	Flanged Part # Price Each	
1 Air to Air	21102H101-010 446.43	23102H101-010 448.97	24102H101-010 503.06	21202H101-010 457.13	23202H101-010 459.64	24202H101-010 512.51	532
1 Air to Spring	21102J101-010 515.82	23102J101-010 518.35	24102J101-010 572.45	21202J101-010 526.52	23202J101-010 529.04	24202J101-010 893.86	532
1-1/4 Air to Air	21102H101-012 503.23	23102H101-012 510.82	24102H101-012 578.71	21202H101-012 520.33	23202H101-012 527.89	24202H101-012 586.66	532
1-1/4 Air to Spring	21102J101-012 572.63	23102J101-012 580.20	24102J101-012 648.07	21202J101-012 589.73	23202J101-012 597.29	24202J101-012 950.31	532
1-1/2 Air to Air	21102H101-015 511.86	23102H101-015 519.97	24102H101-015 601.53	21202H101-015 529.80	23202H101-015 537.92	24202H101-015 609.93	532
1-1/2 Air to Spring	21102J101-015 581.24	23102J101-015 589.35	24102J101-015 670.92	21202J101-015 599.18	23202J101-015 607.33	24202J101-015 976.92	532
2 Air to Air	21102H101-020 610.56	23102H101-020 619.38	24102H101-020 744.11	21202H101-020 642.95	23202H101-020 651.75	24202H101-020 810.92	532
2 Air to Spring	21102J101-020 774.59	23102J101-020 783.38	24102J101-020 908.13	21202J101-020 806.96	23202J101-020 815.74	24202J101-020 1357.88	532
2-1/2 Air to Air	21102H101-025 1036.95	23102H101-025 1060.60	24102H101-025 1204.97	21202H101-025 1090.77	23202H101-025 1114.44	24202H101-025 1335.74	532
2-1/2 Air to Spring	21102J101-025 1172.58	23102J101-025 1196.22	24102J101-025 1340.59	21202J101-025 1226.42	23202J101-025 1250.06	24202J101-025 1471.37	532
3 Air to Air	21102H101-030 1119.02	23102H101-030 1142.67	24102H101-030 1506.91	21202H101-030 1182.04	23202H101-030 1205.74	24202H101-030 1528.67	532
3 Air to Spring	21102J101-030 1254.63	23102J101-030 1278.29	24102J101-030 1642.53	21202J101-030 1317.66	23202J101-030 1341.36	24202J101-030 1672.18	532
4 Air to Air	21102H101-040 1705.62	23102H101-040 1733.25	24102H101-040 2352.95	21202H101-040 1819.79	23202H101-040 1847.43	24202H101-040 2419.94	532
4 Air to Spring	21102J101-040 1964.26	23102J101-040 1991.89	24102J101-040 2611.58	21202J101-040 2078.44	23202J101-040 2106.07	24202J101-040 2890.53	532
6 Air to Air	21102H101-060 3165.15	23102H101-060 3225.07	24102H101-060 4545.08	21202H101-060 3408.03	23202H101-060 3467.96	24202H101-060 4687.02	532
6 Air to Spring	21102J101-060 3672.98	23102J101-060 3732.92	24102J101-060 5052.88	21202J101-060 3915.83	23202J101-060 3975.76	24202J101-060 5194.85	532
NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.							
For Air to Spring <u>OPEN</u> , change letter "J" to letter "K" in listed part number.							

Actuated Valves

Premium Actuated Standard Butterfly Valve - Electric



Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12"),
14"-100 psi, 16"-85 psi,
18"-70 psi, 20"-24"-50 psi
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Declutchable Manual Override
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41101A121-015 1564.27	41201A121-015 1564.27	41301A121-015 1825.80	510
2	41101A121-020 1606.43	41201A121-020 1606.43	41301A121-020 1865.74	510
2-1/2	41101A121-025 1631.00	41201A121-025 1631.00	41301A121-025 1899.07	510
3	41101A121-030 1911.98	41201A121-030 1911.98	41301A121-030 2184.48	510
4	41101A121-040 2104.18	41201A121-040 2104.18	41301A121-040 2473.37	510
6	41101A121-060 2857.84	41201A121-060 2857.84	41301A121-060 3490.80	510
8	41101A121-080 3234.03	41201A121-080 3234.03	41301A121-080 4280.12	510
10	41101A121-100 4687.24	41201A121-100 4687.24	41301A121-100 6779.36	510
12	41101A123-120 5880.95	41201A123-120 5880.95	41301A123-120 9102.66	510

CPVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41102A121-015 1667.58	41202A121-015 1667.58	41302A121-015 2014.81	512
2	41102A121-020 1707.52	41202A121-020 1707.52	41302A121-020 2045.93	512
2-1/2	41102A121-025 1738.65	41202A121-025 1738.65	41302A121-025 2092.48	512
3	41102A121-030 2043.83	41202A121-030 2043.83	41302A121-030 2435.02	512
4	41102A121-040 2258.00	41202A121-040 2490.45	41302A121-040 2794.26	512
6	41102A121-060 3086.42	41202A121-060 3086.42	41302A121-060 4005.01	512
8	41102A121-080 3629.60	41202A121-080 3629.60	41302A121-080 5150.38	512
10	41102A121-100 5474.01	41202A121-100 5474.01	41302A121-100 8528.66	512
12	41102A123-120 6918.22	41202A123-120 6918.22	41302A123-120 10889.34	512

Polypropylene

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41103A121-015 1781.13	41203A121-015 1781.13	41303A121-015 2230.01	514
2	41103A121-020 1806.16	41203A121-020 1806.16	41303A121-020 2262.23	514
2-1/2	41103A121-025 1839.83	41203A121-025 1839.83	41303A121-025 2312.04	514
3	41103A121-030 2129.28	41203A121-030 2129.28	41303A121-030 2611.47	514
4	41103A121-040 2349.35	41203A121-040 2349.35	41303A121-040 2995.54	514
6	41103A121-060 3237.91	41203A121-060 3237.91	41303A121-060 4333.37	514
8	41103A121-080 3880.37	41203A121-080 3880.37	41303A121-080 5714.22	514
10	41103A121-100 5971.47	41203A121-100 5971.47	41303A121-100 9656.34	514
12	41103A123-120 7548.63	41203A123-120 7548.63	41303A123-120 13214.32	514

Polypropylene (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
14, 16, 18, 20 & 24 - Price On Application				

NOTE: Due to variations in potential system operating conditions, 14" -24" Actuated Butterfly Valve packages are sized and priced according to application parameters. Please contact Spears® for additional information.



Actuated Valves

Premium Actuated Standard Butterfly Valve - Pneumatic



Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12")
- 14"-100 psi, 16"- 85 psi, 18"-70 psi, 20"-24"-50 psi
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

NOTE: Due to variations in potential system operating conditions, 14" -24" Actuated Butterfly Valve packages are sized and priced according to application parameters. Please contact Spears® for additional information.

PVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41101H101-015 621.21	41201H101-015 621.21	41301H101-015 882.73	540
1-1/2 Air to Spring	41101J101-015 690.59	41201J101-015 690.59	41301J101-015 952.09	540
2 Air to Air	41101H101-020 663.34	41201H101-020 663.34	41301H101-020 922.65	540
2 Air to Spring	41101J101-020 827.36	41201J101-020 827.36	41301J101-020 1086.65	540
2-1/2 Air to Air	41101H101-025 687.93	41201H101-025 687.93	41301H101-025 955.99	540
2-1/2 Air to Spring	41101J101-025 915.02	41201J101-025 915.02	41301J101-025 1183.09	540
3 Air to Air	41101H101-030 801.76	41201H101-030 801.76	41301H101-030 1074.23	540
3 Air to Spring	41101J101-030 987.84	41201J101-030 987.84	41301J101-030 1260.33	540
4 Air to Air	41101H101-040 940.31	41201H101-040 940.31	41301H101-040 1309.48	540
4 Air to Spring	41101J101-040 1198.94	41201J101-040 1198.94	41301J101-040 1568.12	540
6 Air to Air	41101H101-060 1318.64	41201H101-060 1318.64	41301H101-060 1951.58	540
6 Air to Spring	41101J101-060 1826.45	41201J101-060 1826.45	41301J101-060 2459.40	540
8 Air to Air	41101H101-080 1871.45	41201H101-080 1871.45	41301H101-080 2917.54	540
8 Air to Spring	41101J101-080 2584.31	41201J101-080 2584.31	41301J101-080 3630.36	540
10 Air to Air	41101H101-100 2788.46	41201H101-100 2788.46	41301H101-100 4880.59	540
10 Air to Spring	41101J101-100 4043.80	41201J101-100 4043.80	41301J101-100 6135.93	540
12 Air to Air	41101H101-120 3300.87	41201H101-120 3300.87	41301H101-120 6522.59	540
12 Air to Spring	41101J101-120 4556.22	41201J101-120 4556.22	41301J101-120 7777.92	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41102H101-015 724.52	41202H101-015 724.52	41302H101-015 1071.73	542
1-1/2 Air to Spring	41102J101-015 793.89	41202J101-015 793.89	41302J101-015 1141.12	542
2 Air to Air	41102H101-020 764.43	41202H101-020 764.43	41302H101-020 1102.85	542
2 Air to Spring	41102J101-020 928.45	41202J101-020 928.45	41302J101-020 1266.84	542
2-1/2 Air to Air	41102H101-025 795.57	41202H101-025 795.57	41302H101-025 1149.40	542
2-1/2 Air to Spring	41102J101-025 1023.08	41202J101-025 1023.08	41302J101-025 1376.51	542
3 Air to Air	41102H101-030 933.59	41202H101-030 933.59	41302H101-030 1324.76	542

CPVC (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
3 Air to Spring	41102J101-030 1119.67	41202J101-030 1119.67	41302J101-030 1510.85	542
4 Air to Air	41102H101-040 1094.12	41202H101-040 1094.12	41302H101-040 1630.40	542
4 Air to Spring	41102J101-040 1352.76	41202J101-040 1352.76	41302J101-040 1889.04	542
6 Air to Air	41102H101-060 1547.18	41202H101-060 1547.18	41302H101-060 2465.80	542
6 Air to Spring	41102J101-060 2055.01	41202J101-060 2055.01	41302J101-060 2973.61	542
8 Air to Air	41102H101-080 2267.02	41202H101-080 2267.02	41302H101-080 3787.82	542
8 Air to Spring	41102J101-080 2979.84	41202J101-080 2979.84	41302J101-080 4500.64	542
10 Air to Air	41102H101-100 3575.23	41202H101-100 3575.23	41302H101-100 6629.91	542
10 Air to Spring	41102J101-100 4830.57	41202J101-100 4830.57	41302J101-100 7885.23	542
12 Air to Air	41102H101-120 4338.15	41202H101-120 4338.15	41302H101-120 8309.27	542
12 Air to Spring	41102J101-120 5593.48	41202J101-120 5593.48	41302J101-120 9564.60	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41103H101-015 838.05	41203H101-015 838.05	41303H101-015 1286.94	544
1-1/2 Air to Spring	41103J101-015 907.43	41203J101-015 907.43	41303J101-015 1356.32	544
2 Air to Air	41103H101-020 863.08	41203H101-020 863.08	41303H101-020 1319.15	544
2 Air to Spring	41103J101-020 1027.12	41203J101-020 1027.12	41303J101-020 1483.16	544
2-1/2 Air to Air	41103H101-025 896.74	41203H101-025 896.74	41303H101-025 1368.96	544
2-1/2 Air to Spring	41103J101-025 1123.85	41203J101-025 1123.85	41303J101-025 1596.06	544
3 Air to Air	41103H101-030 1019.04	41203H101-030 1019.04	41303H101-030 1501.24	544
3 Air to Spring	41103J101-030 1205.13	41203J101-030 1205.13	41303J101-030 1687.34	544
4 Air to Air	41103H101-040 1185.47	41203H101-040 1185.47	41303H101-040 1831.65	544
4 Air to Spring	41103J101-040 1444.11	41203J101-040 1444.11	41303J101-040 2090.29	544
6 Air to Air	41103H101-060 1698.69	41203H101-060 1698.69	41303H101-060 2794.18	544
6 Air to Spring	41103J101-060 2206.49	41203J101-060 2206.49	41303J101-060 3301.97	544
8 Air to Air	41103H101-080 2517.78	41203H101-080 2517.78	41303H101-080 4351.64	544
8 Air to Spring	41103J101-080 3230.60	41203J101-080 3230.60	41303J101-080 3645.13	544
10 Air to Air	41103H101-100 4072.68	41203H101-100 4072.68	41303H101-100 7757.55	544

Actuated Valves
Premium Actuated Standard Butterfly Valve - Pneumatic



Polypropylene (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
10 Air to Spring	41103J101-100 5328.04	41203J101-100 5328.04	41303J101-100 9012.88	544
12 Air to Air	41103H101-120 4968.57	41203H101-120 4968.57	41303H101-120 10634.23	544
12 Air to Spring	41103J101-120 6223.91	41203J101-120 6223.91	41303J101-120 11889.59	544
14, 16, 18, 20 & 24 - Price On Application NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.				



Actuated Valves Premium Actuated Lug Insert Butterfly Valve - Electric



Industrial grade valve with factory assembled lug inserts. Patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- 115 VAC standard, optional voltages available
- Zinc or SS Lug Inserts
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Dec clutchable Manual Override
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41121A121-015 1647.08	41221A121-015 1647.08	41321A121-015 1884.78	510
2	41121A121-020 1692.66	41221A121-020 1692.66	41321A121-020 1941.75	510
2-1/2	41121A121-025 1738.21	41221A121-025 1738.21	41321A121-025 1957.40	510
3	41121A121-030 2229.55	41221A121-030 2229.55	41321A121-030 2467.25	510
4	41121A121-040 2981.71	41221A121-040 2981.71	41321A121-040 3273.47	510
6	41121A121-060 3966.44	41221A121-060 3966.44	41321A121-060 4494.48	510
8	41121A121-080 4354.26	41221A121-080 4354.26	41321A121-080 5383.32	510
10	41121A121-100 6745.96	41221A121-100 6745.96	41321A121-100 8771.31	510
12	41121A123-120 8132.29	41221A123-120 8132.29	41321A123-120 10970.35	510

PVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41111A121-015 1583.91	41211A121-015 1583.91	41311A121-015 1837.09	510
2	41111A121-020 1632.88	41211A121-020 1632.88	41311A121-020 1982.45	510
2-1/2	41111A121-025 1654.37	41211A121-025 1654.37	41311A121-025 1925.38	510
3	41111A121-030 2145.58	41211A121-030 2145.58	41311A121-030 2349.13	510
4	41111A121-040 2830.84	41211A121-040 2830.84	41311A121-040 3081.34	510
6	41111A121-060 3768.60	41211A121-060 3768.60	41311A121-060 4219.80	510
8	41111A121-080 4108.03	41211A121-080 4108.03	41311A121-080 5117.15	510
10	41111A121-100 6252.08	41211A121-100 6252.08	41311A121-100 7974.26	510
12	41111A123-120 7561.56	41211A123-120 7561.56	41311A123-120 10809.51	510

CPVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41122A121-015 1813.61	41222A121-015 1813.61	41322A121-015 2112.51	512
2	41122A121-020 1867.73	41222A121-020 1867.73	41322A121-020 2156.65	512
2-1/2	41122A121-025 1874.85	41222A121-025 1874.85	41322A121-025 2186.55	512
3	41122A121-030 2371.89	41222A121-030 2371.89	41322A121-030 2679.33	512
4	41122A121-040 3249.28	41222A121-040 3249.28	41322A121-040 3606.54	512
6	41122A121-060 4295.23	41222A121-060 4295.23	41322A121-060 4964.17	512
8	41122A121-080 4779.82	41222A121-080 4779.82	41322A121-080 6140.51	512
10	41122A121-100 7595.67	41222A121-100 7595.67	41322A121-100 10002.46	512

CPVC - Stainless Steel Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
12	41122A123-120 9097.27	41222A123-120 9097.27	41322A123-120 12397.92	512

CPVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41112A121-015 1712.57	41212A121-015 1712.57	41312A121-015 2061.82	512
2	41112A121-020 1768.09	41212A121-020 1768.09	41312A121-020 2076.25	512
2-1/2	41112A121-025 1775.23	41212A121-025 1775.23	41312A121-025 2108.00	512
3	41112A121-030 2266.56	41212A121-030 2266.56	41312A121-030 2521.34	512
4	41112A121-040 3001.68	41212A121-040 3001.63	41312A121-040 3364.57	512
6	41112A121-060 4056.12	41212A121-060 4056.12	41312A121-060 4622.59	512
8	41112A121-080 4453.89	41212A121-080 4453.89	41312A121-080 5831.64	512
10	41112A121-100 6953.75	41212A121-100 6953.75	41312A121-100 9340.63	512
12	41112A123-120 8372.83	41212A123-120 8372.83	41312A123-120 12007.94	512

Actuated Valves

Premium Actuated Lug Insert Butterfly Valve - Pneumatic



Industrial grade valve with factory assembled lug inserts. Patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- Zinc or SS Lug Inserts
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41121H101-015 910.18	41221H101-015 898.26	41321H101-015 1135.95	540
1-1/2 Air to Spring	41121J101-015 962.57	41221J101-015 962.57	41321J101-015 1200.25	540
2 Air to Air	41121H101-020 943.84	41221H101-020 943.84	41321H101-020 1192.94	540
2 Air to Spring	41121J101-020 1098.89	41221J101-020 1098.89	41321J101-020 1347.97	540
2-1/2 Air to Air	41121H101-025 1038.93	41221H101-025 1038.93	41321H101-025 1258.11	540
2-1/2 Air to Spring	41121J101-025 1254.49	41221J101-025 1254.49	41321J101-025 1473.67	540
3 Air to Air	41121H101-030 1299.20	41221H101-030 1299.20	41321H101-030 1536.89	540
3 Air to Spring	41121J101-030 1339.69	41221J101-030 1339.69	41321J101-030 1577.39	540
4 Air to Air	41121H101-040 1729.88	41221H101-040 1729.88	41321H101-040 2021.65	540
4 Air to Spring	41121J101-040 1971.94	41221J101-040 1971.94	41321J101-040 2263.71	540
6 Air to Air	41121H101-060 2446.11	41221H101-060 2446.11	41321H101-060 2974.15	540
6 Air to Spring	41121J101-060 2789.51	41221J101-060 2789.51	41321J101-060 3317.54	540
8 Air to Air	41121H101-080 2924.01	41221H101-080 2924.01	41321H101-080 3953.04	540
8 Air to Spring	41121J101-080 3747.68	41221J101-080 3747.68	41321J101-080 4776.73	540
10 Air to Air	41121H101-100 4817.54	41221H101-100 4817.54	41321H101-100 6842.91	540
10 Air to Spring	41121J101-100 6037.95	41221J101-100 6037.95	41321J101-100 8063.31	540
12 Air to Air	41121H101-120 5388.03	41221H101-120 5388.03	41321H101-120 8226.08	540
12 Air to Spring	41121J101-120 6594.46	41221J101-120 6594.46	41321J101-120 9432.54	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

PVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41111H101-015 808.61	41211H101-015 808.61	41311H101-015 1022.09	540
1-1/2 Air to Spring	41111J101-015 872.91	41211J101-015 872.91	41311J101-015 1086.39	540
2 Air to Air	41111H101-020 884.06	41211H101-020 884.06	41311H101-020 1074.79	540
2 Air to Spring	41111J101-020 1039.13	41211J101-020 1039.13	41311J101-020 1229.85	540
2-1/2 Air to Air	41111H101-025 954.95	41211H101-025 954.95	41311H101-025 1159.89	540
2-1/2 Air to Spring	41111J101-025 1170.53	41211J101-025 1170.53	41311J101-025 1375.47	540
3 Air to Air	41111H101-030 1215.23	41211H101-030 1215.23	41311H101-030 1418.77	540

PVC - Zinc Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
3 Air to Spring	41111J101-030 1255.73	41211J101-030 1255.73	41311J101-030 1459.26	540
4 Air to Air	41111H101-040 1579.01	41211H101-040 1579.01	41311H101-040 1829.52	540
4 Air to Spring	41111J101-040 1821.05	41211J101-040 1821.05	41311J101-040 2071.56	540
6 Air to Air	41111H101-060 2380.64	41211H101-060 2380.64	41311H101-060 2699.46	540
6 Air to Spring	41111J101-060 2591.67	41211J101-060 2591.67	41311J101-060 3042.85	540
8 Air to Air	41111H101-080 2677.76	41211H101-080 2677.76	41311H101-080 3554.52	540
8 Air to Spring	41111J101-080 3501.44	41211J101-080 3501.44	41311J101-080 4378.19	540
10 Air to Air	41111H101-100 4323.67	41211H101-100 4323.67	41311H101-100 6045.85	540
10 Air to Spring	41111J101-100 5544.07	41211J101-100 5544.07	41311J101-100 7266.26	540
12 Air to Air	41111H101-120 4817.29	41211H101-120 4817.29	41311H101-120 8065.25	540
12 Air to Spring	41111J101-120 6023.73	41211J101-120 6023.73	41311J101-120 9271.69	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41122H101-015 1064.78	41222H101-015 1064.78	41322H101-015 1363.68	542
1-1/2 Air to Spring	41122J101-015 1129.09	41222J101-015 1129.09	41322J101-015 1427.99	542
2 Air to Air	41122H101-020 1118.91	41222H101-020 1118.91	41322H101-020 1407.84	542
2 Air to Spring	41122J101-020 1273.97	41222J101-020 1273.97	41322J101-020 1562.88	542
2-1/2 Air to Air	41122H101-025 1175.57	41222H101-025 1175.57	41322H101-025 1487.25	542
2-1/2 Air to Spring	41122J101-025 1391.13	41222J101-025 1391.13	41322J101-025 1702.83	542
3 Air to Air	41122H101-030 1441.55	41222H101-030 1441.55	41322H101-030 1748.97	542
3 Air to Spring	41122J101-030 1482.38	41222J101-030 1482.03	41322J101-030 1789.46	542
4 Air to Air	41122H101-040 1997.46	41222H101-040 1997.46	41322H101-040 2354.73	542
4 Air to Spring	41122J101-040 2239.51	41222J101-040 2239.51	41322J101-040 2596.77	542
6 Air to Air	41122H101-060 2774.89	41222H101-060 2774.89	41322H101-060 3443.83	542
6 Air to Spring	41122J101-060 3118.29	41222J101-060 3118.29	41322J101-060 3787.23	542
8 Air to Air	41122H101-080 3349.57	41222H101-080 3349.57	41322H101-080 4710.23	542
8 Air to Spring	41122J101-080 4173.23	41222J101-080 4173.23	41322J101-080 5533.92	542



Actuated Valves
Premium Actuated Lug Insert Butterfly Valve - Pneumatic

CPVC - Stainless Steel Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
10 Air to Air	41122H101-100 5667.25	41222H101-100 5667.25	41322H101-100 8074.05	542
10 Air to Spring	41122J101-100 6279.72	41222J101-100 6279.72	41322J101-100 8686.51	542
12 Air to Air	41122H101-120 6353.03	41222H101-120 6353.03	41322H101-120 9653.65	542
12 Air to Spring	41122J101-120 7559.47	41222J101-120 7559.47	41322J101-120 10860.09	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41112H101-015 963.74	41212H101-015 963.74	41312H101-015 1207.13	542
1-1/2 Air to Spring	41112J101-015 1027.77	41212J101-015 1027.77	41312J101-015 1271.42	542
2 Air to Air	41112H101-020 1019.27	41212H101-020 1019.27	41312H101-020 1261.24	542
2 Air to Spring	41112J101-020 1174.34	41212J101-020 1174.31	41312J101-020 1416.31	542
2-1/2 Air to Air	41112H101-025 1075.94	41212H101-025 1075.94	41312H101-025 1329.27	542
2-1/2 Air to Spring	41112J101-025 1291.51	41212J101-025 1291.51	41312J101-025 1544.85	542
3 Air to Air	41112H101-030 1336.20	41212H101-030 1336.20	41312H101-030 1590.98	542
3 Air to Spring	41112J101-030 1376.69	41212J101-030 1376.69	41312J101-030 1631.46	542
4 Air to Air	41112H101-040 1749.82	41212H101-040 1749.82	41312H101-040 2112.76	542
4 Air to Spring	41112J101-040 1991.86	41212J101-040 1991.86	41312J101-040 2354.80	542
6 Air to Air	41112H101-060 2535.78	41212H101-060 2535.78	41312H101-060 3102.25	542
6 Air to Spring	41112J101-060 2879.17	41212J101-060 2879.17	41312J101-060 3445.64	542
8 Air to Air	41112H101-080 3023.64	41212H101-080 3023.64	41312H101-080 4401.39	542
8 Air to Spring	41112J101-080 3847.32	41212J101-080 3847.32	41312J101-080 5225.06	542
10 Air to Air	41112H101-100 5025.36	41212H101-100 5025.36	41312H101-100 7412.23	542
10 Air to Spring	41112J101-100 5637.80	41212J101-100 5637.80	41312J101-100 8024.68	542
12 Air to Air	41112H101-120 5628.57	41212H101-120 5628.57	41312H101-120 9263.67	542
12 Air to Spring	41112J101-120 6835.01	41212J101-120 6835.01	41312J101-120 10470.12	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Actuated Valves Premium Actuated True Lug Butterfly Valve - Electric



Industrial grade lug style valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Declutchable Manual Override
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51121A121-015 2011.01	51221A121-015 2011.01	51321A121-015 2343.89	510
2	51121A121-020 2041.21	51221A121-020 2041.21	51321A121-020 2390.58	510
2-1/2	51121A121-025 2121.34	51221A121-025 2121.34	51321A121-025 2426.55	510
3	51121A121-030 2405.72	51221A121-030 2405.72	51321A121-030 2740.20	510
4	51121A121-040 3170.02	51221A121-040 3170.02	51321A121-040 3578.43	510
6	51121A121-060 4208.87	51221A121-060 4208.87	51321A121-060 4947.49	510
8	51121A121-080 4650.21	51221A121-080 4650.21	51321A121-080 6089.76	510
10	51121A121-100 7598.87	51221A121-100 7598.87	51321A121-100 10432.09	510
12	51121A123-120 9005.74	51221A123-120 9005.74	51321A123-120 12976.26	510

PVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51111A121-015 1886.03	51211A121-015 1886.03	51311A121-015 2186.18	510
2	51111A121-020 1958.35	51211A121-020 1958.35	51311A121-020 2224.12	510
2-1/2	51111A121-025 2006.60	51211A121-025 2006.60	51311A121-025 2290.58	510
3	51111A121-030 2289.53	51211A121-030 2289.53	51311A121-030 2573.79	510
4	51111A121-040 2961.57	51211A121-040 2961.57	51311A121-040 3226.01	510
6	51111A121-060 3934.39	51211A121-060 3934.39	51311A121-060 4564.60	510
8	51111A121-080 4307.99	51211A121-080 4307.99	51311A121-080 5533.55	510
10	51111A121-100 6909.63	51211A121-100 6909.63	51311A121-100 9317.88	510
12	51111A123-120 8208.56	51211A123-120 8208.56	51311A123-120 10899.46	510

CPVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51122A121-015 2244.86	51222A121-015 2244.86	51322A121-015 2664.37	512
2	51122A121-020 2286.85	51222A121-020 2286.85	51322A121-020 2690.41	512
2-1/2	51122A121-025 2312.57	51222A121-025 2312.57	51322A121-025 2748.95	512
3	51122A121-030 2606.44	51222A121-030 2606.44	51322A121-030 3036.46	512
4	51122A121-040 3545.11	51222A121-040 3545.11	51322A121-040 4046.33	512
6	51122A121-060 4243.87	51222A121-060 4243.87	51322A121-060 5605.88	512
8	51122A121-080 5246.92	51222A121-080 5246.92	51322A121-080 6964.93	512
10	51122A121-100 8791.35	51222A121-100 8791.35	51322A121-100 12154.11	512

CPVC - Stainless Steel Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
12	51122A123-120 10356.16	51222A123-120 10356.16	51322A123-120 14972.41	512

CPVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51112A121-015 2104.78	51212A121-015 2104.78	51312A121-015 2443.94	512
2	51112A121-020 2147.42	51212A121-020 2147.42	51312A121-020 2486.56	512
2-1/2	51112A121-025 2171.81	51212A121-025 2171.81	51312A121-025 2528.78	512
3	51112A121-030 2343.52	51212A121-030 2343.52	51312A121-030 2816.27	512
4	51112A121-040 3197.08	51212A121-040 3197.08	51312A121-040 3708.02	512
6	51112A121-060 4335.97	51212A121-060 4335.97	51312A121-060 5127.55	512
8	51112A121-080 4791.56	51212A121-080 4791.56	51312A121-080 6346.80	512
10	51112A121-100 7892.68	51212A121-100 7892.68	51312A121-100 10858.58	512
12	51112A123-120 9342.08	51212A123-120 9342.08	51312A123-120 12205.83	512



Actuated Valves

Premium Actuated True Lug Butterfly Valve - Pneumatic



Industrial grade lug style valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- Zinc or SS Lugs
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51121H101-015 1067.92	51221H101-015 1067.92	51321H101-015 1400.82	540
1-1/2 Air to Spring	51121J101-015 1137.32	51221J101-015 1137.32	51321J101-015 1470.20	540
2 Air to Air	51121H101-020 1101.28	51221H101-020 1101.28	51321H101-020 1447.48	540
2 Air to Spring	51121J101-020 1262.16	51221J101-020 1262.16	51321J101-020 1611.48	540
2-1/2 Air to Air	51121H101-025 1178.24	51221H101-025 1178.24	51321H101-025 1483.47	540
2-1/2 Air to Spring	51121J101-025 1405.36	51221J101-025 1405.36	51321J101-025 1710.56	540
3 Air to Air	51121H101-030 1295.45	51221H101-030 1295.45	51321H101-030 1629.95	540
3 Air to Spring	51121J101-030 1481.55	51221J101-030 1481.55	51321J101-030 1816.04	540
4 Air to Air	51121H101-040 2006.15	51221H101-040 2006.15	51321H101-040 2414.57	540
4 Air to Spring	51121J101-040 2264.78	51221J101-040 2264.78	51321J101-040 2673.22	540
6 Air to Air	51121H101-060 2669.65	51221H101-060 2669.65	51321H101-060 3408.28	540
6 Air to Spring	51121J101-060 3177.44	51221J101-060 3177.44	51321J101-060 3916.08	540
8 Air to Air	51121H101-080 3287.64	51221H101-080 3287.64	51321H101-080 4727.18	540
8 Air to Spring	51121J101-080 4000.46	51221J101-080 4000.46	51321J101-080 5440.02	540
10 Air to Air	51121H101-100 5700.09	51221H101-100 5700.09	51321H101-100 8533.31	540
10 Air to Spring	51121J101-100 6892.34	51221J101-100 6892.34	51321J101-100 9788.66	540
12 Air to Air	51121H101-120 6425.66	51221H101-120 6425.66	51321H101-120 10394.62	540
12 Air to Spring	51121J101-120 7681.00	51221J101-120 7681.00	51321J101-120 11649.95	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

PVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51111H101-015 942.95	51211H101-015 942.95	51311H101-015 1243.12	540
1-1/2 Air to Spring	51111J101-015 1012.35	51211J101-015 1012.35	51311J101-015 1312.48	540
2 Air to Air	51111H101-020 1015.25	51211H101-020 1015.25	51311H101-020 1281.04	540
2 Air to Spring	51111J101-020 1179.27	51211J101-020 1179.27	51311J101-020 1445.07	540
2-1/2 Air to Air	51111H101-025 1063.49	51211H101-025 1063.49	51311H101-025 1347.51	540
2-1/2 Air to Spring	51111J101-025 1290.60	51211J101-025 1290.60	51311J101-025 1574.59	540
3 Air to Air	51111H101-030 1179.29	51211H101-030 1179.29	51311H101-030 1463.54	540

PVC - Zinc Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
3 Air to Spring	51111J101-030 1365.40	51211J101-030 1365.40	51311J101-030 1649.63	540
4 Air to Air	51111H101-040 1797.69	51211H101-040 1797.69	51311H101-040 2062.13	540
4 Air to Spring	51111J101-040 2056.33	51211J101-040 2596.38	51311J101-040 2320.76	540
6 Air to Air	51111H101-060 2395.19	51211H101-060 2395.19	51311H101-060 3025.40	540
6 Air to Spring	51111J101-060 2902.98	51211J101-060 2902.98	51311J101-060 3533.20	540
8 Air to Air	51111H101-080 2945.42	51211H101-080 2945.42	51311H101-080 4170.98	540
8 Air to Spring	51111J101-080 4232.31	51211J101-080 4232.31	51311J101-080 4883.81	540
10 Air to Air	51111H101-100 5010.85	51211H101-100 5010.85	51311H101-100 7419.13	540
10 Air to Spring	51111J101-100 6266.19	51211J101-100 6266.19	51311J101-100 8674.45	540
12 Air to Air	51111H101-120 5628.48	51211H101-120 5628.48	51311H101-120 8319.40	540
12 Air to Spring	51111J101-120 6883.84	51211J101-120 6883.84	51311J101-120 9574.74	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51122H101-015 1301.76	51222H101-015 1301.76	51322H101-015 1721.29	542
1-1/2 Air to Spring	51122J101-015 1371.16	51222J101-015 1371.16	51322J101-015 1790.67	542
2 Air to Air	51122H101-020 1343.79	51222H101-020 1343.79	51322H101-020 1747.31	542
2 Air to Spring	51122J101-020 1507.80	51222J101-020 1507.80	51322J101-020 1911.34	542
2-1/2 Air to Air	51122H101-025 1369.48	51222H101-025 1369.48	51322H101-025 1805.85	542
2-1/2 Air to Spring	51122J101-025 1596.57	51222J101-025 1596.57	51322J101-025 2032.96	542
3 Air to Air	51122H101-030 1496.19	51222H101-030 1496.19	51322H101-030 1926.21	542
3 Air to Spring	51122J101-030 1682.28	51222J101-030 1682.28	51322J101-030 2112.32	542
4 Air to Air	51122H101-040 2381.24	51222H101-040 2381.24	51322H101-040 2882.45	542
4 Air to Spring	51122J101-040 2639.86	51222J101-040 2639.86	51322J101-040 3141.09	542
6 Air to Air	51122H101-060 3130.47	51222H101-060 3130.47	51322H101-060 4066.65	542
6 Air to Spring	51122J101-060 3638.27	51222J101-060 3638.27	51322J101-060 4574.49	542
8 Air to Air	51122H101-080 3884.34	51222H101-080 3884.34	51322H101-080 5602.33	542
8 Air to Spring	51122J101-080 4597.16	51222J101-080 4597.16	51322J101-080 6315.19	542

Actuated Valves
Premium Actuated True Lug Butterfly Valve - Pneumatic



CPVC - Stainless Steel Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
10 Air to Air	51122H101-100 6892.57	51222H101-100 6892.57	51322H101-100 10255.32	542
10 Air to Spring	51122J101-100 8147.92	51222J101-100 8147.92	51322J101-100 11510.66	542
12 Air to Air	51122H101-120 7776.09	51222H101-120 7776.09	51322H101-120 12392.34	542
12 Air to Spring	51122J101-120 9031.45	51222J101-120 9031.45	51322J101-120 13647.68	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51112H101-015 1161.68	51212H101-015 1161.68	51312H101-015 1500.85	542
1-1/2 Air to Spring	51112J101-015 1231.08	51212J101-015 1231.08	51312J101-015 1570.23	542
2 Air to Air	51112H101-020 1204.34	51212H101-020 1204.34	51312H101-020 1543.47	542
2 Air to Spring	51112J101-020 1368.36	51212J101-020 1368.36	51312J101-020 1707.48	542
2-1/2 Air to Air	51112H101-025 1228.71	51212H101-025 1228.71	51312H101-025 1585.69	542
2-1/2 Air to Spring	51112J101-025 1455.80	51212J101-025 1455.80	51312J101-025 1812.80	542
3 Air to Air	51112H101-030 1233.27	51212H101-030 1233.27	51312H101-030 1706.02	542
3 Air to Spring	51112J101-030 1419.34	51212J101-030 1419.34	51312J101-030 1892.13	542
4 Air to Air	51112H101-040 2033.20	51212H101-040 2033.20	51312H101-040 2544.16	542
4 Air to Spring	51112J101-040 2291.83	51212J101-040 2291.83	51312J101-040 2802.78	542
6 Air to Air	51112H101-060 2796.74	51212H101-060 2796.74	51312H101-060 3588.35	542
6 Air to Spring	51112J101-060 3304.58	51212J101-060 3304.58	51312J101-060 4096.16	542
8 Air to Air	51112H101-080 3428.99	51212H101-080 3428.99	51312H101-080 4984.22	542
8 Air to Spring	51112J101-080 4141.80	51212J101-080 4141.80	51312J101-080 5697.06	542
10 Air to Air	51112H101-100 5993.88	51212H101-100 5993.88	51312H101-100 8959.81	542
10 Air to Spring	51112J101-100 7249.24	51212J101-100 7249.24	51312J101-100 10215.15	542
12 Air to Air	51112H101-120 6762.03	51212H101-120 6762.03	51312H101-120 9625.77	542
12 Air to Spring	51112J101-120 8017.36	51212J101-120 8017.36	51312J101-120 10881.11	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.



Actuated Valves Tandem Actuated Butterfly Valves

Custom configured and produced to order, Spears® Tandem Actuated Butterfly Valves are available in multiple configurations to meet variety of operational needs. Tandem Actuated Butterfly Valves utilize a Tee-Style configuration for 3-way or diverting operation where two (2) valves are operated from one (1) actuator.

Electric



Pneumatic



Multi-Featured Options:

- Tandem 3-Way: two valves operated from one actuator, both closing or both opening at the same time.
- Tandem Diverting: two valves operated from one actuator, one opening while the other closes.
- Variable Valve Orientation Available
- Multi Seat Material Options including EPDM, FKM, Buna-N, and PTFE Sleeved Seats.
- Multi Flanged Connection Options including Standard, Lug-Insert or True-Lug Style Valves
- Multi Actuation Option, including Electric or Pneumatic with a host of Actuation Accessories for each (see Electric or Pneumatic Actuator Accessories for Butterfly Valves)

Pressure Rating @ 73°F (23°C), Water
150 psi for Sizes through 12"
(Larger Sizes Available)

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR SELECTION ASSISTANCE & PRICING

Actuated Valves Premium Actuated Diaphragm Valve - Electric



Industrial grade Weir-type design, excellent for throttling and use with viscous fluids. Full-featured actuator can be custom configured with add-on accessories.

- Stainless Steel Hardware
- 235 psi @ 73°F (23°C) - sizes 1/2" - 2" (flanged & PTFE diaphragm-150 psi), 2-1/2" - 4"-150 psi
- 115 VAC standard, optional voltages available
- Multi-turn Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC - EPDM and FKM Diaphragms

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Disc Code
Joint	Socket	SR Threaded	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91121A101-005 1904.72	93121A101-005 1910.05	94021A101-005 1901.34	95021A101-005 1985.43	91231A101-005 1919.76	93231A101-005 1925.12	94031A101-005 1915.96	95031A101-005 2003.28	520
3/4	91121A101-007 1923.00	93121A101-007 1930.71	94021A101-007 1918.02	95021A101-007 2012.18	91231A101-007 1940.03	93231A101-007 1947.73	94031A101-007 1933.88	95031A101-007 2018.29	520
1	91121A101-010 1964.96	93121A101-010 1975.65	94021A101-010 1960.15	95021A101-010 2048.81	91231A101-010 1983.71	93231A101-010 1994.35	94031A101-010 1976.60	95031A101-010 2081.12	520
1-1/4	91121A101-012 2059.01	93121A101-012 2076.16	94021A101-012 2049.91	95021A101-012 2146.65	91231A101-012 2112.54	93231A101-012 2129.35	94031A101-012 2106.21	95031A101-012 2186.35	520
1-1/2	91121A101-015 2073.48	93121A101-015 2102.77	94021A101-015 2066.04	95021A101-015 2151.12	91231A101-015 2120.31	93231A101-015 2120.31	94031A101-015 2111.68	95031A101-015 2194.80	520
2	91121A101-020 2885.93	93121A101-020 2944.49	94021A101-020 2874.76	95021A101-020 2981.86	91231A101-020 2952.52	93231A101-020 3012.77	94031A101-020 2937.79	95031A101-020 3013.66	520
2-1/2	---	---	---	95021A101-025 3459.73	---	---	---	95031A101-025 3550.77	520
3	---	---	---	95021A101-030 3674.27	---	---	---	95031A101-030 3768.92	520
4	---	---	---	95021A101-040 4332.48	---	---	---	95031A101-040 4439.16	520

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

PVC - Elastomer Backed Diaphragms

Material	EPDM O-ring & EPDM Backed PTFE Diaphragm				FKM O-ring & EPDM Backed PTFE Diaphragm				Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91151A101-005 1985.04	93151A101-005 1990.42	94051A101-005 1977.64	95051A101-005 2064.54	91251A101-005 2008.71	93251A101-005 2014.07	---	---	520
3/4	91151A101-007 1999.71	93151A101-007 2007.42	94051A101-007 1991.60	95051A101-007 2088.47	91251A101-007 2027.84	93251A101-007 2035.55	---	---	520
1	91151A101-010 2107.92	93151A101-010 2118.59	94051A101-010 2100.04	95051A101-010 2182.13	91251A101-010 2120.06	93251A101-010 2130.73	---	---	520
1-1/4	91151A101-012 2232.40	93151A101-012 2249.48	94051A101-012 2221.79	95051A101-012 2323.41	91251A101-012 2259.79	93251A101-012 2276.91	---	---	520
1-1/2	91151A101-015 2263.27	93151A101-015 2292.54	94051A101-015 2251.11	95051A101-015 2343.33	91251A101-015 2287.64	93251A101-015 2316.92	---	---	520
2	91151A101-020 3093.97	93151A101-020 3124.66	94051A101-020 3076.94	95051A101-020 3176.37	91251A101-020 3122.49	93251A101-020 3186.22	---	---	520
2-1/2	---	---	---	95051A101-025 3841.39	---	---	---	---	520
3	---	---	---	95051A101-030 4219.27	---	---	---	---	520
4	---	---	---	95051A101-040 4981.31	---	---	---	---	520

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM and FKM Diaphragms

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91122A101-005 2008.96	93122A101-005 2014.33	94022A101-005 2002.91	95022A101-005 2059.01	91232A101-005 2076.35	93232A101-005 2081.71	94032A101-005 2066.69	95032A101-005 1947.31	522
3/4	91122A101-007 2035.98	93122A101-007 2043.68	94022A101-007 2028.61	95022A101-007 2093.19	91232A101-007 2096.67	93232A101-007 2104.38	94032A101-007 2086.56	95032A101-007 2127.05	522
1	91122A101-010 2083.36	93122A101-010 2094.02	94022A101-010 2076.81	95022A101-010 2174.43	91232A101-010 2173.65	93232A101-010 2184.33	94032A101-010 2162.53	95032A101-010 2221.57	522



Actuated Valves Premium Actuated Diaphragm Valve - Electric

CPVC - EPDM and FKM Diaphragms (continued)

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/4	91122A101-012 2237.77	93122A101-012 2254.89	94022A101-012 2226.16	95022A101-012 2285.12	91232A101-012 2372.79	93232A101-012 2389.86	94032A101-012 2357.74	95032A101-012 2359.27	522
1-1/2	91122A101-015 2267.07	93122A101-015 2267.07	94022A101-015 2236.15	95022A101-015 2291.87	91232A101-015 2395.36	93232A101-015 2418.32	94032A101-015 2379.13	95032A101-015 2436.71	522
2	91122A101-020 3043.73	93122A101-020 3105.84	94022A101-020 2917.48	95022A101-020 2679.78	91232A101-020 3174.93	93232A101-020 3239.72	94032A101-020 3158.27	95032A101-020 3188.32	522
2-1/2	---	---	---	95022A101-025 3895.72	---	---	---	95032A101-025 4021.01	522
3	---	---	---	95022A101-030 4441.96	---	---	---	95032A101-030 4621.80	522
4	---	---	---	95022A101-040 5376.61	---	---	---	95032A101-040 5623.08	522

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

CPVC Premium Actuated Diaphragm Valves -Electric

Material	EPDM O-ring & EPDM Backed PTFE Diaphragm				FKM O-ring & EPDM Backed PTFE Diaphragm				Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91152A101-005 2113.69	93152A101-005 2119.07	94052A101-005 2103.99	95052A101-005 2186.85	91252A101-005 2140.04	93252A101-005 2145.40	---	---	522
3/4	91152A101-007 2149.63	93152A101-007 2157.33	94052A101-007 2138.15	95052A101-007 2215.72	91252A101-007 2166.85	93252A101-007 2185.78	---	---	522
1	91152A101-010 2238.00	93152A101-010 2248.65	94052A101-010 2226.26	95052A101-010 2324.11	91252A101-010 2257.95	93252A101-010 2268.59	---	---	522
1-1/4	91152A101-012 2413.65	93152A101-012 2430.75	94052A101-012 2396.54	95052A101-012 2467.96	91252A101-012 2436.19	93252A101-012 2453.32	---	---	522
1-1/2	91152A101-015 2423.56	93152A101-015 2452.83	94052A101-015 2407.27	95052A101-015 2602.59	91252A101-015 2461.00	93252A101-015 2490.27	---	---	522
2	91152A101-020 3253.81	93152A101-020 3320.21	94052A101-020 3235.29	95052A101-020 3464.61	91252A101-020 3332.48	93252A101-020 3400.51	---	---	522
2-1/2	---	---	---	95052A101-025 4675.37	---	---	---	---	522
3	---	---	---	95052A101-030 5259.75	---	---	---	---	522
4	---	---	---	95052A101-040 6392.31	---	---	---	---	522

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

Actuated Valves
Premium Actuated Diaphragm Valve - Electric



Polypropylene - EPDM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2	93123A101-005 1908.37	---	524
3/4	93123A101-007 1927.66	---	524
1	93123A101-010 1971.52	---	524
1-1/4	93123A101-012 2073.01	---	524
1-1/2	93123A101-015 2086.68	---	524
2	93123A101-020 2895.56	---	524
2-1/2	---	95023A101-025 3503.72	524
3	---	95023A101-030 3796.26	524
4	---	95023A101-040 4553.73	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene Premium Actuated Diaphragm Valves - Electric

Size	SR Thread	Flanged	Disc Code
1/2	93253A101-005 2003.25	---	524
3/4	93253A101-007 2016.18	---	524
1	93253A101-010 2132.38	---	524
1-1/4	93253A101-012 2262.38	---	524
1-1/2	93253A101-015 2294.72	---	524
2	93253A101-020 3131.36	---	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene - FKM O-ring and FKM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2	93233A101-005 1924.02	---	524
3/4	93233A101-007 1945.02	---	524
1	93233A101-010 1991.44	---	524
1-1/4	93233A101-012 2106.79	---	524
1-1/2	93233A101-015 2120.94	---	524
2	93233A101-020 2936.67	---	524
2-1/2	---	95033A101-025 3575.22	524
3	---	95033A101-030 3898.29	524
4	---	95033A101-040 4695.06	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2	93153A101-005 1991.58	---	524
3/4	93153A101-007 2001.98	---	524
1	93153A101-010 2114.75	---	524
1-1/4	93153A101-012 2239.88	---	524
1-1/2	93153A101-015 2270.66	---	524
2	93153A101-020 3147.36	---	524
2-1/2	---	95053A101-025 3906.71	524
3	---	95053A101-030 4316.74	524
4	---	95053A101-040 5127.48	524

NOTE: O-rings used on SR Thread End Connectors only.



Actuated Valves

Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing



Industrial grade Weir-type design, excellent for throttling and use with viscous fluids or slurries.

- Compact, Light Weight Design
- True Union Socket/Thread, SR Thread, or Spigot End Connections - sizes 1/2"-2" Pressure Rated to 235 psi @ 73°F (23°C)
- Flanged Ends (& PTFE diaphragms) - sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F (23°C)
- Corrosion Resistant Plastic Housing
- Stainless Steel Hardware
- 90 psi Operating Pressure
- Linear Action Operation with Preset Stops
- Air-Air, Air-Spring Closed, or Optional Air-Spring Open

NOTE: "Socket" valves include standard plastic thread end connectors.

PVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91121H850-005 182.11	93121H850-005 182.11	94021H850-005 176.64	95021H850-005 209.47	550
3/4 Air to Air	91121H850-007 194.74	93121H850-007 194.74	94021H850-007 188.89	95021H850-007 225.26	550
1 Air to Air	91121H850-010 205.26	93121H850-010 205.26	94021H850-010 199.11	95021H850-010 238.95	550
1-1/4 Air to Air	91121H850-012 322.37	93121H850-012 322.37	94021H850-012 312.69	95021H850-012 296.84	550
1-1/2 Air to Air	91121H850-015 324.21	93121H850-015 324.21	94021H850-015 314.48	95021H850-015 374.74	550
2 Air to Air	91121H850-020 394.74	93121H850-020 394.74	94021H850-020 382.89	95021H850-020 453.68	550
1/2 Air to Spring Close	91121J850-005 260.00	93121J850-005 260.00	94021J850-005 252.20	95021J850-005 301.05	550
3/4 Air to Spring Close	91121J850-007 289.47	93121J850-007 289.47	94021J850-007 280.79	95021J850-007 322.11	550
1 Air to Spring Close	91121J850-010 335.79	93121J850-010 335.79	94021J850-010 325.72	95021J850-010 342.11	550
1-1/4 Air to Spring Close	91121J850-012 413.68	93121J850-012 413.68	94021J850-012 464.58	95021J850-012 428.42	550
1-1/2 Air to Spring Close	91121J850-015 478.95	93121J850-015 478.95	94021J850-015 464.21	95021J850-015 513.68	550
2 Air to Spring Close	91121J850-020 586.32	93121J850-020 586.32	94021J850-020 568.73	95021J850-020 654.74	550
1/2 Air to Spring Open	91121K850-005 182.11	93121K850-005 182.11	94021K850-005 176.64	95021K850-005 209.47	550
3/4 Air to Spring Open	91121K850-007 194.74	93121K850-007 194.74	94021K850-007 188.89	95021K850-007 225.26	550
1 Air to Spring Open	91121K850-010 205.26	93121K850-010 205.26	94021K850-010 199.11	95021K850-010 238.95	550
1-1/4 Air to Spring Open	91121K850-012 257.89	93121K850-012 257.89	94021K850-012 250.16	95021K850-012 296.84	550
1-1/2 Air to Spring Open	91121K850-015 324.21	93121K850-015 324.21	94021K850-015 314.48	95021K850-015 374.74	550
2 Air to Spring Open	91121K850-020 394.74	93121K850-020 394.74	94021K850-020 382.89	95021K850-020 453.68	550

PVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91231H850-005 202.34	93231H850-005 202.34	94031H850-005 196.27	95031H850-005 232.75	550
3/4 Air to Air	91231H850-007 216.38	93231H850-007 216.38	94031H850-007 209.88	95031H850-007 250.29	550
1 Air to Air	91231H850-010 228.07	93231H850-010 228.07	94031H850-010 221.23	95031H850-010 265.49	550
1-1/4 Air to Air	91231H850-012 379.25	93231H850-012 379.25	94031H850-012 367.88	95031H850-012 349.22	550
1-1/2 Air to Air	91231H850-015 381.42	93231H850-015 381.42	94031H850-015 369.98	95031H850-015 440.86	550
2 Air to Air	91231H850-020 464.40	93231H850-020 464.40	94031H850-020 450.46	95031H850-020 533.75	550
1/2 Air to Spring Close	91231J850-005 288.88	93231J850-005 288.88	94031J850-005 280.22	95031J850-005 334.51	550
3/4 Air to Spring Close	91231J850-007 321.64	93231J850-007 321.64	94031J850-007 311.99	95031J850-007 357.89	550

Actuated Valves
Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing



PVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1 Air to Spring Close	91231J850-010 373.09	93231J850-010 373.09	94031J850-010 361.91	95031J850-010 380.12	550
1-1/4 Air to Spring Close	91231J850-012 486.68	93231J850-012 486.68	94031J850-012 472.08	95031J850-012 504.02	550
1-1/2 Air to Spring Close	91231J850-015 563.46	93231J850-015 563.46	94031J850-015 546.57	95031J850-015 604.34	550
2 Air to Spring Close	91231J850-020 689.78	93231J850-020 689.78	94031J850-020 669.09	95031J850-020 770.27	550
1/2 Air to Spring Open	91231K850-005 202.34	93231K850-005 202.34	94031K850-005 196.27	95031K850-005 232.75	550
3/4 Air to Spring Open	91231K850-007 216.38	93231K850-007 216.38	94031K850-007 209.88	95031K850-007 250.29	550
1 Air to Spring Open	91231K850-010 228.07	93231K850-010 228.07	94031K850-010 221.23	95031K850-010 265.49	550
1-1/4 Air to Spring Open	91231K850-012 303.41	93231K850-012 303.41	94031K850-012 294.31	95031K850-012 349.22	550
1-1/2 Air to Spring Open	91231K850-015 381.42	93231K850-015 381.42	94031K850-015 369.98	95031K850-015 440.86	550
2 Air to Spring Open	91231K850-020 464.40	93231K850-020 464.40	94031K850-020 450.46	95031K850-020 533.75	550

PVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91151H850-005 244.21	93151H850-005 244.21	94051H850-005 236.88	95051H850-005 303.16	550
3/4 Air to Air	91151H850-007 262.11	93151H850-007 262.11	94051H850-007 254.24	95051H850-007 302.11	550
1 Air to Air	91151H850-010 280.00	93151H850-010 280.00	94051H850-010 271.60	95051H850-010 320.00	550
1-1/4 Air to Air	91151H850-012 349.47	93151H850-012 349.47	94051H850-012 338.99	95051H850-012 397.89	550
1-1/2 Air to Air	91151H850-015 440.00	93151H850-015 440.00	94051H850-015 426.80	95051H850-015 503.16	550
2 Air to Air	91151H850-020 529.47	93151H850-020 529.47	94051H850-020 513.59	95051H850-020 608.42	550
1/2 Air to Spring Close	91151J850-005 324.21	93151J850-005 324.21	94051J850-005 314.48	95051J850-005 393.68	550
3/4 Air to Spring Close	91151J850-007 347.37	93151J850-007 347.37	94051J850-007 336.95	95051J850-007 416.84	550
1 Air to Spring Close	91151J850-010 369.47	93151J850-010 369.47	94051J850-010 358.39	95051J850-010 443.16	550
1-1/4 Air to Spring Close	91151J850-012 464.21	93151J850-012 464.21	94051J850-012 450.28	95051J850-012 555.79	550
1-1/2 Air to Spring Close	91151J850-015 555.79	93151J850-015 555.79	94051J850-015 539.12	95051J850-015 690.53	550
2 Air to Spring Close	91151J850-020 707.37	93151J850-020 707.37	94051J850-020 686.15	95051J850-020 847.37	550
1/2 Air to Spring Open	91151K850-005 244.21	93151K850-005 244.21	94051K850-005 236.88	95051K850-005 283.16	550
3/4 Air to Spring Open	91151K850-007 262.11	93151K850-007 262.11	94051K850-007 254.24	95051K850-007 303.16	550
1 Air to Spring Open	91151K850-010 280.00	93151K850-010 280.00	94051K850-010 271.60	95051K850-010 318.95	550
1-1/4 Air to Spring Open	91151K850-012 349.47	93151K850-012 349.47	94051K850-012 338.99	95051K850-012 402.11	550
1-1/2 Air to Spring Open	91151K850-015 440.00	93151K850-015 440.00	94051K850-015 426.80	95051K850-015 503.16	550
2 Air to Spring Open	91151K850-020 529.47	93151K850-020 529.47	94051K850-020 513.59	95051K850-020 609.47	550

PVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91251H850-005 271.35	93251H850-005 271.35	---	---	550
3/4 Air to Air	91251H850-007 291.23	93251H850-007 291.23	---	---	550
1 Air to Air	91251H850-010 311.12	93251H850-010 311.12	---	---	550
1-1/4 Air to Air	91251H850-012 388.31	93251H850-012 388.31	---	---	550
1-1/2 Air to Air	91251H850-015 488.88	93251H850-015 488.88	---	---	550
2 Air to Air	91251H850-020 588.31	93251H850-020 588.31	---	---	550



Actuated Valves
Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing

PVC - FKM O-ring and EPDM Backed PTFE Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Spring Close	91251J850-005 360.23	93251J850-005 360.23	---	---	550
3/4 Air to Spring Close	91251J850-007 385.97	93251J850-007 385.97	---	---	550
1 Air to Spring Close	91251J850-010 410.53	93251J850-010 410.53	---	---	550
1-1/4 Air to Spring Close	91251J850-012 515.79	93251J850-012 515.79	---	---	550
1-1/2 Air to Spring Close	91251J850-015 617.55	93251J850-015 617.55	---	---	550
2 Air to Spring Close	91251J850-020 785.97	93251J850-020 785.97	---	---	550
1/2 Air to Spring Open	91251K850-005 271.35	93251K850-005 271.35	---	---	550
3/4 Air to Spring Open	91251K850-007 291.23	93251K850-007 291.23	---	---	550
1 Air to Spring Open	91251K850-010 311.12	93251K850-010 311.12	---	---	550
1-1/4 Air to Spring Open	91251K850-012 388.31	93251K850-012 388.31	---	---	550
1-1/2 Air to Spring Open	91251K850-015 488.88	93251K850-015 488.88	---	---	550
2 Air to Spring Open	91251K850-020 588.31	93251K850-020 588.31	---	---	550

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91122H850-005 262.11	93122H850-005 262.11	94022H850-005 253.68	95022H850-005 301.05	552
3/4 Air to Air	91122H850-007 282.11	93122H850-007 282.11	94022H850-007 272.63	95022H850-007 322.11	552
1 Air to Air	91122H850-010 298.95	93122H850-010 298.95	94022H850-010 289.47	95022H850-010 341.05	552
1-1/4 Air to Air	91122H850-012 371.58	93122H850-012 371.58	94022H850-012 360.00	95022H850-012 426.32	552
1-1/2 Air to Air	91122H850-015 468.42	93122H850-015 468.42	94022H850-015 454.74	95022H850-015 536.84	552
2 Air to Air	91122H850-020 567.37	93122H850-020 567.37	94022H850-020 550.53	95022H850-020 653.68	552
1/2 Air to Spring Close	91122J850-005 374.74	93122J850-005 374.74	94022J850-005 364.21	95022J850-005 430.53	552
3/4 Air to Spring Close	91122J850-007 420.00	93122J850-007 420.00	94022J850-007 407.37	95022J850-007 461.05	552
1 Air to Spring Close	91122J850-010 489.47	93122J850-010 489.47	94022J850-010 474.74	95022J850-010 487.37	552
1-1/4 Air to Spring Close	91122J850-012 598.95	93122J850-012 598.95	94022J850-012 581.05	95022J850-012 609.47	552
1-1/2 Air to Spring Close	91122J850-015 688.42	93122J850-015 688.42	94022J850-015 667.37	95022J850-015 767.37	552
2 Air to Spring Close	91122J850-020 866.32	93122J850-020 866.32	94022J850-020 840.00	95022J850-020 934.74	552
1/2 Air to Spring Open	91122K850-005 262.11	93122K850-005 262.11	94022K850-005 253.68	95022K850-005 301.05	552
3/4 Air to Spring Open	91122K850-007 282.11	93122K850-007 282.11	94022K850-007 272.63	95022K850-007 322.11	552
1 Air to Spring Open	91122K850-010 298.95	93122K850-010 298.95	94022K850-010 289.47	95022K850-010 341.05	552
1-1/4 Air to Spring Open	91122K850-012 371.58	93122K850-012 371.58	94022K850-012 360.00	95022K850-012 426.32	552
1-1/2 Air to Spring Open	91122K850-015 468.42	93122K850-015 468.42	94022K850-015 454.74	95022K850-015 536.84	552
2 Air to Spring Open	91122K850-020 567.37	93122K850-020 567.37	94022K850-020 550.53	95022K850-020 653.68	552

CPVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91232H850-005 327.37	93232H850-005 327.37	94032H850-005 317.89	95032H850-005 334.74	552
3/4 Air to Air	91232H850-007 351.58	93232H850-007 351.58	94032H850-007 341.05	95032H850-007 357.89	552
1 Air to Air	91232H850-010 373.68	93232H850-010 373.68	94032H850-010 362.11	95032H850-010 378.95	552
1-1/4 Air to Air	91232H850-012 464.21	93232H850-012 464.21	94032H850-012 449.47	95032H850-012 501.05	552

Actuated Valves
Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing



CPVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1-1/2 Air to Air	91232H850-015 585.26	93232H850-015 585.26	94032H850-015 568.42	95032H850-015 631.58	552
2 Air to Air	91232H850-020 708.42	93232H850-020 708.42	94032H850-020 687.37	95032H850-020 769.47	552
1/2 Air to Spring Close	91232J850-005 468.42	93232J850-005 468.42	94032J850-005 454.74	95032J850-005 506.32	552
3/4 Air to Spring Close	91232J850-007 524.21	93232J850-007 524.21	94032J850-007 508.42	95032J850-007 542.11	552
1 Air to Spring Close	91232J850-010 611.58	93232J850-010 611.58	94032J850-010 593.68	95032J850-010 572.63	552
1-1/4 Air to Spring Close	91232J850-012 748.42	93232J850-012 748.42	94032J850-012 726.32	95032J850-012 716.84	552
1-1/2 Air to Spring Close	91232J850-015 860.00	93232J850-015 860.00	94032J850-015 834.74	95032J850-015 902.11	552
2 Air to Spring Close	91232J850-020 1082.11	93232J850-020 1082.11	94032J850-020 1049.47	95032J850-020 1098.95	552
1/2 Air to Spring Open	91232K850-005 327.37	93232K850-005 327.37	94032K850-005 317.89	95032K850-005 354.74	552
3/4 Air to Spring Open	91232K850-007 351.58	93232K850-007 351.58	94032K850-007 341.05	95032K850-007 378.95	552
1 Air to Spring Open	91232K850-010 373.68	93232K850-010 373.68	94032K850-010 362.11	95032K850-010 401.05	552
1-1/4 Air to Spring Open	91232K850-012 464.21	93232K850-012 464.21	94032K850-012 449.47	95032K850-012 501.05	552
1-1/2 Air to Spring Open	91232K850-015 585.26	93232K850-015 585.26	94032K850-015 568.42	95032K850-015 631.58	552
2 Air to Spring Open	91232K850-020 708.42	93232K850-020 708.42	94032K850-020 687.37	95032K850-020 769.47	552

CPVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91152H850-005 353.68	93152H850-005 353.68	94052H850-005 343.16	95052H850-005 353.68	552
3/4 Air to Air	91152H850-007 378.95	93152H850-007 378.95	94052H850-007 367.37	95052H850-007 434.74	552
1 Air to Air	91152H850-010 398.95	93152H850-010 398.95	94052H850-010 386.32	95052H850-010 458.95	552
1-1/4 Air to Air	91152H850-012 503.16	93152H850-012 503.16	94052H850-012 487.37	95052H850-012 580.00	552
1-1/2 Air to Air	91152H850-015 629.47	93152H850-015 629.47	94052H850-015 610.53	95052H850-015 726.32	552
2 Air to Air	91152H850-020 762.11	93152H850-020 762.11	94052H850-020 738.95	95052H850-020 876.84	552
1/2 Air to Spring Close	91152J850-005 471.58	93152J850-005 471.58	94052J850-005 456.84	95052J850-005 505.26	552
3/4 Air to Spring Close	91152J850-007 505.26	93152J850-007 505.26	94052J850-007 490.53	95052J850-007 620.00	552
1 Air to Spring Close	91152J850-010 525.26	93152J850-010 525.26	94052J850-010 509.47	95052J850-010 655.79	552
1-1/4 Air to Spring Close	91152J850-012 669.47	93152J850-012 669.47	94052J850-012 649.47	95052J850-012 829.47	552
1-1/2 Air to Spring Close	91152J850-015 795.79	93152J850-015 795.79	94052J850-015 772.63	95052J850-015 1037.89	552
2 Air to Spring Close	91152J850-020 1015.79	93152J850-020 1015.79	94052J850-020 985.26	95052J850-020 1251.58	552
1/2 Air to Spring Open	91152K850-005 353.68	93152K850-005 353.68	94052K850-005 343.16	95052K850-005 353.68	552
3/4 Air to Spring Open	91152K850-007 378.95	93152K850-007 378.95	94052K850-007 367.37	95052K850-007 434.74	552
1 Air to Spring Open	91152K850-010 398.95	93152K850-010 398.95	94052K850-010 386.32	95052K850-010 458.95	552
1-1/4 Air to Spring Open	91152K850-012 503.16	93152K850-012 503.16	94052K850-012 487.37	95052K850-012 580.00	552
1-1/2 Air to Spring Open	91152K850-015 629.47	93152K850-015 629.47	94052K850-015 610.53	95052K850-015 726.32	552
2 Air to Spring Open	91152K850-020 762.11	93152K850-020 762.11	94052K850-020 738.95	95052K850-020 876.84	552

CPVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91252H850-005 409.47	93252H850-005 409.47	---	---	552
3/4 Air to Air	91252H850-007 440.00	93252H850-007 440.00	---	---	552



Actuated Valves
Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing

CPVC - FKM O-ring and EPDM Backed PTFE Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1 Air to Air	91252H850-010 466.32	93252H850-010 466.32	---	---	552
1-1/4 Air to Air	91252H850-012 580.00	93252H850-012 580.00	---	---	552
1-1/2 Air to Air	91252H850-015 731.58	93252H850-015 731.58	---	---	552
2 Air to Air	91252H850-020 886.32	93252H850-020 886.32	---	---	552
1/2 Air to Spring Close	91252J850-005 586.32	93252J850-005 586.32	---	---	552
3/4 Air to Spring Close	91252J850-007 655.79	93252J850-007 655.79	---	---	552
1 Air to Spring Close	91252J850-010 765.26	93252J850-010 765.26	---	---	552
1-1/4 Air to Spring Close	91252J850-012 935.79	93252J850-012 935.79	---	---	552
1-1/2 Air to Spring Close	91252J850-015 1074.74	93252J850-015 1074.74	---	---	552
2 Air to Spring Close	91252J850-020 1352.63	93252J850-020 1352.63	---	---	552
1/2 Air to Spring Open	91252K850-005 409.47	93252K850-005 409.47	---	---	552
3/4 Air to Spring Open	91252K850-007 440.00	93252K850-007 440.00	---	---	552
1 Air to Spring Open	91252K850-010 466.32	93252K850-010 466.32	---	---	552
1-1/4 Air to Spring Open	91252K850-012 580.00	93252K850-012 580.00	---	---	552
1-1/2 Air to Spring Open	91252K850-015 731.58	93252K850-015 731.58	---	---	552
2 Air to Spring Open	91252K850-020 886.32	93252K850-020 886.32	---	---	552

Actuated Valves **Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing**



Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM O-ring and EPDM Diaphragm SR Thread					
93123H850-005	1/2 Air to Air	1	0	554	218.95
93123H850-007	3/4 Air to Air	1	0	554	236.84
93123H850-010	1 Air to Air	1	0	554	247.37
93123H850-012	1-1/4 Air to Air	1	0	554	313.68
93123H850-015	1-1/2 Air to Air	1	0	554	393.68
93123H850-020	2 Air to Air	1	0	554	474.74
93123J850-005	1/2 Air to Spring Close	1	0	554	296.84
93123J850-007	3/4 Air to Spring Close	1	0	554	341.05
93123J850-010	1 Air to Spring Close	1	0	554	387.37
93123J850-012	1-1/4 Air to Spring Close	1	0	554	442.11
93123J850-015	1-1/2 Air to Spring	1	0	554	540.00
93123J850-020	2 Air to Spring Close	1	0	554	664.21
93123K850-005	1/2 Air to Spring Open	1	0	554	218.95
93123K850-007	3/4 Air to Spring Open	1	0	554	236.84
93123K850-010	1 Air to Spring Open	1	0	554	247.37
93123K850-012	1-1/4 Air to Spring Open	1	0	554	313.68
93123K850-015	1-1/2 Air to Spring Open	1	0	554	393.68
93123K850-020	2 Air to Spring Open	1	0	554	474.74

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FKM O-ring and FKM Diaphragm SR Thread					
93233H850-005	1/2 Air to Air	1	0	554	347.37
93233H850-007	3/4 Air to Air	1	0	554	375.79
93233H850-010	1 Air to Air	1	0	554	392.63
93233H850-012	1-1/4 Air to Air	1	0	554	497.89
93233H850-015	1-1/2 Air to Air	1	0	554	625.26
93233H850-020	2 Air to Air	1	0	554	753.68
93233J850-005	1/2 Air to Spring Close	1	0	554	471.58
93233J850-007	3/4 Air to Spring Close	1	0	554	541.05
93233J850-010	1 Air to Spring Close	1	0	554	614.74
93233J850-012	1-1/4 Air to Spring Close	1	0	554	702.11
93233J850-015	1-1/2 Air to Spring Close	1	0	554	856.84
93233J850-020	2 Air to Spring Close	1	0	554	1054.74
93233K850-005	1/2 Air to Spring Open	1	0	554	347.37
93233K850-007	3/4 Air to Spring Open	1	0	554	375.79
93233K850-010	1 Air to Spring Open	1	0	554	392.63
93233K850-012	1-1/4 Air to Spring Open	1	0	554	497.89
93233K850-015	1-1/2 Air to Spring Open	1	0	554	625.26
93233K850-020	2 Air to Spring Open	1	0	554	753.68

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93153H850-005	1/2 Air to Air	1	0	554	364.21
93153H850-007	3/4 Air to Air	1	0	554	377.89
93153H850-010	1 Air to Air	1	0	554	393.68
93153H850-012	1-1/4 Air to Air	1	0	554	544.21
93153H850-015	1-1/2 Air to Air	1	0	554	654.74
93153H850-020	2 Air to Air	1	0	554	797.89
93153J850-005	1/2 Air to Spring Close	1	0	554	377.89
93153J850-007	3/4 Air to Spring Close	1	0	554	403.16
93153J850-010	1 Air to Spring Close	1	0	554	429.47
93153J850-012	1-1/4 Air to Spring Close	1	0	554	534.74
93153J850-015	1-1/2 Air to Spring Close	1	0	554	641.05
93153J850-020	2 Air to Spring Close	1	0	554	820.00
93153K850-005	1/2 Air to Spring Open	1	0	554	364.21
93153K850-007	3/4 Air to Spring Open	1	0	554	377.89
93153K850-010	1 Air to Spring Open	1	0	554	393.68
93153K850-012	1-1/4 Air to Spring Open	1	0	554	544.21
93153K850-015	1-1/2 Air to Spring Open	1	0	554	654.74

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93153K850-020	2 Air to Spring Open	1	0	554	797.89
FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93253H850-005	1/2 Air to Air	1	0	554	423.16
93253H850-007	3/4 Air to Air	1	0	554	438.95
93253H850-010	1 Air to Air	1	0	554	457.89
93253H850-012	1-1/4 Air to Air	1	0	554	632.63
93253H850-015	1-1/2 Air to Air	1	0	554	761.05
93253H850-020	2 Air to Air	1	0	554	927.37
93253J850-005	1/2 Air to Spring Close	1	0	554	438.95
93253J850-007	3/4 Air to Spring Close	1	0	554	468.42
93253J850-010	1 Air to Spring Close	1	0	554	498.95
93253J850-012	1-1/4 Air to Spring Close	1	0	554	622.11
93253J850-015	1-1/2 Air to Spring Close	1	0	554	745.26
93253J850-020	2 Air to Spring Close	1	0	554	953.68
93253K850-005	1/2 Air to Spring Open	1	0	554	423.16
93253K850-007	3/4 Air to Spring Open	1	0	554	438.95
93253K850-010	1 Air to Spring Open	1	0	554	457.89
93253K850-012	1-1/4 Air to Spring Open	1	0	554	632.63
93253K850-015	1-1/2 Air to Spring Open	1	0	554	761.05
93253K850-020	2 Air to Spring Open	1	0	554	927.37



Actuated Valves Premium Actuated Diaphragm Valve - Pneumatic



Industrial grade Weir-type design, excellent for throttling and use with viscous fluids. Full-featured actuator can be custom configured with add-on accessories.

- Stainless Steel Hardware
- 235 psi @ 73°F (23°C) - sizes 1/2"- 2" (flanged & PTFE diaphragm-150 psi), 2-1/2"- 4"-150 psi
- 80 psi Operating Pressure
- Linear Action Operation with Preset Stops
- Air-Air or Air-Spring Closed (optional spring open)

See **Pneumatic Actuator Accessories for Diaphragm Valves** for Add-on Actuator Accessories

PVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91121H100-005 857.54	93121H100-005 862.91	94021H100-005 854.18	95021H100-005 938.25	550
1/2 Air to Spring	91121J100-005 889.07	93121J100-005 894.44	94021J100-005 885.72	95021J100-005 969.80	550
3/4 Air to Air	91121H100-007 1890.95	93121H100-007 1151.62	94021H100-007 1138.96	95021H100-007 1233.11	550
3/4 Air to Spring	91121J100-007 1191.26	93121J100-007 1198.94	94021J100-007 1186.27	95021J100-007 1280.41	550
1 Air to Air	91121H100-010 1937.63	93121H100-010 1250.18	94021H100-010 1234.72	95021H100-010 1323.38	550
1 Air to Spring	91121J100-010 1290.01	93121J100-010 1300.66	94021J100-010 1285.19	95021J100-010 1373.84	550
1-1/4 Air to Air	91121H100-012 2062.16	93121H100-012 2079.57	94021H100-012 2053.08	95021H100-012 2149.82	550
1-1/4 Air to Spring	91121J100-012 2144.17	93121J100-012 2161.59	94021J100-012 2135.08	95021J100-012 2231.81	550
1-1/2 Air to Air	91121H100-015 2076.64	93121H100-015 2105.91	94021H100-015 2069.19	95021H100-015 2154.27	550
1-1/2 Air to Spring	91121J100-015 2158.64	93121J100-015 2187.92	94021J100-015 2151.21	95021J100-015 2236.27	550
2 Air to Air	91121H100-020 2355.05	93121H100-020 2386.75	94021H100-020 2344.15	95021H100-020 2448.98	550
2 Air to Spring	91121J100-020 2446.52	93121J100-020 2478.22	94021J100-020 2435.61	95021J100-020 2540.45	550
2-1/2 Air to Air	---	---	---	95021H100-025 2856.29	550
2-1/2 Air to Spring	---	---	---	95021J100-025 3461.91	550
3 Air to Air	---	---	---	95021H100-030 3665.59	550
3 Air to Spring	---	---	---	95021J100-030 4618.12	550
4 Air to Air	---	---	---	95021H100-040 4888.60	550
4 Air to Spring	---	---	---	95021J100-040 5380.64	550
6 Air to Spring	---	---	---	95021J100-060 12535.32	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91231H100-005 872.59	93231H100-005 877.95	94031H100-005 868.81	95031H100-005 956.12	550
1/2 Air to Spring	91231J100-005 904.11	93231J100-005 909.51	94031J100-005 900.35	95031J100-005 987.66	550
3/4 Air to Air	91231H100-007 1161.01	93231H100-007 1168.67	94031H100-007 1154.83	95031H100-007 1239.22	550
3/4 Air to Spring	91231J100-007 1208.31	93231J100-007 1215.98	94031J100-007 1202.13	95031J100-007 1286.53	550
1 Air to Air	91231H100-010 1258.22	93231H100-010 1268.89	94031H100-010 1251.15	95031H100-010 1355.67	550
1 Air to Spring	91231J100-010 1308.66	93231J100-010 1319.37	94031J100-010 1301.61	95031J100-010 1406.14	550
1-1/4 Air to Air	91231H100-012 2115.69	93231H100-012 2132.78	94031H100-012 2109.16	95031H100-012 2189.49	550

Actuated Valves
Premium Actuated Diaphragm Valve - Pneumatic



PVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1-1/4 Air to Spring	91231J100-012 2197.69	93231J100-012 2214.79	94031J100-012 2191.17	95031J100-012 2271.48	550
1-1/2 Air to Air	91231H100-015 2123.45	93231H100-015 2152.71	94031H100-015 2114.84	95031H100-015 2197.94	550
1-1/2 Air to Spring	91231J100-015 2205.45	93231J100-015 2234.73	94031J100-015 2196.84	95031J100-015 2279.96	550
2 Air to Air	91231H100-020 2420.24	93231H100-020 2451.98	94031H100-020 2405.88	95031H100-020 2480.12	550
2 Air to Spring	91231J100-020 2511.73	93231J100-020 2543.45	94031J100-020 2497.34	95031J100-020 2571.57	550
2-1/2 Air to Air	---	---	---	95031H100-025 2945.42	550
2-1/2 Air to Spring	---	---	---	95031J100-025 3551.01	550
3 Air to Air	---	---	---	95031H100-030 3758.22	550
3 Air to Spring	---	---	---	95031J100-030 4710.76	550
4 Air to Air	---	---	---	95031H100-040 4993.08	550
4 Air to Spring	---	---	---	95031J100-040 5485.07	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91151H100-005 937.88	93151H100-005 943.25	94051H100-005 930.47	95051H100-005 1017.37	550
1/2 Air to Spring	91151J100-005 969.43	93151J100-005 974.77	94051J100-005 961.99	95051J100-005 1048.91	550
3/4 Air to Air	91151H100-007 1884.44	93151H100-007 1228.35	94051H100-007 1212.53	95051H100-007 1309.40	550
3/4 Air to Spring	91151J100-007 1315.26	93151J100-007 1275.65	94051J100-007 1259.84	95051J100-007 1356.72	550
1 Air to Air	91151H100-010 1963.58	93151H100-010 1393.13	94051H100-010 1374.60	95051H100-010 1456.65	550
1 Air to Spring	91151J100-010 1432.95	93151J100-010 1443.61	94051J100-010 1425.05	95051J100-010 1507.13	550
1-1/4 Air to Air	91151H100-012 2235.56	93151H100-012 2252.64	94051H100-012 2224.94	95051H100-012 1636.99	550
1-1/4 Air to Spring	91151J100-012 2317.55	93151J100-012 2334.66	94051J100-012 2306.96	95051J100-012 1636.99	550
1-1/2 Air to Air	91151H100-015 2266.42	93151H100-015 2295.69	94051H100-015 2254.27	95051H100-015 2346.47	550
1-1/2 Air to Spring	91151J100-015 2348.42	93151J100-015 2377.69	94051J100-015 2336.28	95051J100-015 2428.47	550
2 Air to Air	91151H100-020 2558.75	93151H100-020 2590.48	94051H100-020 2542.06	95051H100-020 2639.36	550
2 Air to Spring	91151J100-020 2650.21	93151J100-020 2681.95	94051J100-020 2633.52	95051J100-020 2730.84	550
2-1/2 Air to Air	---	---	---	95051H100-025 3217.42	550
2-1/2 Air to Spring	---	---	---	95051J100-025 3823.01	550
3 Air to Air	---	---	---	95051H100-030 4123.14	550
3 Air to Spring	---	---	---	95051J100-030 5075.66	550
4 Air to Air	---	---	---	95051H100-040 5523.12	550
4 Air to Spring	---	---	---	95051J100-040 6015.17	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91251H100-005 961.53	93251H100-005 966.89	---	---	550
1/2 Air to Spring	91251J100-005 993.08	93251J100-005 998.43	---	---	550
3/4 Air to Air	91251H100-007 1248.77	93251H100-007 1256.47	---	---	550



Actuated Valves Premium Actuated Diaphragm Valve - Pneumatic

PVC - FKM O-ring and EPDM Backed PTFE Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
3/4 Air to Spring	91251J100-007 1296.09	93251J100-007 1303.80	---	---	550
1 Air to Air	91251H100-010 1394.62	93251H100-010 1405.27	---	---	550
1 Air to Spring	91251J100-010 1445.09	93251J100-010 1455.76	---	---	550
1-1/4 Air to Air	91251H100-012 2262.96	93251H100-012 2280.05	---	---	550
1-1/4 Air to Spring	91251J100-012 2344.96	93251J100-012 2362.04	---	---	550
1-1/2 Air to Air	91251H100-015 2290.80	93251H100-015 2320.07	---	---	550
1-1/2 Air to Spring	91251J100-015 2372.82	93251J100-015 2402.08	---	---	550
2 Air to Air	91251H100-020 2586.65	93251H100-020 2618.39	---	---	550
2 Air to Spring	91251J100-020 2678.13	93251J100-020 2709.84	---	---	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91122H100-005 961.77	93122H100-005 967.15	94022H100-005 955.74	95022H100-005 1011.83	552
1/2 Air to Spring	91122J100-005 993.33	93122J100-005 998.67	94022J100-005 987.26	95022J100-005 1043.37	552
3/4 Air to Air	91122H100-007 1256.92	93122H100-007 1264.61	94022H100-007 1249.54	95022H100-007 1314.14	552
3/4 Air to Spring	91122J100-007 1304.23	93122J100-007 1311.93	94022J100-007 1296.86	95022J100-007 1361.45	552
1 Air to Air	91122H100-010 1357.92	93122H100-010 1368.58	94022H100-010 1351.37	95022H100-010 1448.98	552
1 Air to Spring	91122J100-010 1408.38	93122J100-010 1419.04	94022J100-010 1401.80	95022J100-010 1499.44	552
1-1/4 Air to Air	91122H100-012 2240.94	93122H100-012 2258.02	94022H100-012 2229.31	95022H100-012 2288.25	552
1-1/4 Air to Spring	91122J100-012 2322.95	93122J100-012 2340.03	94022J100-012 2311.31	95022J100-012 2370.28	552
1-1/2 Air to Air	91122H100-015 2254.63	93122H100-015 2283.88	94022H100-015 2239.31	95022H100-015 2295.04	552
1-1/2 Air to Spring	91122J100-015 2336.63	93122J100-015 2365.92	94022J100-015 2321.28	95022J100-015 2377.03	552
2 Air to Air	91122H100-020 2509.59	93122H100-020 2541.31	94022H100-020 2496.81	95022H100-020 2580.89	552
2 Air to Spring	91122J100-020 2601.04	93122J100-020 2632.78	94022J100-020 2588.26	95022J100-020 2672.35	552
2-1/2 Air to Air	---	---	---	95022H100-025 3283.08	552
2-1/2 Air to Spring	---	---	---	95022J100-025 3888.69	552
3 Air to Air	---	---	---	95022H100-030 4417.13	552
3 Air to Spring	---	---	---	95022J100-030 5369.66	552
4 Air to Air	---	---	---	95022H100-040 5910.75	552
4 Air to Spring	---	---	---	95022J100-040 6402.80	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91232H100-005 1029.18	93232H100-005 1034.56	94032H100-005 1019.54	95032H100-005 1042.04	552
1/2 Air to Spring	91232J100-005 1060.73	93232J100-005 1066.09	94032J100-005 1051.08	95032J100-005 1073.59	552
3/4 Air to Air	91232H100-007 1317.60	93232H100-007 1325.29	94032H100-007 1307.47	95032H100-007 1347.97	552
3/4 Air to Spring	91232J100-007 1364.91	93232J100-007 1372.61	94032J100-007 1354.79	95032J100-007 1395.28	552
1 Air to Air	91232H100-010 1448.22	93232H100-010 1458.88	94032H100-010 1437.07	95032H100-010 1496.13	552

Actuated Valves
Premium Actuated Diaphragm Valve - Pneumatic



CPVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1 Air to Spring	91232J100-010 1498.67	93232J100-010 1509.34	94032J100-010 1487.55	95032J100-010 1546.59	552
1-1/4 Air to Air	91232H100-012 2375.94	93232H100-012 2393.01	94032H100-012 2360.89	95032H100-012 2362.44	552
1-1/4 Air to Spring	91232J100-012 2457.94	93232J100-012 2475.04	94032J100-012 2442.88	95032J100-012 2444.44	552
1-1/2 Air to Air	91232H100-015 2398.52	93232H100-015 2427.78	94032H100-015 2382.27	95032H100-015 2376.79	552
1-1/2 Air to Spring	91232J100-015 2480.53	93232J100-015 2509.79	94032J100-015 2464.28	95032J100-015 2458.79	552
2 Air to Air	91232H100-020 2638.03	93232H100-020 2669.73	94032H100-020 2621.71	95032H100-020 2651.11	552
2 Air to Spring	91232J100-020 2729.48	93232J100-020 2761.22	94032J100-020 2713.17	95032J100-020 2742.59	552
2-1/2 Air to Air	---	---	---	95032H100-025 3405.74	552
2-1/2 Air to Spring	---	---	---	95032J100-025 4011.33	552
3 Air to Air	---	---	---	95032H100-030 4593.16	552
3 Air to Spring	---	---	---	95032J100-030 5545.69	552
4 Air to Air	---	---	---	95032H100-040 6152.06	552
4 Air to Spring	---	---	---	95032J100-040 6644.07	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91152H100-005 1066.53	93152H100-005 1071.91	94052H100-005 1056.81	95052H100-005 1139.67	552
1/2 Air to Spring	91152J100-005 1528.60	93152J100-005 1103.43	94052J100-005 1088.36	95052J100-005 1171.21	552
3/4 Air to Air	91152H100-007 1370.55	93152H100-007 1378.25	94052H100-007 1359.08	95052H100-007 1436.63	552
3/4 Air to Spring	91152J100-007 1550.23	93152J100-007 1425.58	94052J100-007 1406.37	95052J100-007 1483.93	552
1 Air to Air	91152H100-010 1512.57	93152H100-010 1523.21	94052H100-010 1500.82	95052H100-010 1598.67	552
1 Air to Spring	91152J100-010 1563.02	93152J100-010 1573.68	94052J100-010 1551.29	95052J100-010 1649.13	552
1-1/4 Air to Air	91152H100-012 2416.81	93152H100-012 2447.60	94052H100-012 2399.67	95052H100-012 2471.12	552
1-1/4 Air to Spring	91152J100-012 2498.82	93152J100-012 2529.61	94052J100-012 2481.69	95052J100-012 2553.13	552
1-1/2 Air to Air	91152H100-015 2426.71	93152H100-015 2455.98	94052H100-015 2410.43	95052H100-015 2605.76	552
1-1/2 Air to Spring	91152J100-015 2508.73	93152J100-015 2538.00	94052J100-015 2492.45	95052J100-015 2687.76	552
2 Air to Air	91152H100-020 2715.22	93152H100-020 2746.94	94052H100-020 2697.08	95052H100-020 2921.57	552
2 Air to Spring	91152J100-020 2806.69	93152J100-020 2838.42	94052J100-020 2788.56	95052J100-020 3013.02	552
2-1/2 Air to Air	---	---	---	95052H100-025 4046.33	552
2-1/2 Air to Spring	---	---	---	95052J100-025 4651.91	552
3 Air to Air	---	---	---	95052H100-030 5217.69	552
3 Air to Spring	---	---	---	95052J100-030 6170.23	552
4 Air to Air	---	---	---	95052H100-040 6905.05	552
4 Air to Spring	---	---	---	95052J100-040 7397.12	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.



Actuated Valves
Premium Actuated Diaphragm Valve - Pneumatic

CPVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91252H100-005 1092.87	93252H100-005 1098.23	---	---	552
1/2 Air to Spring	91252J100-005 1124.42	93252J100-005 1129.78	---	---	552
3/4 Air to Air	91252H100-007 1387.78	93252H100-007 1395.47	---	---	552
3/4 Air to Spring	91252J100-007 1435.08	93252J100-007 1442.78	---	---	552
1 Air to Air	91252H100-010 1532.48	93252H100-010 1549.60	---	---	552
1 Air to Spring	91252J100-010 1582.95	93252J100-010 1600.05	---	---	552
1-1/4 Air to Air	91252H100-012 2439.35	93252H100-012 2456.46	---	---	552
1-1/4 Air to Spring	91252J100-012 2521.38	93252J100-012 2538.45	---	---	552
1-1/2 Air to Air	91252H100-015 2464.17	93252H100-015 2493.43	---	---	552
1-1/2 Air to Spring	91252J100-015 2546.16	93252J100-015 2575.43	---	---	552
2 Air to Air	91252H100-020 2792.25	93252H100-020 2825.56	---	---	552
2 Air to Spring	91252J100-020 2883.71	93252J100-020 2917.02	---	---	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter "K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

Actuated Valves
Premium Actuated Diaphragm Valve - Pneumatic



Polypropylene - EPDM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2 Air to Air	93123H100-005 861.19	---	554
1/2 Air to Spring	93123J100-005 892.75	---	554
3/4 Air to Air	93123H100-007 1148.61	---	554
3/4 Air to Spring	93123J100-007 880.51	---	554
1 Air to Air	93123H100-010 1246.07	---	554
1 Air to Spring	93123J100-010 1296.54	---	554
1-1/4 Air to Air	93123H100-012 2076.16	---	554
1-1/4 Air to Spring	93123J100-012 2158.17	---	554
1-1/2 Air to Air	93123H100-015 2089.84	---	554
1-1/2 Air to Spring	93123J100-015 2171.87	---	554
2 Air to Air	93123H100-020 2364.49	---	554
2 Air to Spring	93123J100-020 2455.96	---	554
2-1/2 Air to Air	---	95023H100-025 2899.34	554
2-1/2 Air to Spring	---	95023J100-025 3504.91	554
3 Air to Air	---	95023H100-030 3785.01	554
3 Air to Spring	---	95023J100-030 4737.56	554
4 Air to Air	---	95023H100-040 5105.20	554
4 Air to Spring	---	95023J100-040 5597.23	554

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene - FKM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2 Air to Air	93233H100-005 876.84	---	554
1/2 Air to Spring	93233J100-005 908.38	---	554
3/4 Air to Air	93233H100-007 1165.95	---	554
3/4 Air to Spring	93233J100-007 1213.27	---	554
1 Air to Air	93233H100-010 1265.99	---	554
1 Air to Spring	93233J100-010 1316.47	---	554
1-1/4 Air to Air	93233H100-012 2109.95	---	554
1-1/4 Air to Spring	93233J100-012 2191.89	---	554
1-1/2 Air to Air	93233H100-015 2124.07	---	554
1-1/2 Air to Spring	93233J100-015 2206.08	---	554
2 Air to Air	93233H100-020 2404.77	---	554
2 Air to Spring	93233J100-020 2496.24	---	554
2-1/2 Air to Air	---	95033H100-025 2969.35	554
2-1/2 Air to Spring	---	95033J100-025 3574.95	554
3 Air to Air	---	95033H100-030 3884.91	554
3 Air to Spring	---	95033J100-030 4837.43	554
4 Air to Air	---	95033H100-040 5243.57	554

Polypropylene - FKM O-ring and EPDM Diaphragm (continued)

Size	SR Thread	Flanged	Disc Code
4 Air to Spring	---	95033J100-040 5735.61	554

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2 Air to Air	93153H100-005 944.39	---	554
1/2 Air to Spring	93153J100-005 975.95	---	554
3/4 Air to Air	93153H100-007 1222.91	---	554
3/4 Air to Spring	93153J100-007 1270.21	---	554
1 Air to Air	93153H100-010 1389.31	---	554
1 Air to Spring	93153J100-010 1439.78	---	554
1-1/4 Air to Air	93153H100-012 2243.04	---	554
1-1/4 Air to Spring	93153J100-012 2325.07	---	554
1-1/2 Air to Air	93153H100-015 2273.83	---	554
1-1/2 Air to Spring	93153J100-015 2355.84	---	554
2 Air to Air	93153H100-020 2567.56	---	554
2 Air to Spring	93153J100-020 2659.01	---	554
2-1/2 Air to Air	---	95053H100-025 3281.33	554
2-1/2 Air to Spring	---	95053J100-025 3886.89	554
3 Air to Air	---	95053H100-030 4282.03	554
3 Air to Spring	---	95053J100-030 5234.57	554
4 Air to Air	---	95053H100-040 5666.87	554
4 Air to Spring	---	95053J100-040 6158.92	554

Polypropylene - FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread

Size	SR Thread	Flanged	Disc Code
1/2 Air to Air	93253H100-005 956.07	---	554
1/2 Air to Spring	93253J100-005 987.62	---	554
3/4 Air to Air	93253H100-007 1237.08	---	554
3/4 Air to Spring	93253J100-007 1284.42	---	554
1 Air to Air	93253H100-010 1406.94	---	554
1 Air to Spring	93253J100-010 1457.40	---	554
1-1/4 Air to Air	93253H100-012 2265.52	---	554
1-1/4 Air to Spring	93253J100-012 2347.51	---	554
1-1/2 Air to Air	93253H100-015 2297.87	---	554
1-1/2 Air to Spring	93253J100-015 2379.87	---	554
2 Air to Air	93253H100-020 2595.34	---	554
2 Air to Spring	93253J100-020 2686.81	---	554



Actuated Valves Electric Actuator Accessories

Contact Spears® for any desired accessories or functions not specified in the Accessory Selection Tables

The following accessories are for use on Spears® electric actuated Ball Valves, Butterfly Valves and Diaphragm Valves. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Heater	Heater/Thermostat - On 41°F, Off 60.8°F	A-H1	205.61
	Heater/Thermostat - On 62.6°F, Off 80.6°F	A-H2	185.03
Auxiliary Limit Switches	2-SPDT Limit Switch Set (1/2" shaft cam) ¹	A-LS1	184.44
	2-SPDT Limit Switch Set (3/8" shaft cam) ¹	A-LS2	184.44
	2-SPDT Limit Switch Set for Electric Spring Return	A-LS3	165.47
Position Indicators	LED Indicator Lights	A-P2	235.62
Modulating Positioner Boards	115 VAC 4-20 mA	A-PB1	1884.91
	115 VAC 0-5 VDC	A-PB2	1884.91
	115 VAC 0-10 VDC	A-PB3	1884.91
	230 VAC 4-20 mA	A-PB4	1884.91
	230 VAC 0-5 VDC	A-PB5	1884.91
	230 VAC 0-10 VDC	A-PB6	1884.91
	24 VAC 4-20 mA	A-PB7	1884.91
	24 VAC 0-5 VDC	A-PB8	1884.91
	24 VAC 0-10 VDC	A-PB9	1884.91
	24 VDC 4-20 mA	A-PB10	1884.91
	24 VDC 0-5 VDC	A-PB11	1884.91
	24 VDC 0-10 VDC	A-PB12	1884.91
	115 VAC 4-20 mA For Electric Spring Return Actuator	A-PB13	1970.15
Transmitter	4-20mA	A-T1	1383.00
Torque Sensors	Adjustable Electronic Torque Sensor	A-TS1	998.80
Speed Controller	Variable Speed Controller	A-SC1	655.89
"2-Wire" Control (operates as solenoid valve)	Control Relay Switch Setup 115 VAC- Normally Closed ²	A-CR1	233.05
	Control Relay Switch Setup 115 VAC- Normally Open ²	A-CR2	233.05
	Control Relay Switch Setup 24 VAC- Normally Closed ²	A-CR3	233.05
	Control Relay Switch Setup 24 VAC- Normally Open ²	A-CR4	233.05
	Control Relay Switch Setup 230 VAC- Normally Closed ²	A-CR5	233.05
	Control Relay Switch Setup 230 VAC- Normally Open ²	A-CR6	233.05
	Control Relay Switch Setup 12 VDC- Normally Closed ²	A-CR7	233.05
	Control Relay Switch Setup 12 VDC- Normally Open ²	A-CR8	233.05
	Control Relay Switch Setup 24 VDC- Normally Closed ²	A-CR9	233.05
	Control Relay Switch Setup 24 VDC- Normally Open ²	A-CR10	233.05
Friction Brake	Mechanical Brake ³	A-FB1	387.21
Lockout Switch	Power disconnect switch activated when manual override is in use	A-LK1	268.76
Battery Backup	115VAC 7 AMP BATTERY BACK UP	A-BB4	4972.24
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61
Stem Extensions	Ball Valve Stem Extension ⁴	A-BVSE-xxx-000	Call for pricing
	True Union 2000 Ball Valve Stem Extension ⁴	A-BVSE2-xxx-000	
	Butterfly Valve Stem Extension ⁴	A-BFSE-xxx-000	
	Diaphragm Valve Stem Extension ⁴	A-DESE-xxx-000	

- NOTES: 1 - The A-LS2 is used on 1/2" - 2" basic Ball Valve packages; A-LS1 used on all other sizes.
2 - "2-Wire" Control is not applicable to Diaphragm Valves.
3 - Friction Brake is standard on Butterfly Valves and not applicable to Diaphragm Valves.
4 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Actuated Valves

Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves



The following accessories are for use on Spears® pneumatic actuated Ball Valves and Butterfly Valves. See separate listing for pneumatic Diaphragm Valve accessories. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Pneumatic Positioners	3-15 psi NEMA 4 Flat-Top Indicator ¹	A-PP1	1485.40
	3-15 psi NEMA 4 Dome Indicator ¹	A-PP2	1598.11
	3-15 psi NEMA 4 Dome Indicator Integrated 2-SPDT Mech. Switches ¹	A-PP3	2197.71
Electro Pneumatic Positioners with Indicator	4-20mA NEMA 4 Flat-Top Indicator ¹	A-EP1	3155.21
	4-20mA NEMA 4 Dome Indicator ¹	A-EP2	3267.76
	4-20 mA NEMA 4 Dome Indicator Integrated 2-SPDT Mech. Switches ¹	A-EP3	3450.99
	4-20mA NEMA 7 Flat-Top Indicator ¹	A-EP4	3549.60
	4-20mA Intrinsically Safe (CSA/UL) Flat-Top Indicator ¹	A-EP5	3599.48
	4-20mA NEMA 7 Dome Indicator ¹	A-EP6	3662.27
	4-20mA Intrinsically Safe w/2-SPST Proximity Switches ¹	A-EP22	3717.58
Solenoid Valves	3 & 4-way 115 VAC NEMA 4/4x	A-SV1	204.93
	3 & 4-way 230 VAC NEMA 4/4x	A-SV2	215.15
	3 & 4-way 24 VAC NEMA 4/4x	A-SV3	215.15
	3 & 4-way 12 VDC NEMA 4/4x	A-SV4	215.15
	3 & 4-way 24 VDC NEMA 4/4x	A-SV5	215.15
	3 & 4-way 115 VAC NEMA 4/4x/7/9	A-SV6	435.46
	3 & 4-way 230 VAC NEMA 4/4x/7/9	A-SV7	435.46
	3 & 4-way 24 VAC NEMA 4/4x/7/9	A-SV8	435.46
	3 & 4-way 12 VDC NEMA 4/4x/7/9	A-SV9	435.46
	3 & 4-way 24 VDC NEMA 4/4x/7/9	A-SV10	435.46
	Dual Coil 3 & 4-way 115 VAC NEMA 4/4x	A-SV11	358.56
	Dual Coil 3 & 4-way 230 VAC NEMA 4/4x	A-SV12	358.56
	Dual Coil 3 & 4-way 24 VAC NEMA 4/4x	A-SV13	358.56
	Dual Coil 3 & 4-way 12 VDC NEMA 4/4x	A-SV14	358.56
	Dual Coil 3 & 4-way 24 VDC NEMA 4/4x	A-SV15	358.56
	Dual Coil 3 & 4-way 115 VAC NEMA 7/9	A-SV16	747.93
	Dual Coil 3 & 4-way 230 VAC NEMA 7/9	A-SV17	747.93
	Dual Coil 3 & 4-way 24 VAC NEMA 7/9	A-SV18	747.93
	Dual Coil 3 & 4-way 12 VDC NEMA 7/9	A-SV19	747.93
	Dual Coil 3 & 4-way 24 VDC NEMA 7/9	A-SV20	747.93
	Stainless Steel 3 & 4-way 115 VAC NEMA 4/4x	A-SV21	891.27
	3-Way 24 VDC Hi Temperature (Class H) NEMA 4x	A-SV22	2554.60
	3 & 4-way 230 VAC NEMA 4/4x 1/2" NPT Din Connector	A-SV23	1144.97
Limit Switch & Transmitter Combination	4-20mA 2-SPDT NEMA 4/4x/7/9	A-LS20	1215.38
	4-20mA 2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS21	1280.98
	4-20mA 2-DPDT NEMA 4/4x/7/9	A-LS22	1445.27
	4-20mA 2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS23	1511.03
	4-20mA 2-Proximity NEMA 4/4x/7/9	A-LS24	1560.29
	4-20mA 2-Proximity NEMA 4/4x/7/9 w/ Visual Indicator	A-LS25	1612.23
Limit Switches	2-SPDT NEMA 4/4x	A-LS40	337.93
	2-SPDT NEMA 4/4x w/ Visual Indicator	A-LS41	394.19
	2-SPDT NEMA 4/4x w/ Green/Red Dome Indicator	A-LS41D	487.09
	NEMA 4/4x w/ Low Profile Indicator	A-LS41L	496.84
	2-DPDT NEMA 4/4x	A-LS42	558.48
	2-DPDT NEMA 4/4x w/ Visual Indicator	A-LS43	624.25
	2-Proximity NEMA 4/4x	A-LS44	673.37
	2-Proximity NEMA 4/4x w/ Low Profile Indicator (source power requires intrinsic safety barrier or amplifier).	A-LS44L	819.52
	2-Proximity NEMA 4/4x w/ Visual Indicator	A-LS45	739.12
	2-Proximity NEMA 7/9	A-LS46	771.92
	2-Proximity NEMA 7/9 w/ Visual Indicator	A-LS47	837.83
	2-Proximity NEMA 7/9 w/ Low Profile Indicator	A-LS47L	777.00
	2-SPDT NEMA 4/4x/7/9	A-LS48	555.76
	2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS49	492.74
	2-DPDT NEMA 4/4x/7/9	A-LS50	994.86
	2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS51	1059.87
	4-SPDT NEMA 4/4x w/ 180° Indicator	A-LS52	557.13
Transmitter	4-20mA Output Transmitter	A-PT1	4839.32
Indicator	Dome Indicator	A-V2	92.22
Pressure Gauge Set	Stainless steel case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 - output gauges 0-160 psi	A-G1	701.33
	Plastic case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 - output gauges 0-160 psi	A-G2	264.95



Actuated Valves
Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Air Mufflers	Standard Sintered Bronze, 40 Micron, 1/8" NPT	A-M18	15.67
	Standard Sintered Bronze, 40 Micron, 1/4" NPT	A-M14	12.87
	Speed Control Muffler (Adjustable Air Flow) 1/8" NPT	A-M2V18	28.73
	Speed Control Muffler (Adjustable Air Flow) 1/4" NPT	A-M2V14	24.34
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61

Stem Extensions	Ball Valve Stem Extension ²	A-BVSE-xxx-000	Call for pricing
	True Union 2000 Ball Valve Stem Extension ²	A-BVSE2-xxx-000	
	Butterfly Valve Stem Extension ²	A-BFSE-xxx-000	

NOTES: 1 - Pneumatic and Electro-Pneumatic positioners include brass gauges: 1 input gauge @ 0-30 psi and 2 output gauges @ 0-160 psi. Stainless steel gauges may be ordered separately.
2 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Actuated Valves Pneumatic Actuator Accessories for Diaphragm Valves



The following accessories are for use on Spears® pneumatic actuated Diaphragm Valves only. See separate listing for Ball Valve and Butterfly Valve pneumatic accessories. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Pneumatic Positioners	3-15 psi NEMA 4x w/ Visual Indicator Top Loading (no gauge)	A-DPP1	4579.13
	3-15 psi NEMA 4x w/ Visual Indicator Top Loading w/ gauges (3)	A-DPP2	5183.53
	3-15 psi NEMA 4x w/ Visual Indicator Bottom Loading (no gauge)	A-DPP3	4579.14
	3-15 psi NEMA 4x w/ Visual Indicator Bottom Loading w/ gauges (3)	A-DPP4	5183.53
Electro Pneumatic Positioners	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator (up to 2")	A-DEP1	8763.88
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator w/SS Gauges (up to 2")	A-DEP2	9368.28
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator (2-1/2" & up)	A-DEP3	8763.88
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator w/SS Gauges (2-1/2" & up)	A-DEP4	9368.28
3-Way Solenoid Valves	115 VAC NEMA 4/4x	A-DSV1	377.04
	230 VAC NEMA 4/4x	A-DSV2	377.04
	24 VAC NEMA 4/4x	A-DSV3	377.04
	12 VDC NEMA 4/4x	A-DSV4	377.04
	24 VDC NEMA 4/4x	A-DSV5	377.04
	115 VAC NEMA 4/4x/7/9	A-DSV6	581.96
	230 VAC NEMA 4/4x/7/9	A-DSV7	581.96
	24 VAC NEMA 4/4x/7/9	A-DSV8	581.96
	12 VDC NEMA 4/4x/7/9	A-DSV9	581.96
	24 VDC NEMA 4/4x/7/9	A-DSV10	581.96
4-Way Solenoid Valves	115 VAC NEMA 4/4x	A-DSV11	704.81
	230 VAC NEMA 4/4x	A-DSV12	704.81
	24 VAC NEMA 4/4x	A-DSV13	704.81
	12 VDC NEMA 4/4x	A-DSV14	704.81
	24 VDC NEMA 4/4x	A-DSV15	704.81
	115 VAC NEMA 4/4x/7/9	A-DSV16	987.82
	230 VAC NEMA 4/4x/7/9	A-DSV17	987.82
	24 VAC NEMA 4/4x/7/9	A-DSV18	987.82
	12 VDC NEMA 4/4x/7/9	A-DSV19	987.82
	24 VDC NEMA 4/4x/7/9	A-DSV20	987.82
Micro Limit Switches	2-SPDT NEMA 4 w/ 180° Visual Indicator ¹	A-DLS20	1140.31
	2-SPDT NEMA 7/9 w/ 180° Visual Indicator ¹	A-DLS25	2033.33
Proximity Limit Switches	2-SPDT NEMA 4/4X	A-DLS23	1840.67
Limit Switches	2-SPDT NEMA 4 ²	A-DLS24	1327.14
Speed Controller	Variable Speed Controller	A-DPSC1	1142.29
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61

Stem Extensions	Diaphragm Valve Stem Extension ³	A-DPSE-xxx-000	Call for pricing
------------------------	---	----------------	------------------

- NOTES: 1 - Micro Limit Switches used on valve sizes 1/2" through 2".
2 - Limit Switches used on valve sizes 2-1/2" & larger
3 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.



Actuated Valves Valve Actuation Questionnaire Checklist Ball Valves

Contact Name: _____ Date: _____
Business Name: _____
City: _____ State: _____ Country: _____
Phone: _____ Fax: _____ E-mail: _____
Project Name: _____

Ball Valves: System Media Pressure (Required) psi _____ kPa _____ Bar _____ Nominal Size in _____ mm _____ cm _____ Valve Quantity Each _____	
Ball Valve Type : True Union Industrial ☐ Three Way Horizontal ☐ (See 3-way orientation box below) PVC ☐ True Union Standard ☐ Three Way Vertical ☐ (See 3-way orientation box below) CPVC ☐ Compact ☐ Tandem Three Way ☐ Low-Extractable PVC ☐ True Union Tee Style ☐ Tandem 3-Way Orientation Document Required Other Valve Type ☐ _____	
Body Material : PVC ☐ EPDM ☐ CPVC ☐ FKM ☐ Low-Extractable PVC ☐ Other ☐ (If Other Explain) _____	
O-ring Seals : Socket ☐ Flange ☐ Threaded ☐ Spigot ☐ SR Threaded ☐ Metric ☐ DIN ☐ JIS ☐ BSP (Thread) ☐	
End Connector :	
Vertical 3- Way Orientation ☐ Single L Port ☐ Triple L Port ☐ Double L Port ☐ T Port	
Horizontal 3- Way Orientation ☐ L Port ☐ T Port	

Pneumatic ☐ Not all combinations may be available. FailSafe Type - (Position to which valve cycles upon air loss) ☐ Double Acting (No FailSafe. Stays in last activated position) ☐ Spring Return - Close (FailSafe in closed position upon air loss) ☐ Spring Return - Open (FailSafe in open position upon air loss) ☐ Other: _____ Operating Air Pressure (psi) - (Compressed air supply required to operate actuator) ☐ 80-150 ☐ Other: _____ Override Type - (Override used to cycle valve upon air loss) ☐ Basic ☐ Declutchable ☐ Other: _____ Aux. Limit Switches - (Additional mechanical switches to operate external lights, alarms etc. (set of 2)) ☐ SPDT - Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical Voltage Signal Type Specify Voltage: _____ Visual Indicator - (Provides local visual valve position indication) ☐ Low Profile ☐ Dome ☐ No Indicator Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle). ☐ Pneumatic Positioner (Air supply required to operate valve) Signal Pressure - (Air pressure required to position the valve) ☐ 3-15 psi ☐ Other: _____ ☐ Electro-Pneumatic Positioner (Air and voltage supply required to operate) Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ With Transmitter - (Sends output signal to PLC to provide valve position) Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids, solids and gases) ☐ 4 ☐ 4x ☐ Other: _____ Solenoid Valve - (Regulates actuator intake/exhaust air supply) ☐ 3 & 4 Way ☐ Dual Coil (Double Acting Actuators only) ☐ Other: _____ Solenoid Valve Voltage ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ ☐ Other Options: _____	Electric ☐ Not all combinations may be available. ☐ Basic Two Position (90 Degree Travel Standard) ☐ 3 Position 90 ☐ 180 ☐ FailSafe Position (if required) ☐ Fail Open - FailSafe in open position upon power loss ☐ Fail Close - FailSafe in closed position upon power loss Note: On "Fail Safe" Options Two Positions ONLY Override Not Recommended. Voltage Supply Power: ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ Frequency ☐ 50 Hertz ☐ 60 Hertz Phase ☐ Single ☐ Three Override Type - (Override used to cycle valve upon power loss) ☐ Basic ☐ Declutchable ☐ Other: _____ Duty Cycle (Amount of work valve can accomplish before requiring rest) ☐ 25% ☐ 75% ☐ Other/Min. Requirement: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle) ☐ Positioner with Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Transmitter - (Sends output signal to PLC to provide valve position) Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ Positioner - NO Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Auxiliary Limit Switches (Additional mechanical switches to operate external lights, alarms etc.) ☐ 2 ☐ 4 (Set of 2 each) Standard Accessories - All options not available in all actuator combinations ☐ Torque Sensor ☐ Friction Brake ☐ Battery Backup ☐ LED Indicating Lights (red / green) ☐ Speed Control ☐ 2 Wire Control Relay ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F] ☐ Other Options: _____
--	---

Rev. A 2010

Actuated Valves Valve Actuation Questionnaire Checklist Butterfly Valves



Contact Name: _____ Date: _____
Business Name: _____
City: _____ State: _____ Country: _____
Phone: _____ Fax: _____ E-mail: _____
Project Name: _____

Butterfly Valves:	System Media Pressure (Required)	psi	kPa	Bar	Valve Quantity Each
Nominal Size	in	mm	cm		
Butterfly Valve Type : Standard ☐ True Lug ☐ Tandem Diverting ☐ Pool Valve ☐ Tandem Three Way ☐ Wafer ☐ (Tandem 3-Way Orientation Document Required) Other Valve Type ☐ _____					
Body Material : PVC ☐ CPVC ☐ Polypropylene ☐					
O-ring Seals : Buna-N ☐ EPDM ☐ FKM ☐ Other ☐ (If Other Explain) _____					
Lug Materials : SS316 ☐ Zinc ☐					
☐ Other Information: _____					
Pneumatic ☐ Not all combinations may be available. FailSafe Type - (Position to which valve cycles upon air loss) ☐ Double Acting (No FailSafe. Stays in last activated position) ☐ Spring Return - Close (FailSafe in closed position upon air loss) ☐ Spring Return - Open (FailSafe in open position upon air loss) ☐ Other: _____ Operating Air Pressure (psi) - (Compressed air supply required to operate actuator) ☐ 80-150 ☐ Other: _____ Override Type - (Override used to cycle valve upon air loss) ☐ Basic ☐ Declutchable ☐ Other: _____ Aux. Limit Switches - (Additional mechanical switches to operate external lights, alarms etc. (set of 2)) ☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical Voltage Signal Type Specify Voltage: _____ Visual Indicator - (Provides local visual valve position indication) ☐ Low Profile ☐ Dome Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle). ☐ Pneumatic Positioner (Air supply required to operate valve) Signal Pressure - (Air pressure required to position the valve) ☐ 3-15 psi ☐ Other: _____ ☐ Electro-Pneumatic Positioner (Air and voltage supply required to operate) Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ With Transmitter - (Sends output signal to PLC to provide valve position) Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids, solids and gases) ☐ 4 ☐ 4x ☐ Other: _____ Solenoid Valve - (Regulates actuator intake/exhaust air supply) ☐ 3 & 4 Way ☐ Dual Coil (Double Acting Actuators only) ☐ Other: _____ Solenoid Valve Voltage ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ ☐ Other Options: _____			Electric ☐ Not all combinations may be available. ☐ Basic Two Position (90 Degree Travel Standard) FailSafe Position (if required) ☐ Fail Open - Open (FailSafe in open position upon power loss) ☐ Fail Close - Close (FailSafe in closed position upon power loss) Note: On "Fail Safe" options two positions ONLY. Override Not Recommended. Voltage Supply Power: ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ Frequency ☐ 50 Hertz ☐ 60 Hertz Phase ☐ Single ☐ Three Override Type - (Override used to cycle valve upon power loss) ☐ Basic ☐ Declutchable ☐ Other: _____ Duty Cycle (Amount of work valve can accomplish before requiring rest) ☐ 25% ☐ 75% ☐ Other/Min. Requirement: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle) ☐ Positioner with Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Transmitter - (Sends output signal to PLC to provide valve position) Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ Positioner - NO Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Auxiliary Limit Switches (Additional mechanical switches to operate external lights, alarms etc.) ☐ 2 ☐ 4 (Set of 2 each) Standard Accessories - All options not available in all actuator combinations ☐ Torque Sensor ☐ Torque Sensor ☐ Battery Backup ☐ LED Indicating Lights (red /green) ☐ Speed Control ☐ 2 Wire Control Relay ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F] ☐ Other Options: _____		

Rev. A 2010



Actuated Valves Valve Actuation Questionnaire Checklist Diaphragm Valves

Contact Name: _____ Date: _____
Business Name: _____
City: _____ State: _____ Country: _____
Phone: _____ Fax: _____ E-mail: _____
Project Name: _____

Diaphragm Valves: System Media Pressure (Required)	psi _____ kPa _____ Bar _____	Valve Quantity Each
Nominal Size	in _____ mm _____ cm _____	
Diaphragm Valve Type: EPDM ☐ FKM ☐ PTFE/FKM ☐ PTFE/EPDM ☐ Other Valve Type ☐ _____	Body Material: PVC ☐ CPVC ☐ Low-Extractable PVC ☐ Polypropylene ☐	End Connector O-rings 1/2" - 2": EPDM ☐ FKM ☐ PTFE/FKM ☐ PTFE/EPDM ☐ Other ☐ (If Other Explain) _____ End Connector: Socket ☐ SR Threaded ☐ Flange ☐ Spigot ☐
☐ Other information: _____		
Not all combinations may be available. Unitized Pneumatic ☐ Pneumatic ☐ FailSafe Type - (Position to which valve cycles upon air loss) ☐ Double Acting (No FailSafe. Stays in last activated position) ☐ Spring Return - Close (FailSafe in <u>closed</u> position upon air loss) ☐ Spring Return - Open (FailSafe in <u>open</u> position upon air loss) ☐ Other: _____ Operating Air Pressure (psi) - (Compressed air supply required to operate actuator) ☐ 80-116 ☐ Other: _____ Override Type - (Override used to cycle valve upon air loss. Not available in sizes 1/2" - 2") ☐ Basic ☐ Dec clutchable ☐ Other: _____ Aux. Limit Switches - (Additional mechanical switches to operate external lights, alarms etc. (set of 2)) ☐ SPDT - Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical Voltage Signal Type: Specify Voltage: _____ Visual Indicator - (Provides local visual valve position indication) ☐ Low Profile ☐ Dome Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle). ☐ Pneumatic Positioner (Air supply required to operate valve) Signal Pressure - (Air pressure required to position the valve) ☐ 3-15 psi ☐ Other: _____ ☐ Electro-Pneumatic Positioner (Air and voltage supply required to operate) Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ With Transmitter - (Sends output signal to PLC to provide valve position) Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ Solenoid Valve - (Regulates actuator intake/exhaust air supply) ☐ 3 way (Air-to-Spring) ☐ 4 way (Double Acting Actuators only) ☐ Other: _____ Solenoid Valve Voltage ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids, solids and gases) ☐ 4 ☐ 4x ☐ Other: _____ ☐ Other Options: _____ _____	Not all combinations may be available. Electric Multi Turn ☐ Voltage Supply Power: ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ Frequency ☐ 50 Hertz ☐ 60 Hertz Phase ☐ Single ☐ Three Override Type - (Override used to cycle valve upon power loss) ☐ Basic ☐ Dec clutchable ☐ Other: _____ Duty Cycle (Amount of work valve can accomplish before requiring rest) ☐ 25% ☐ 75% ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle) ☐ Positioner with Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Transmitter - (Sends output signal to PLC to provide valve position) Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ Positioner - NO Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Auxiliary Limit Switches (Additional mechanical switches to operate external lights, alarms etc.) ☐ 2 ☐ 4 (Set of 2 each) Standard Accessories - All options not available in all actuator combinations ☐ Torque Sensor ☐ Battery Backup ☐ LED Indicating Lights (red /green) ☐ Speed Control ☐ 2 Wire Control Relay ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F] ☐ Other Options: _____ _____	

Rev. A 2010

Strainers & Filters Filters



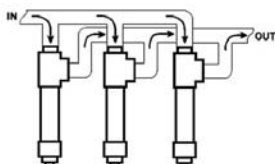
Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.



- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install

- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size (Bushings sold separately)

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



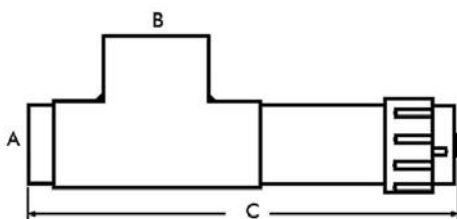
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM					
FL-16"	2-1/2 /3 x 4	1	0	020	555.11
FL-32"	2-1/2 /3 x 4	1	0	020	567.73
FL-50	2-1/2 /3 x 4	1	0	020	643.40
FL-76	2-1/2 /3 x 4	1	0	020	777.14
FL-100	2-1/2 /3 x 4	1	0	020	706.48
FL-150	2-1/2 /3 x 4	1	0	020	731.74
FL-200	2-1/2 /3 x 4	1	0	020	794.81

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.

50 GPM

MFL-16"	2-1/2 /3 x 2	1	0	020	466.82
MFL-32"	2-1/2 /3 x 2	1	0	020	474.37
MFL-50	2-1/2 /3 x 2	1	0	020	489.48
MFL-76	2-1/2 /3 x 2	1	0	020	592.98
MFL-100	2-1/2 /3 x 2	1	0	020	517.27
MFL-150	2-1/2 /3 x 2	1	0	020	542.49
MFL-200	2-1/2 /3 x 2	1	0	020	605.57

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.

Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FL-50-1	50 Mesh	3	0	020	479.42

Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.

50 GPM (12" Length)

MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.

Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM Filter Body					
FL-11	2-1/2 /3 X 4	1	0	020	378.46
50 GPM Filter Body					
MFL-11	2-1/2 /3 X 2	1	0	020	290.17

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-4A	3X1-1/4	70	0	020	31.55
FL-5A	3X1/4	70	0	020	31.55



Strainers & Filters Filters & Hose Filters

Filters

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FCG-5	3	2	0	020	10.04

Cap Gasket Only

Components for New-Style Filters w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-4B	4X1-1/4	25	0	020	57.97

Filter Cap w/O-rings

Components for New-Style Filters w/4" Bottom Cap (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Filter Cap w/O-rings

FL-5B	4X1/4	1	0	020	93.78
-------	-------	---	---	-----	-------

Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)

Cap O-Ring Only

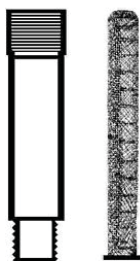
B-242	- - -	100	0	901	.83
-------	-------	-----	---	-----	-----

Filter Bushing O-Rings

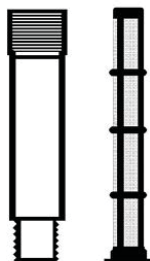
B-335-60	- - -	100	0	901	3.66
----------	-------	-----	---	-----	------

Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals

Hose Filters



7 GPM Steel



7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

7 GPM Hose Filter Assembly

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
with Stainless Steel Screen					
HF-20	3/4	10	60	020	18.71
HF-30	3/4	10	60	020	18.71
HF-50	3/4	10	60	020	18.71
HF-80	3/4	10	60	020	18.71
HF-100	3/4	10	60	020	19.43
HF-150	3/4	10	60	020	19.67
HF-200	3/4	10	60	020	20.20
with Plastic/Nylon Screen					
HF-150N	3/4	10	60	020	19.67

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Stainless Steel Screen					
HF-20-1W	5	25	150	020	6.84
HF-30-1W	5	25	150	020	6.84
HF-50-1W	5	25	150	020	6.84
HF-80-1W	5	25	150	020	6.84
HF-100-1W	5	25	150	020	10.11
HF-150-1W	5	25	150	020	10.11
HF-200-1W	5	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	4-3/4	25	150	020	10.11

7 GPM Hose Filter Body Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Hose Filter Body w/o screen					
HF	3/4	10	60	020	14.07
Hose Washer					
W-100	3/4	50	1500	020	.04
Screen Washer					
S-W	- - -	600	0	901	.21

Strainers & Filters

In-line Tee Style Filters and Reverse In-line Tee Style Filters



100 GPM and 50 GPM • PVC White • Buna O-ring Seal



100 GPM



50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

100 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	555.11
TF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	567.73
TF-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	643.40
TF-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	777.14
TF-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	706.48
TF-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	731.74
TF-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	794.81

50 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MTF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	466.82
MTF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	474.37
MTF-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	489.48
MTF-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	592.98
MTF-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	517.27
MTF-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	542.49
MTF-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	605.57

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

100 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	555.11
TF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	567.73
TFR-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	643.40
TFR-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	777.14
TFR-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	706.48
TFR-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	731.74
TFR-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	794.81

50 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MTF-16"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	466.82
MTF-32"	2-1/2" / 3 x 2-1/2" / 3	1	0	020	474.37
MTFR-50	2-1/2" / 3 x 2-1/2" / 3	1	0	020	489.48
MTFR-76	2-1/2" / 3 x 2-1/2" / 3	1	0	020	592.98
MTFR-100	2-1/2" / 3 x 2-1/2" / 3	1	0	020	517.27

50 GPM PVC White Reverse Tee Filter (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MTFR-150	2-1/2" / 3 x 2-1/2" / 3	1	0	020	542.49
MTFR-200	2-1/2" / 3 x 2-1/2" / 3	1	0	020	605.57

*Standard TF-16, TF-32, MTF-16 & MTF-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FL-50-1	50 Mesh	3	0	020	479.42
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14



Strainers & Filters

In-line Tee Style Filters and Reverse In-line Tee Style Filters

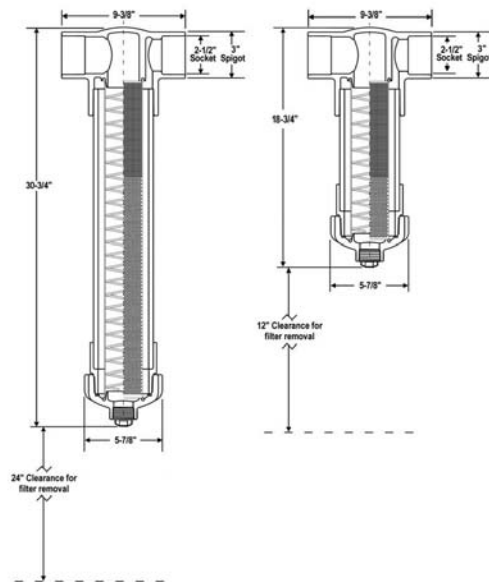
50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53

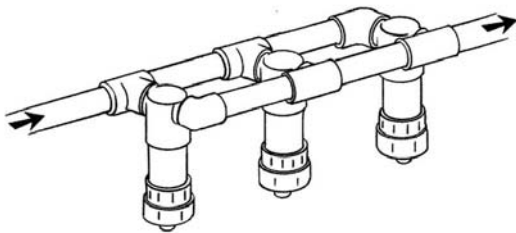
IN-LINE TECHNICAL INFORMATION

Dimensions

Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

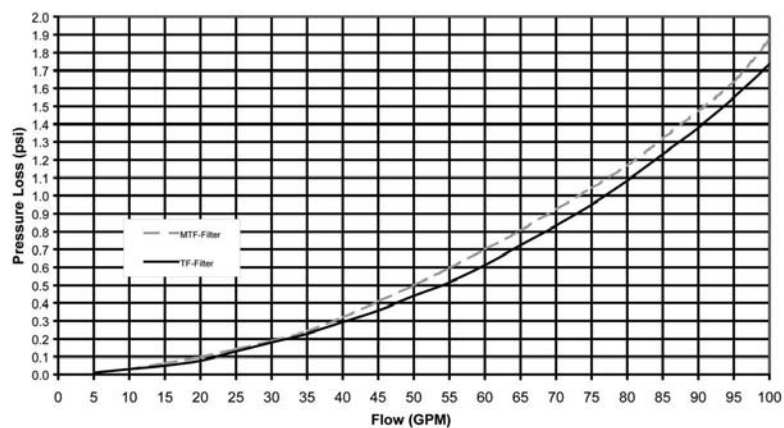


Parallel Filter Installation



- When more than 100 gpm is required, filters may be installed in parallel.
- When installing filter, allow space for removing filter screen for cleaning.
- Remove stainless steel filter screen before solvent welding filter to pipe manifold to avoid cement contact with screen.
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance.
- Installation in a shaded area is preferred.

Pressure Loss





Strainers & Filters Reverse Flow Filters



100 GPM



50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

100 GPM Reverse Flow Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
FLR-16"	4X2-1/2 /3	1	0	020	555.11
FLR-32"	4X2-1/2 /3	1	0	020	567.73
FLR-50	4X2-1/2 /3	1	0	020	643.40
FLR-76	4X2-1/2 /3	1	0	020	777.14
FLR-100	4X2-1/2 /3	1	0	020	706.48
FLR-150	4X2-1/2 /3	1	0	020	731.74
FLR-200	4X2-1/2 /3	1	0	020	794.81

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
MFLR-16"	2X2-1/2 /3	1	0	020	466.82
MFLR-32"	2X2-1/2 /3	1	0	020	474.37
MFLR-50	2X2-1/2 /3	1	0	020	489.48
MFLR-76	2X2-1/2 /3	1	0	020	592.98
MFLR-100	2X2-1/2 /3	1	0	020	517.27
MFLR-150	2X2-1/2 /3	1	0	020	542.49
MFLR-200	2X2-1/2 /3	1	0	020	605.57

*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Reverse Flow Filter Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53

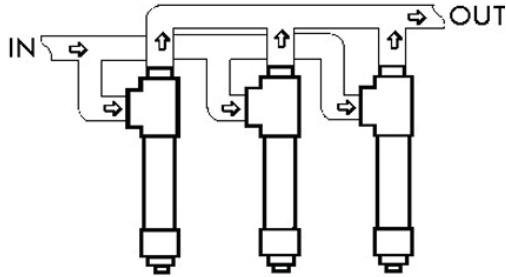
Strainers & Filters Reverse Flow Filters



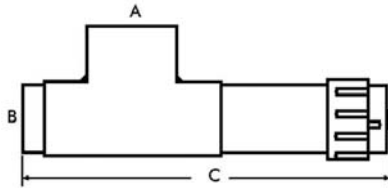
Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: FLR-50 = 50 Mesh

Typical Reverse Flow Application



- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in direct sunlight, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



Series	A Inlet	B Outlet		C Overall Length	Screen Length	Filter Approx. Weight
		Socket	Spigot			
FLR	4	2-1/2	3	28	24	8
MFLR	4	2-1/2	3	16	12	4-3/4



Strainers & Filters In-line Tee-Style Filters



Socket/Spigot

All Filters are 2-1/2"x 2-1/2"
Inlet/Outlet Connection

Note: 2-1/2" Socket is also a 3" Spigot

Pressure Rating @ 73°F (23°C), Water
200 psi

Mesh Size Codes

Mesh Size	Size Code
1/16" Holes	16
1/32" Holes	32
50 Mesh	50
76 Mesh	76
100 Mesh	100
150 Mesh	150
200 Mesh	200

Note: Standard flow filtration path is internal to external. Reverse-flow filtration flows from external to internal side of filter screen.

100 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 722.18	TF3-16 775.85	1	0	295
32	TF2-32 738.46	TF3-32 793.40	1	0	295
50	TF2-50 836.89	TF3-50 947.41	1	0	295
76	TF2-76 1010.88	TF3-76 1086.13	1	0	295
100	TF2-100 918.88	TF3-100 987.20	1	0	295
150	TF2-150 951.77	TF3-150 1022.47	1	0	295
200	TF2-200 1033.93	TF3-200 1110.76	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 607.18	MTF3-16 652.27	1	0	295
32	MTF2-32 617.01	MTF3-32 662.93	1	0	295
50	MTF2-50 636.66	MTF3-50 684.02	1	0	295
76	MTF2-76 771.17	MTF3-76 828.54	1	0	295
100	MTF2-100 672.75	MTF3-100 722.68	1	0	295
150	MTF2-150 705.62	MTF3-150 758.12	1	0	295
200	MTF2-200 787.60	MTF3-200 846.25	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 722.18	TF3-16 775.85	1	0	295
32	TF2-32 738.46	TF3-32 793.40	1	0	295
50	TFR2-50 836.89	TFR3-50 899.08	1	0	295
76	TFR2-76 1010.88	TFR3-76 1086.13	1	0	295
100	TFR2-100 918.88	TFR3-100 987.20	1	0	295
150	TFR2-150 951.77	TFR3-150 1022.47	1	0	295
200	TFR2-200 1033.93	TFR3-200 1110.76	1	0	295

100 GPM PVC Gray Reverse Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

50 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 607.18	MTF3-16 652.27	1	0	295
32	MTF2-32 617.01	MTF3-32 662.93	1	0	295
50	MTFR2-50 636.66	MTFR3-50 684.02	1	0	295
76	MTFR2-76 771.17	MTFR3-76 828.54	1	0	295
100	MTFR2-100 672.75	MTFR3-100 722.68	1	0	295
150	MTFR2-150 705.62	MTFR3-150 758.12	1	0	295
200	MTFR2-200 787.60	MTFR3-200 846.25	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16C 934.36	TF3-16C 1003.79	1	0	296
32	TF2-32C 955.31	TF3-32C 1026.52	1	0	296
50	TF2-50C 1082.91	TF3-50C 1163.12	1	0	296
76	TF2-76C 1307.78	TF3-76C 1405.26	1	0	296
100	TF2-100C 1188.73	TF3-100C 1277.18	1	0	296
150	TF2-150C 1231.25	TF3-150C 1322.93	1	0	296
200	TF2-200C 1337.60	TF3-200C 1436.98	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16C 785.51	MTF3-16C 843.82	1	0	296
32	MTF2-32C 798.24	MTF3-32C 857.68	1	0	296
50	MTF2-50C 823.68	MTF3-50C 884.92	1	0	296
76	MTF2-76C 997.68	MTF3-76C 1071.94	1	0	296

Strainers & Filters In-line Tee-Style Filters



50 GPM CPVC Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Stainless Steel Screen

100	MTF2-100C 870.24	MTF3-100C 934.85	1	0	296
150	MTF2-150C 912.93	MTF3-150C 979.63	1	0	296
200	MTF2-200C 1018.96	MTF3-200C 1094.81	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Stainless Steel Screen

16	TF2-16C 934.36	TF3-16C 1003.79	1	0	296
32	TF2-32C 955.31	TF3-32C 1026.52	1	0	296
50	TFR2-50C 1082.91	TFR3-50C 1163.12	1	0	296
76	TFR2-76C 1307.78	TFR3-76C 1405.26	1	0	296
100	TFR2-100C 1188.73	TFR3-100C 1277.18	1	0	296
150	TFR2-150C 1231.25	TFR3-150C 1322.93	1	0	296
200	TFR2-200C 1337.60	TFR3-200C 1436.98	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Stainless Steel Screen

16	MTF2-16C 785.51	MTF3-16C 843.82	1	0	296
32	MTF2-32C 798.24	MTF3-32C 857.68	1	0	296
50	MTFR2-50C 823.68	MTFR3-50C 884.92	1	0	296
76	MTFR2-76C 997.68	MTFR3-76C 1071.94	1	0	296
100	MTFR2-100C 870.24	MTFR3-100C 934.85	1	0	296
150	MTFR2-150C 912.93	MTFR3-150C 979.63	1	0	296
200	MTFR2-200C 1018.96	MTFR3-200C 1094.81	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FL-50-1	50 Mesh	3	0	020	479.42
FL-76-1	76 Mesh	3	0	020	474.37
FL-100-1	100 Mesh	3	0	020	373.45
FL-150-1	150 Mesh	3	0	020	403.71
FL-200-1	200 Mesh	3	0	020	499.60

NOTE: When ordering replacement screens for TF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04

50 GPM Filter Replacement Screens for MTF Filters (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-32-1	1/32" Holes	3	0	020	232.14
MFL-50-1	50 Mesh	3	0	020	252.33
MFL-76-1	76 Mesh	3	0	020	358.29
MFL-100-1	100 Mesh	3	0	020	277.57
MFL-150-1	150 Mesh	3	0	020	307.85
MFL-200-1	200 Mesh	3	0	020	378.46

NOTE: When ordering replacement screens for MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	1/16" Holes	3	0	020	222.04
FL-32-1	1/32" Holes	3	0	020	242.22
FLR-50-1	50 Mesh	3	0	020	243.39
FLR-76-1	76 Mesh	3	0	020	474.37
FLR-100-1	100 Mesh	3	0	020	337.02
FLR-150-1	150 Mesh	3	0	020	383.52
FLR-200-1	200 Mesh	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTRF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	1/16" Holes	3	0	020	222.04
MFL-32-1	1/32" Holes	3	0	020	232.14
MFLR-50-1	50 Mesh	3	0	020	256.21
MFLR-76-1	76 Mesh	3	0	020	358.29
MFLR-100-1	100 Mesh	3	0	020	263.67
MFLR-150-1	150 Mesh	3	0	020	292.44
MFLR-200-1	200 Mesh	3	0	020	359.53



Strainers & Filters Y-Strainers



Socket



Flanged



SR Thread

Part numbers shown reflect a mesh size of 8. For different mesh sizes, substitute Mesh Code in part number as specified in chart below.

U.S. Standard Mesh Sieve No.	Sieve Opening Size (in.)	Part Number Mesh Code
8	0.094	8
12	0.062	12
20	0.033	20
30	0.024	30

Example: for 12 Mesh, specify
YS22P12-005

Additional Mesh Sizes available on request.



True Union

Pressure Rating @ 73°F (23°C), Water

1/2" - 2" 150 psi

3" - 4" 90 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure
De-ratings Apply

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005 87.04	YS22S8-005 172.24	YS32P8-005 95.06	YS32S8-005 189.25	1	18	102
3/4	YS22P8-007 97.25	YS22S8-007 196.97	YS32P8-007 107.17	YS32S8-007 222.15	1	18	102
1	YS22P8-010 106.94	YS22S8-010 233.65	YS32P8-010 117.74	YS32S8-010 256.88	1	12	102
1-1/4	YS22P8-012 181.08	YS22S8-012 337.12	YS32P8-012 201.22	YS32S8-012 371.68	1	8	102
1-1/2	YS22P8-015 191.60	YS22S8-015 359.36	YS32P8-015 212.92	YS32S8-015 394.60	1	8	102
2	YS22P8-020 225.07	YS22S8-020 405.91	YS32P8-020 250.05	YS32S8-020 450.99	1	4	102
3	YS22P8-030 518.73	YS22S8-030 700.77	YS32P8-030 557.40	YS32S8-030 739.44	1	0	102
4	YS22P8-040 906.98	YS22S8-040 1135.74	YS32P8-040 976.26	YS32S8-040 1204.99	1	0	102

PVC - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005SR 91.73	YS21S8-005SR 176.94	YS31P8-005SR 99.72	YS31S8-005SR 193.93	1	18	102
3/4	YS21P8-007SR 104.00	YS21S8-007SR 203.71	YS31P8-007SR 113.89	YS31S8-007SR 228.94	1	12	102
1	YS21P8-010SR 116.95	YS21S8-010SR 243.69	YS31P8-010SR 127.76	YS31S8-010SR 266.94	1	8	102
1-1/4	YS21P8-012SR 197.42	YS21S8-012SR 353.45	YS31P8-012SR 217.57	YS31S8-012SR 388.01	1	8	102
1-1/2	YS21P8-015SR 211.67	YS21S8-015SR 379.44	YS31P8-015SR 232.94	YS31S8-015SR 414.79	1	4	102
2	YS21P8-020SR 259.99	YS21S8-020SR 440.82	YS31P8-020SR 284.99	YS31S8-020SR 485.93	1	0	102

Strainers & Filters Y-Strainers



PVC - SR Threaded Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
3	YS21P8-030SR 562.40	YS21S8-030SR 744.27	YS31P8-030SR 600.91	YS31S8-030SR 1111.76	1	0	102
4	YS21P8-040SR 952.08	YS21S8-040SR 1180.84	YS31P8-040SR 1250.13	YS31S8-040SR 1250.13	1	0	102

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005 142.27	YS23S8-005 240.64	YS33P8-005 157.93	YS33S8-005 314.49	1	8	102
3/4	YS23P8-007 151.15	YS23S8-007 274.78	YS33P8-007 163.91	YS33S8-007 360.43	1	8	102
1	YS23P8-010 161.39	YS23S8-010 303.73	YS33P8-010 175.81	YS33S8-010 422.07	1	8	102
1-1/4	YS23P8-012 258.72	YS23S8-012 445.11	YS33P8-012 282.06	YS33S8-012 604.78	1	4	102
1-1/2	YS23P8-015 288.31	YS23S8-015 481.06	YS33P8-015 320.13	YS33S8-015 648.98	1	4	102
2	YS23P8-020 362.47	YS23S8-020 572.98	YS33P8-020 397.73	YS33S8-020 737.27	1	0	102
3	YS23P8-030 800.66	YS23S8-030 982.68	YS33P8-030 860.24	YS33S8-030 1042.78	1	0	102
4	YS23P8-040 1290.39	YS23S8-040 1519.16	YS33P8-040 1387.05	YS33S8-040 1615.79	1	0	102

PVC Clear - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005CL 87.04	YS22S8-005CL 172.24	YS32P8-005CL 95.06	YS32S8-005CL 189.25	1	18	103
3/4	YS22P8-007CL 97.25	YS22S8-007CL 196.97	YS32P8-007CL 107.17	YS32S8-007CL 222.15	1	18	103
1	YS22P8-010CL 106.94	YS22S8-010CL 233.65	YS32P8-010CL 117.74	YS32S8-010CL 256.88	1	12	103
1-1/4	YS22P8-012CL 181.08	YS22S8-012CL 337.12	YS32P8-012CL 201.22	YS32S8-012CL 371.68	1	8	103
1-1/2	YS22P8-015CL 191.60	YS22S8-015CL 359.36	YS32P8-015CL 212.92	YS32S8-015CL 394.60	1	8	103
2	YS22P8-020CL 225.07	YS22S8-020CL 439.60	YS32P8-020CL 250.05	YS32S8-020CL 450.99	1	4	103
3	YS22P8-030CL 518.73	YS22S8-030CL 700.77	YS32P8-030CL 557.40	YS32S8-030CL 739.44	1	0	103
4	YS22P8-040CL 906.98	YS22S8-040CL 1135.74	YS32P8-040CL 976.26	YS32S8-040CL 1204.99	1	0	103

PVC Clear - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005CLSR 91.73	YS21S8-005CLSR 176.94	YS31P8-005CLSR 99.72	YS31S8-005CLSR 193.93	1	18	103
3/4	YS21P8-007CLSR 104.00	YS21S8-007CLSR 203.71	YS31P8-007CLSR 113.89	YS31S8-007CLSR 228.94	1	12	103
1	YS21P8-010CLSR 116.95	YS21S8-010CLSR 243.69	YS31P8-010CLSR 127.76	YS31S8-010CLSR 266.94	1	8	103
1-1/4	YS21P8-012CLSR 197.42	YS21S8-012CLSR 353.45	YS31P8-012CLSR 217.57	YS31S8-012CLSR 388.01	1	8	103
1-1/2	YS21P8-015CLSR 211.67	YS21S8-015CLSR 379.44	YS31P8-015CLSR 232.94	YS31S8-015CLSR 414.79	1	4	103
2	YS21P8-020CLSR 259.99	YS21S8-020CLSR 440.82	YS31P8-020CLSR 284.99	YS31S8-020CLSR 485.93	1	0	103
3	YS21P8-030CLSR 562.40	YS21S8-030CLSR 744.27	YS31P8-030CLSR 600.91	YS31S8-030CLSR 782.93	1	0	103
4	YS21P8-040CLSR 952.08	YS21S8-040CLSR 1180.84	YS31P8-040CLSR 1250.13	YS31S8-040CLSR 1250.13	1	0	103

PVC Clear - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005CL 142.27	YS23S8-005CL 240.64	YS33P8-005CL 157.93	YS33S8-005CL 314.49	1	8	103
3/4	YS23P8-007CL 151.15	YS23S8-007CL 274.78	YS33P8-007CL 163.91	YS33S8-007CL 360.43	1	8	103
1	YS23P8-010CL 161.39	YS23S8-010CL 303.73	YS33P8-010CL 175.81	YS33S8-010CL 422.07	1	8	103
1-1/4	YS23P8-012CL 258.72	YS23S8-012CL 445.11	YS33P8-012CL 282.06	YS33S8-012CL 604.78	1	4	103



Strainers & Filters Y-Strainers & True Union Y-Strainers

PVC Clear - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1-1/2	YS23P8-015CL 288.31	YS23S8-015CL 481.06	YS33P8-015CL 320.13	YS33S8-015CL 648.98	1	4	103
2	YS23P8-020CL 362.47	YS23S8-020CL 572.98	YS33P8-020CL 397.73	YS33S8-020CL 737.27	1	0	103
3	YS23P8-030CL 800.66	YS23S8-030CL 982.68	YS33P8-030CL 860.24	YS33S8-030CL 1042.78	1	0	103
4	YS23P8-040CL 1290.39	YS23S8-040CL 1519.16	YS33P8-040CL 1387.05	YS33S8-040CL 1615.79	1	0	103

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22C8-005C 232.20	YS22S8-005C 319.13	YS32C8-005C 260.02	YS32S8-005C 358.72	1	18	104
3/4	YS22C8-007C 255.13	YS22S8-007C 362.93	YS32C8-007C 287.23	YS32S8-007C 407.93	1	18	104
1	YS22C8-010C 324.19	YS22S8-010C 448.89	YS32C8-010C 365.17	YS32S8-010C 503.75	1	12	104
1-1/4	YS22C8-012C 470.62	YS22S8-012C 647.68	YS32C8-012C 566.36	YS32S8-012C 685.83	1	8	104
1-1/2	YS22C8-015C 505.52	YS22S8-015C 669.04	YS32C8-015C 587.58	YS32S8-015C 748.02	1	8	104
2	YS22C8-020C 715.75	YS22S8-020C 838.72	YS32C8-020C 756.31	YS32S8-020C 914.78	1	4	104
3	YS22C8-030C 853.81	YS22S8-030C 1021.35	YS32C8-030C 900.54	YS32S8-030C 1098.69	1	0	104
4	YS22C8-040C 1478.88	YS22S8-040C 1691.52	YS32C8-040C 1590.03	YS32S8-040C 1818.78	1	0	104

CPVC - SR Threaded Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21C8-005CSR 240.65	YS21S8-005CSR 327.58	YS31C8-005CSR 268.48	YS31S8-005CSR 367.18	1	18	104
3/4	YS21C8-007CSR 264.18	YS21S8-007CSR 371.96	YS31C8-007CSR 296.27	YS31S8-007CSR 416.98	1	12	104
1	YS21C8-010CSR 344.92	YS21S8-010CSR 469.59	YS31C8-010CSR 385.91	YS31S8-010CSR 524.43	1	8	104
1-1/4	YS21C8-012CSR 491.91	YS21S8-012CSR 632.51	YS31C8-012CSR 587.65	YS31S8-012CSR 707.15	1	8	104
1-1/2	YS21C8-015CSR 530.17	YS21S8-015CSR 693.68	YS31C8-015CSR 667.73	YS31S8-015CSR 772.65	1	4	104
2	YS21C8-020CSR 750.85	YS21S8-020CSR 873.82	YS31C8-020CSR 841.61	YS31S8-020CSR 949.85	1	0	104
3	YS21C8-030CSR 897.31	YS21S8-030CSR 1064.85	YS31C8-030CSR 960.15	YS31S8-030CSR 1142.18	1	0	104
4	YS21C8-040CSR 1523.98	YS21S8-040CSR 1736.64	YS31C8-040CSR 1635.14	YS31S8-040CSR 1863.91	1	0	104

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23C8-005C 374.44	YS23S8-005C 459.72	YS33C8-005C 415.61	YS33S8-005C 512.87	1	8	104
3/4	YS23C8-007C 397.73	YS23S8-007C 489.04	YS33C8-007C 431.29	YS33S8-007C 545.78	1	8	104
1	YS23C8-010C 424.71	YS23S8-010C 543.37	YS33C8-010C 462.66	YS33S8-010C 605.78	1	8	104
1-1/4	YS23C8-012C 680.81	YS23S8-012C 838.08	YS33C8-012C 742.20	YS33S8-012C 933.22	1	4	104
1-1/2	YS23C8-015C 758.69	YS23S8-015C 931.21	YS33C8-015C 842.40	YS33S8-015C 1038.88	1	4	104
2	YS23C8-020C 953.87	YS23S8-020C 1164.35	YS33C8-020C 1046.67	YS33S8-020C 1218.31	1	0	104
3	YS23C8-030C 1303.27	YS23S8-030C 1472.44	YS33C8-030C 1300.05	YS33S8-030C 1583.59	1	0	104
4	YS23C8-040C 2086.21	YS23S8-040C 2298.85	YS33C8-040C 2244.07	YS33S8-040C 2472.85	1	0	104

PVC Gray - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005 91.63	YS2AS8-005 181.29	YS3AP8-005 100.07	YS3AS8-005 199.22	1	12	102
3/4	YS2AP8-007 102.36	YS2AS8-007 207.33	YS3AP8-007 112.80	YS3AS8-007 233.86	1	8	102

Strainers & Filters True Union Y-Strainers



PVC Gray - True Union Socket Ends (continued)

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1	YS2AP8-010 112.54	YS2AS8-010 245.96	YS3AP8-010 123.91	YS3AS8-010 270.43	1	8	102
1-1/4	YS2AP8-012 190.62	YS2AS8-012 355.49	YS3AP8-012 211.82	YS3AS8-012 391.22	1	4	102
1-1/2	YS2AP8-015 201.71	YS2AS8-015 378.27	YS3AP8-015 224.11	YS3AS8-015 415.39	1	0	102
2	YS2AP8-020 236.91	YS2AS8-020 427.24	YS3AP8-020 263.23	YS3AS8-020 474.74	1	0	102
3	YS2AP8-030 546.04	YS2AS8-030 737.64	YS3AP8-030 586.73	YS3AS8-030 778.36	1	0	102
4	YS2AP8-040 954.72	YS2AS8-040 1195.52	YS3AP8-040 1027.61	YS3AS8-040 1268.42	1	0	102

PVC Gray - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005 91.63	YS2BS8-005 181.29	YS3BP8-005 100.07	YS3BS8-005 199.22	1	12	102
3/4	YS2BP8-007 102.36	YS2BS8-007 207.33	YS3BP8-007 112.80	YS3BS8-007 233.86	1	8	102
1	YS2BP8-010 112.54	YS2BS8-010 245.96	YS3BP8-010 123.91	YS3BS8-010 270.43	1	8	102
1-1/4	YS2BP8-012 190.62	YS2BS8-012 355.49	YS3BP8-012 211.82	YS3BS8-012 391.22	1	4	102
1-1/2	YS2BP8-015 201.71	YS2BS8-015 378.27	YS3BP8-015 224.11	YS3BS8-015 415.39	1	0	102
2	YS2BP8-020 236.91	YS2BS8-020 427.24	YS3BP8-020 263.23	YS3BS8-020 474.74	1	0	102
3	YS2BP8-030 546.04	YS2BS8-030 737.64	YS3BP8-030 586.73	YS3BS8-030 778.36	1	0	102
4	YS2BP8-040 954.72	YS2BS8-040 1195.52	YS3BP8-040 1027.61	YS3BS8-040 1268.42	1	0	102

PVC Gray - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005SR 96.54	YS2BS8-005SR 186.22	YS3BP8-005SR 104.99	YS3BS8-005SR 204.16	1	12	102
3/4	YS2BP8-007SR 109.49	YS2BS8-007SR 214.43	YS3BP8-007SR 119.88	YS3BS8-007SR 240.98	1	8	102
1	YS2BP8-010SR 123.08	YS2BS8-010SR 256.48	YS3BP8-010SR 134.45	YS3BS8-010SR 280.98	1	8	102
1-1/4	YS2BP8-012SR 207.80	YS2BS8-012SR 372.05	YS3BP8-012SR 229.01	YS3BS8-012SR 408.42	1	4	102
1-1/2	YS2BP8-015SR 222.80	YS2BS8-015SR 399.41	YS3BP8-015SR 245.21	YS3BS8-015SR 436.62	1	0	102
2	YS2BP8-020SR 273.66	YS2BS8-020SR 464.01	YS3BP8-020SR 300.00	YS3BS8-020SR 511.52	1	0	102
3	YS2BP8-030SR 591.82	YS2BS8-030SR 783.44	YS3BP8-030SR 632.51	YS3BS8-030SR 824.15	1	0	102
4	YS2BP8-040SR 1002.22	YS2BS8-040SR 1243.00	YS3BP8-040SR 1075.13	YS3BS8-040SR 1315.92	1	0	102

PVC Clear - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005CL 91.63	YS2AS8-005CL 181.29	YS3AP8-005CL 100.07	YS3AS8-005CL 199.22	1	12	103
3/4	YS2AP8-007CL 102.36	YS2AS8-007CL 207.33	YS3AP8-007CL 112.80	YS3AS8-007CL 233.86	1	8	103
1	YS2AP8-010CL 112.54	YS2AS8-010CL 245.96	YS3AP8-010CL 123.91	YS3AS8-010CL 270.43	1	8	103
1-1/4	YS2AP8-012CL 190.62	YS2AS8-012CL 354.86	YS3AP8-012CL 211.82	YS3AS8-012CL 391.22	1	4	103
1-1/2	YS2AP8-015CL 201.71	YS2AS8-015CL 378.27	YS3AP8-015CL 224.11	YS3AS8-015CL 415.39	1	0	103
2	YS2AP8-020CL 236.91	YS2AS8-020CL 427.24	YS3AP8-020CL 263.23	YS3AS8-020CL 474.74	1	0	103
3	YS2AP8-030CL 546.04	YS2AS8-030CL 737.64	YS3AP8-030CL 586.73	YS3AS8-030CL 778.36	1	0	103
4	YS2AP8-040CL 954.72	YS2AS8-040CL 1195.52	YS3AP8-040CL 1027.61	YS3AS8-040CL 1268.42	1	0	103



Strainers & Filters True Union Y-Strainers

PVC Clear - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CL 91.63	YS2BS8-005CL 181.29	YS3BP8-005CL 100.07	YS3BS8-005CL 199.22	1	12	103
3/4	YS2BP8-007CL 102.36	YS2BS8-007CL 207.33	YS3BP8-007CL 112.80	YS3BS8-007CL 233.86	1	8	103
1	YS2BP8-010CL 112.54	YS2BS8-010CL 245.97	YS3BP8-010CL 123.91	YS3BS8-010CL 270.43	1	8	103
1-1/4	YS2BP8-012CL 190.62	YS2BS8-012CL 354.86	YS3BP8-012CL 211.82	YS3BS8-012CL 391.22	1	4	103
1-1/2	YS2BP8-015CL 201.71	YS2BS8-015CL 378.27	YS3BP8-015CL 224.11	YS3BS8-015CL 415.39	1	0	103
2	YS2BP8-020CL 236.91	YS2BS8-020CL 427.24	YS3BP8-020CL 263.23	YS3BS8-020CL 474.74	1	0	103
3	YS2BP8-030CL 546.04	YS2BS8-030CL 737.64	YS3BP8-030CL 586.73	YS3BS8-030CL 778.36	1	0	103
4	YS2BP8-040CL 954.72	YS2BS8-040CL 1195.52	YS3BP8-040CL 1027.61	YS3BS8-040CL 1268.42	1	0	103

PVC Clear - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CLSR 96.54	YS2BS8-005CLSR 186.22	YS3BP8-005CLSR 104.99	YS3BS8-005CLSR 204.16	1	12	103
3/4	YS2BP8-007CLSR 109.49	YS2BS8-007CLSR 214.43	YS3BP8-007CLSR 119.88	YS3BS8-007CLSR 240.98	1	8	103
1	YS2BP8-010CLSR 123.08	YS2BS8-010CLSR 256.48	YS3BP8-010CLSR 134.45	YS3BS8-010CLSR 280.98	1	8	103
1-1/4	YS2BP8-012CLSR 207.80	YS2BS8-012CLSR 372.05	YS3BP8-012CLSR 229.01	YS3BS8-012CLSR 408.42	1	4	103
1-1/2	YS2BP8-015CLSR 222.80	YS2BS8-015CLSR 399.41	YS3BP8-015CLSR 245.21	YS3BS8-015CLSR 436.62	1	0	103
2	YS2BP8-020CLSR 273.66	YS2BS8-020CLSR 464.01	YS3BP8-020CLSR 300.00	YS3BS8-020CLSR 511.52	1	0	103
3	YS2BP8-030CLSR 591.82	YS2BS8-030CLSR 783.44	YS3BP8-030CLSR 632.51	YS3BS8-030CLSR 824.15	1	0	103
4	YS2BP8-040CLSR 1002.22	YS2BS8-040CLSR 1243.00	YS3BP8-040CLSR 1075.13	YS3BS8-040CLSR 1315.92	1	0	103

CPVC - True Union Socket Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AC8-005C 244.43	YS2AS8-005C 335.93	YS3AC8-005C 273.74	YS3AS8-005C 377.59	1	12	104
3/4	YS2AC8-007C 268.56	YS2AS8-007C 382.03	YS3AC8-007C 302.35	YS3AS8-007C 429.40	1	8	104
1	YS2AC8-010C 341.25	YS2AS8-010C 472.54	YS3AC8-010C 384.40	YS3AS8-010C 530.24	1	8	104
1-1/4	YS2AC8-012C 495.39	YS2AS8-012C 681.77	YS3AC8-012C 596.15	YS3AS8-012C 722.96	1	4	104
1-1/2	YS2AC8-015C 532.13	YS2AS8-015C 704.24	YS3AC8-015C 618.54	YS3AS8-015C 787.38	1	0	104
2	YS2AC8-020C 753.41	YS2AS8-020C 882.85	YS3AC8-020C 796.12	YS3AS8-020C 962.93	1	0	104
3	YS2AC8-030C 898.74	YS2AS8-030C 1075.13	YS3AC8-030C 964.91	YS3AS8-030C 1156.51	1	0	104
4	YS2AC8-040C 1556.71	YS2AS8-040C 1780.54	YS3AC8-040C 1673.73	YS3AS8-040C 1914.53	1	0	104

CPVC - True Union Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005C 244.43	YS2BS8-005C 335.93	YS3BC8-005C 273.74	YS3BS8-005C 377.59	1	12	104
3/4	YS2BC8-007C 268.56	YS2BS8-007C 382.03	YS3BC8-007C 302.35	YS3BS8-007C 429.40	1	8	104
1	YS2BC8-010C 341.25	YS2BS8-010C 472.54	YS3BC8-010C 384.40	YS3BS8-010C 530.24	1	8	104
1-1/4	YS2BC8-012C 495.39	YS2BS8-012C 681.77	YS3BC8-012C 596.15	YS3BS8-012C 721.94	1	4	104
1-1/2	YS2BC8-015C 532.13	YS2BS8-015C 704.24	YS3BC8-015C 618.54	YS3BS8-015C 787.38	1	0	104
2	YS2BC8-020C 753.41	YS2BS8-020C 882.85	YS3BC8-020C 796.12	YS3BS8-020C 962.93	1	0	104
3	YS2BC8-030C 898.74	YS2BS8-030C 1075.13	YS3BC8-030C 950.39	YS3BS8-030C 1156.51	1	0	104
4	YS2BC8-040C 1556.71	YS2BS8-040C 1780.54	YS3BC8-040C 1673.73	YS3BS8-040C 1914.53	1	0	104

Strainers & Filters
True Union Y-Strainers



CPVC - True Union SR Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005CSR 253.34	YS2BS8-005CSR 344.79	YS3BC8-005CSR 282.61	YS3BS8-005CSR 386.51	1	12	104
3/4	YS2BC8-007CSR 278.08	YS2BS8-007CSR 391.52	YS3BC8-007CSR 311.87	YS3BS8-007CSR 438.93	1	12	104
1	YS2BC8-010CSR 363.05	YS2BS8-010CSR 494.27	YS3BC8-010CSR 406.20	YS3BS8-010CSR 552.33	1	8	104
1-1/4	YS2BC8-012CSR 517.78	YS2BS8-012CSR 665.80	YS3BC8-012CSR 618.56	YS3BS8-012CSR 744.35	1	4	104
1-1/2	YS2BC8-015CSR 558.05	YS2BS8-015CSR 730.19	YS3BC8-015CSR 702.85	YS3BS8-015CSR 813.32	1	0	104
2	YS2BC8-020CSR 790.38	YS2BS8-020CSR 919.80	YS3BC8-020CSR 885.91	YS3BS8-020CSR 999.85	1	0	104
3	YS2BC8-030CSR 944.55	YS2BS8-030CSR 1120.91	YS3BC8-030CSR 1010.67	YS3BS8-030CSR 1202.29	1	0	104
4	YS2BC8-040CSR 1604.18	YS2BS8-040CSR 1828.04	YS3BC8-040CSR 1721.20	YS3BS8-040CSR 1961.98	1	0	104



Strainers & Filters Basket Strainers



Pressure Rating
@ 73°F (23°C), Water

1/2"-8"	150 psi
10"-12"	50 psi

Maximum Service
Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure
De-ratings Apply

Important Ordering Information - Column headings indicate Elastomer seal type and Strainer Basket screen material. All Part Numbers shown designate 1/8" perforated (#6 Mesh Code) Strainer Basket Screens. To order other screen perforation sizing, replace the number "6" preceding the dash-separator with the corresponding Mesh Code from chart. Pricing is the same for all listed Mesh Codes.

Perforation Size	Mesh Code
1/16"	12
3/32"	8
1/8"	6
3/16"	4
1/4"	3
3/8"	2

Example: To order a 1/16" screen perforation in listed part number BS22P6-020, change the part number to BS22P12-020

Contact Spears® for additional perforations & wire mesh sizes

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22P6-005 407.06	BS22S6-005 650.98	BS32P6-005 428.48	BS32S6-005 672.40	1	2	295
3/4	BS22P6-007 407.06	BS22S6-007 650.98	BS32P6-007 428.48	BS32S6-007 672.40	1	2	295
1	BS22P6-010 407.06	BS22S6-010 650.98	BS32P6-010 428.48	BS32S6-010 672.40	1	2	295
1-1/4	BS22P6-012 745.59	BS22S6-012 1069.75	BS32P6-012 837.53	BS32S6-012 1202.23	1	0	295
1-1/2	BS22P6-015 745.59	BS22S6-015 1069.75	BS32P6-015 837.53	BS32S6-015 1202.23	1	0	295
2	BS22P6-020 745.59	BS22S6-020 1069.75	BS32P6-020 837.53	BS32S6-020 1202.23	1	0	295
2-1/2	BS22P6-025 1410.09	BS22S6-025 1973.29	BS32P6-025 1585.14	BS32S6-025 2217.25	1	0	295
3	BS22P6-030 1720.49	BS22S6-030 2283.11	BS32P6-030 1933.19	BS32S6-030 2565.33	1	0	295
4	BS22P6-040 2278.44	BS22S6-040 2925.52	BS32P6-040 2560.03	BS32S6-040 3278.08	1	0	295
6	BS22P6-060 3252.76	BS22S6-060 4372.12	BS32P6-060 3654.91	BS32S6-060 4918.53	1	0	295
8	BS22P6-080 4335.63	BS22S6-080 5857.16	BS32P6-080 4872.53	BS32S6-080 6582.47	1	0	295
10	BS22P6-100 8308.63	BS22S6-100 10482.52	BS32P6-100 9086.61	BS32S6-100 11527.94	1	0	295
12	BS22P6-120 10294.12	BS22S6-120 13187.22	BS32P6-120 11321.27	BS32S6-120 14568.98	1	0	295

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23P6-005 469.23	BS23S6-005 713.14	BS33P6-005 492.76	BS33S6-005 736.67	1	0	295
3/4	BS23P6-007 469.23	BS23S6-007 713.14	BS33P6-007 492.76	BS33S6-007 736.67	1	0	295
1	BS23P6-010 469.23	BS23S6-010 713.14	BS33P6-010 492.76	BS33S6-010 736.67	1	0	295
1-1/4	BS23P6-012 886.35	BS23S6-012 1211.54	BS33P6-012 996.79	BS33S6-012 1361.48	1	0	295
1-1/2	BS23P6-015 886.35	BS23S6-015 1186.03	BS33P6-015 996.79	BS33S6-015 1361.48	1	0	295
2	BS23P6-020 886.35	BS23S6-020 1211.54	BS33P6-020 996.79	BS33S6-020 1361.48	1	0	295
2-1/2	BS23P6-025 1626.86	BS23S6-025 2189.51	BS33P6-025 1828.06	BS33S6-025 2460.18	1	0	295

Strainers & Filters Basket Strainers



PVC - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
3	BS23P6-030 2065.51	BS23S6-030 2627.33	BS33P6-030 2320.78	BS33S6-030 2951.88	1	0	295
4	BS23P6-040 2691.94	BS23S6-040 3332.17	BS33P6-040 3024.81	BS33S6-040 3744.05	1	0	295
6	BS23P6-060 5745.36	BS23S6-060 6864.52	BS33P6-060 6455.43	BS33S6-060 7712.97	1	0	295
8	BS23P6-080 7571.16	BS23S6-080 9092.69	BS33P6-080 8507.20	BS33S6-080 10217.09	1	0	295
10	BS23P6-100 10093.94	BS23S6-100 12267.65	BS33P6-100 11341.56	BS33S6-100 13783.89	1	0	295
12	BS23P6-120 13812.05	BS23S6-120 16707.00	BS33P6-120 15519.16	BS33S6-120 18771.91	1	0	295

PVC - Spigot Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27P6-005 407.06	BS27S6-005 650.98	BS37P6-005 428.48	BS37S6-005 672.40	1	0	295
3/4	BS27P6-007 407.06	BS27S6-007 650.98	BS37P6-007 428.48	BS37S6-007 672.40	1	0	295
1	BS27P6-010 407.06	BS27S6-010 650.98	BS37P6-010 428.48	BS37S6-010 672.40	1	0	295
1-1/4	BS27P6-012 745.59	BS27S6-012 1069.75	BS37P6-012 837.53	BS37S6-012 1202.23	1	0	295
1-1/2	BS27P6-015 745.59	BS27S6-015 1069.75	BS37P6-015 837.53	BS37S6-015 1202.23	1	0	295
2	BS27P6-020 745.59	BS27S6-020 1069.75	BS37P6-020 837.53	BS37S6-020 1202.23	1	0	295
2-1/2	BS27P6-025 1410.09	BS27S6-025 1973.32	BS37P6-025 1585.14	BS37S6-025 2217.25	1	0	295
3	BS27P6-030 1720.49	BS27S6-030 2283.11	BS37P6-030 1933.19	BS37S6-030 2565.33	1	0	295
4	BS27P6-040 2278.44	BS27S6-040 2925.52	BS37P6-040 2560.03	BS37S6-040 3278.08	1	0	295
6	BS27P6-060 3252.76	BS27S6-060 4372.12	BS37P6-060 3654.91	BS37S6-060 4918.53	1	0	295
8	BS27P6-080 4335.63	BS27S6-080 5857.16	BS37P6-080 4872.53	BS37S6-080 6582.47	1	0	295
10	BS27P6-100 8308.63	BS27S6-100 10482.52	BS37P6-100 9086.61	BS37S6-100 11527.94	1	0	295
12	BS27P6-120 10294.12	BS27S6-120 13187.22	BS37P6-120 11321.27	BS37S6-120 14568.98	1	0	295

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22C6-005C 634.49	BS22S6-005C 878.39	BS32C6-005C 666.55	BS32S6-005C 910.46	1	2	297
3/4	BS22C6-007C 634.49	BS22S6-007C 878.39	BS32C6-007C 666.55	BS32S6-007C 910.46	1	2	297
1	BS22C6-010C 634.49	BS22S6-010C 878.39	BS32C6-010C 666.55	BS32S6-010C 910.46	1	2	297
1-1/4	BS22C6-012C 1197.36	BS22S6-012C 1522.57	BS32C6-012C 1345.85	BS32S6-012C 1710.55	1	0	297
1-1/2	BS22C6-015C 1197.36	BS22S6-015C 1522.57	BS32C6-015C 1345.85	BS32S6-015C 1710.55	1	0	297
2	BS22C6-020C 1197.36	BS22S6-020C 1522.57	BS32C6-020C 1345.85	BS32S6-020C 1710.55	1	0	297
2-1/2	BS22C6-025C 1961.57	BS22S6-025C 2522.36	BS32C6-025C 2203.87	BS32S6-025C 2834.37	1	0	297
3	BS22C6-030C 2543.26	BS22S6-030C 3106.03	BS32C6-030C 2857.67	BS32S6-030C 3489.79	1	0	297
4	BS22C6-040C 3379.36	BS22S6-040C 4019.18	BS32C6-040C 3797.74	BS32S6-040C 4515.97	1	0	297
6	BS22C6-060C 4466.31	BS22S6-060C 5587.52	BS32C6-060C 5018.38	BS32S6-060C 6277.95	1	0	297
8	BS22C6-080C 6375.84	BS22S6-080C 7897.74	BS32C6-080C 7163.94	BS32S6-080C 8873.88	1	0	297
10	BS22C6-100C 11192.03	BS22S6-100C 13364.49	BS32C6-100C 12575.39	BS32S6-100C 15016.73	1	0	297
12	BS22C6-120C 14212.40	BS22S6-120C 17107.55	BS32C6-120C 15968.94	BS32S6-120C 19222.87	1	0	297



Strainers & Filters Basket Strainers

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23C6-005C 694.41	BS23S6-005C 938.31	BS33C6-005C 730.83	BS33S6-005C 974.74	1	0	297
3/4	BS23C6-007C 694.41	BS23S6-007C 938.31	BS33C6-007C 730.83	BS33S6-007C 974.74	1	0	297
1	BS23C6-010C 694.41	BS23S6-010C 938.31	BS33C6-010C 730.83	BS33S6-010C 974.74	1	0	297
1-1/4	BS23C6-012C 1350.35	BS23S6-012C 1673.28	BS33C6-012C 1517.06	BS33S6-012C 1880.14	1	0	297
1-1/2	BS23C6-015C 1350.35	BS23S6-015C 1673.28	BS33C6-015C 1517.06	BS33S6-015C 1880.14	1	0	297
2	BS23C6-020C 1350.35	BS23S6-020C 1673.28	BS33C6-020C 1517.06	BS33S6-020C 1880.14	1	0	297
2-1/2	BS23C6-025C 2562.92	BS23S6-025C 3124.68	BS33C6-025C 2878.96	BS33S6-025C 3511.07	1	2	297
3	BS23C6-030C 3047.31	BS23S6-030C 3810.92	BS33C6-030C 3423.96	BS33S6-030C 4056.04	1	0	297
4	BS23C6-040C 3990.21	BS23S6-040C 8240.56	BS33C6-040C 4483.56	BS33S6-040C 9258.82	1	0	297
6	BS23C6-060C 7662.95	BS23S6-060C 8783.12	BS33C6-060C 8610.48	BS33S6-060C 9868.63	1	0	297
8	BS23C6-080C 9913.23	BS23S6-080C 11435.37	BS33C6-080C 11138.97	BS33S6-080C 12848.89	1	0	297
10	BS23C6-100C 13460.75	BS23S6-100C 15632.63	BS33C6-100C 15124.09	BS33S6-100C 17565.43	1	0	297
12	BS23C6-120C 18415.33	BS23S6-120C 21309.48	BS33C6-120C 20691.55	BS33S6-120C 23946.35	1	0	297

CPVC - Spigot Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27C6-005C 634.49	BS27S6-005C 878.39	BS37C6-005C 666.55	BS37S6-005C 910.46	1	0	297
3/4	BS27C6-007C 634.49	BS27S6-007C 878.39	BS37C6-007C 666.55	BS37S6-007C 910.46	1	0	297
1	BS27C6-010C 634.49	BS27S6-010C 878.39	BS37C6-010C 666.55	BS37S6-010C 910.46	1	0	297
1-1/4	BS27C6-012C 1197.36	BS27S6-012C 1522.57	BS37C6-012C 1345.85	BS37S6-012C 1710.55	1	0	297
1-1/2	BS27C6-015C 1197.36	BS27S6-015C 1522.57	BS37C6-015C 1345.85	BS37S6-015C 1710.55	1	0	297
2	BS27C6-020C 1197.36	BS27S6-020C 1522.57	BS37C6-020C 1345.85	BS37S6-020C 1710.55	1	0	297
2-1/2	BS27C6-025C 1961.57	BS27S6-025C 2522.36	BS37C6-025C 2203.87	BS37S6-025C 2834.37	1	0	297
3	BS27C6-030C 2543.26	BS27S6-030C 3106.03	BS37C6-030C 2857.67	BS37S6-030C 3489.79	1	0	297
4	BS27C6-040C 3379.36	BS27S6-040C 4019.18	BS37C6-040C 3797.74	BS37S6-040C 4515.97	1	0	297
6	BS27C6-060C 4466.31	BS27S6-060C 5587.52	BS37C6-060C 5018.38	BS37S6-060C 6277.95	1	0	297
8	BS27C6-080C 6375.84	BS27S6-080C 7897.74	BS37C6-080C 7163.94	BS37S6-080C 8873.88	1	0	297
10	BS27C6-100C 11192.03	BS27S6-100C 13364.49	BS37C6-100C 12575.39	BS37S6-100C 15016.73	1	0	297
12	BS27C6-120C 14212.40	BS27S6-120C 17107.55	BS37C6-120C 15968.75	BS37S6-120C 19222.87	1	0	297

Strainers & Filters Duplex Basket Strainers



Custom configured and produced to order, Spears® Duplex Basket Strainer provides individual isolation of strainers for servicing and cleaning without shutting down the line. A center handle on the Duplex unit control valves allows selection of either strainer unit for isolation. Each Basket Strainer features a convenient quick release clamp cap equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit.



Multi-Featured Options:

- No Flow Shutdown Required
- Sizes 1/2" - 4" Constructed from Corrosion Resistant PVC or CPVC
- True Union Socket, Thread, or Flanged Connections
- Uses Spears® Standard Basket Strainers Configurations
- Simple Single-Throw Lever Operation
- Select EPDM or FKM Seal Options
- Multiple Strainer Mesh Options in Plastic or Stainless Steel
(see Industrial Basket Strainer options in this catalog)

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR ADDITIONAL CUSTOM OPTIONS, SELECTION ASSISTANCE & PRICING



Strainers & Filters Suction Strainers



Pressure Rating @ 73°F (23°C), Water
50 psi

Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, enlarged inlet on reducing sizes performs best in suction line applications. The internal Strainer Basket is bottom-drained for direct flushing through a 360° adjustable side mounted Discharge Valve Assembly (included). Bolt-on Bonnet is fitted with Top Sight-Glass.

Standard units listed have EPDM Seals and Stainless Steel 3/16" Perforated Screen (4-mesh). Contact Spears® for other Mesh Code or Elastomer seal options required.

PVC Suction Strainer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flanged End

SS23BS4SG-040	4	1	0	295	2980.31
SS23BS4SG-420	4X2	1	0	295	2838.95
SS23BS4SG-421	4X2-1/2	1	0	295	2850.05
SS23BS4SG-422	4X3	1	0	295	2857.31
SS23BS4SG-060	6	1	0	295	3887.53
SS23BS4SG-532	6X4	1	0	295	3755.69
SS23BS4SG-080	8	1	0	295	4269.93
SS23BS4SG-582	8X4	1	0	295	3882.68
SS23BS4SG-585	8X6	1	0	295	3905.21
SS23BS4SG-100	10	1	0	295	4776.56
SS23BS4SG-626	10X6	1	0	295	4648.64
SS23BS4SG-628	10X8	1	0	295	4701.59
SS23BS4SG-120	12	1	0	295	5251.89
SS23BS4SG-668	12X8	1	0	295	5124.93
SS23BS4SG-670	12X10	1	0	295	5168.08

Suction Strainer Stainless Steel Baskets 3/16" Perforation

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SSS4-040	4	1	4	299	826.49
SSS4-060	6	1	2	299	879.25
SSS4-080	8	1	2	299	1101.83
SSS4-100	10	1	0	299	1197.65
SSS4-120	12	1	2	299	1468.25

Expansion Joints Fabricated Expansion Joints



Triple O-ring Sealed Telescoping Design Available with 6" and 12" Travel



- Compact Installation - Eliminates Need For Expansion Loops
- EPDM or FKM Pressure O-ring Seal with Dual "Wiper" O-ring for Extended Life
- Support Piston Eliminates Binding, Minimizes Alignment Problems
- Excellent For Use as a Repair Coupling

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Fabricated Expansion Joints 6" Travel with EPDM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

826-005X6	1/2	10	0	085	313.03
826-007X6	3/4	6	0	085	336.52
826-010X6	1	5	0	085	340.31
826-012X6	1-1/4	4	0	085	395.55
826-015X6	1-1/2	4	0	085	419.43
826-020X6	2	2	0	085	469.18
826-025X6	2-1/2	1	0	085	535.15
826-030X6	3	1	0	085	555.51
826-040X6	4	1	0	085	596.17
826-060X6	6	1	0	085	982.20
826-080X6	8	1	0	085	1352.21
826-100X6	10	1	0	085	1587.88
826-120X6	12	1	0	085	2813.54
826-140X6	14	1	0	085	3213.82

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X6.

PVC Fabricated Expansion Joints 12" Travel with EPDM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

826-005X12	1/2	10	0	085	352.11
826-007X12	3/4	6	0	085	372.39
826-010X12	1	5	0	085	446.24
826-012X12	1-1/4	4	0	085	568.92
826-015X12	1-1/2	4	0	085	451.77
826-020X12	2	2	0	085	532.92
826-025X12	2-1/2	1	0	085	895.29
826-030X12	3	1	0	085	688.48
826-040X12	4	1	0	085	773.44
826-060X12	6	1	0	085	1126.68
826-080X12	8	1	0	085	1510.54
826-100X12	10	1	0	085	1846.74
826-120X12	12	1	0	085	2957.95
826-140X12	14	1	0	085	3283.27

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X12

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Fabricated Expansion Joints 6" Travel with FKM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

826-005X6C	1/2	10	0	085	387.05
826-007X6C	3/4	6	0	085	423.54
826-010X6C	1	5	0	085	457.80
826-012X6C	1-1/4	4	0	085	480.84
826-015X6C	1-1/2	4	0	085	524.06
826-020X6C	2	2	0	085	664.05
826-025X6C	2-1/2	1	0	085	788.00
826-030X6C	3	1	0	085	915.43
826-040X6C	4	1	0	085	1350.14
826-060X6C	6	1	0	085	1451.36
826-080X6C	8	1	0	085	2753.19
826-100X6C	10	1	0	085	3514.77
826-120X6C	12	1	0	085	4662.63

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X6C

CPVC Fabricated Expansion Joints 12" Travel with FKM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

826-005X12C	1/2	10	0	085	394.20
826-007X12C	3/4	6	0	085	452.06
826-010X12C	1	5	0	085	482.24
826-012X12C	1-1/4	4	0	085	764.46
826-015X12C	1-1/2	4	0	085	605.32
826-020X12C	2	2	0	085	772.65
826-025X12C	2-1/2	1	0	085	1169.72
826-030X12C	3	1	0	085	940.04
826-040X12C	4	1	0	085	1557.18
826-060X12C	6	1	0	085	1715.44
826-080X12C	8	1	0	085	3284.37
826-100X12C	10	1	0	085	3847.76

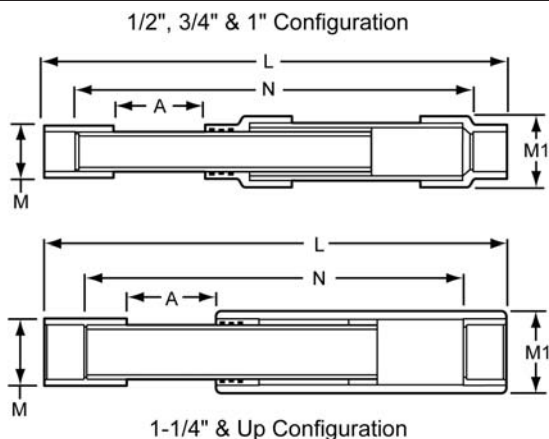
EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X12C



Expansion Joints Fabricated Expansion Joints

EXPANSION JOINT REPAIR COUPLING (Soc x Soc)

1/2" - 2" 235 psi @ 73°F (23°C)
2- 1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)
NOTE: "A" = Midpoint of Extension



Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005X6	826-005X6C	1/2	3	13- 11/16	1- 9/32	1- 23/32	11- 15/16	.50	.55
826-007X6	826-007X6C	3/4	3	14- 13/16	1- 1/2	2- 1/16	12- 13/16	1.00	1.10
826-010X6	826-010X6C	1	3	15- 15/16	1- 23/32	2- 11/32	13- 11/16	1.00	1.10
826-012X6	826-012X6C	1- 1/4	3	15- 3/4	2- 7/32	2- 3/8	13- 3/8	1.50	1.65
826-015X6	826-015X6C	1- 1/2	3	16- 1/8	2- 11/32	2- 7/8	13- 7/16	2.00	2.20
826-020X6	826-020X6C	2	3	16- 15/16	2- 7/8	3- 1/2	13- 15/16	3.00	3.30
826-025X6	826-025X6C	2- 1/2	3	18- 7/8	4- 3/16	4- 1/2	14- 7/8	6.00	6.60
826-030X6	826-030X6C	3	3	18- 3/4	4- 3/16	4- 1/2	15- 1/4	6.00	6.60
826-040X6	826-040X6C	4	3	19- 3/4	5- 5/16	5- 9/16	15- 3/16	7.00	7.70
826-060X6	826-060X6C	6	3	22- 3/4	7- 11/16	8- 5/8	16- 3/4	26.50	29.15
826-080X6	826-080X6C	8	3	27- 1/4	9- 11/16	10- 3/4	19- 1/4	40.50	44.55
826-100X6	826-100X6C	10	3	35- 7/8	11- 13/16	12- 3/4	25- 7/8	67.00	73.70
826-120X6	826-120X6C	12	3	39- 1/2	14- 1/8	16	27- 1/2	134.00	147.40
826-140X6	---	14	3	49- 3/4	15- 5/8	16	34- 7/8	104.27	---

Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005X12	826-005X12C	1/2	6	16- 11/16	1- 9/32	1- 23/32	14- 15/16	.57	.63
826-007X12	826-007X12C	3/4	6	17- 13/16	1- 1/2	2- 1/16	15- 13/16	1.14	1.26
826-010X12	826-010X12C	1	6	18- 15/16	1- 23/32	2- 11/32	16- 11/16	1.14	1.26
826-012X12	826-012X12C	1- 1/4	6	18- 3/4	2- 7/32	2- 3/8	16- 3/8	1.71	1.88
826-015X12	826-015X12C	1- 1/2	6	19- 1/8	2- 11/32	2- 7/8	16- 7/16	2.28	2.51
826-020X12	826-020X12C	2	6	19- 15/16	2- 7/8	3- 1/2	16- 15/16	3.43	3.77
826-025X12	826-025X12C	2- 1/2	6	21- 7/8	4- 3/16	4- 1/2	17- 7/8	6.85	7.54
826-030X12	826-030X12C	3	6	21- 3/4	4- 3/16	4- 1/2	18- 1/4	6.85	7.54
826-040X12	826-040X12C	4	6	22- 3/4	5- 5/16	5- 9/16	18- 3/16	8.00	8.80
826-060X12	826-060X12C	6	6	25- 3/4	7- 11/16	8- 5/8	19- 3/4	30.27	33.30
826-080X12	826-080X12C	8	6	30- 1/4	9- 11/16	10- 3/4	22- 1/4	46.26	50.89
826-100X12	826-100X12C	10	6	38- 7/8	11- 13/16	12- 3/4	28- 7/8	76.53	84.19
826-120X12	---	12	6	42- 1/2	14- 1/8	16	30- 1/2	153.07	---
826-140X12	---	14	6	52- 3/4	15- 5/8	16	37- 7/8	159.00	---

Expansion Joints Elastomer Expansion Joints



PVC & CPVC Schedule 80 Elastomer Expansion Joint

Designed to allow for the expansion, contraction, lateral and angular movement of a piping system. Aids in noise and vibration dampening.



- Convenient, Double Union End Connections with Strong, Buttress Thread Union Nuts
- Internal Nylon Cord Reinforced Elastomer Bellows Tube
- Chemically Resistant Neoprene Elastomer with Optional EPDM Tube Available
- Double Spherical Arch Bellows Provides Improved Movement Capability
- Pressure rated to 150 psi @ 73°F (23°C)
- Suitable for Vacuum Service
- Available in Socket or Spears® Special Reinforced (SR) Female Plastic Thread End Connectors, IPS Sizes 3/4" through 3"

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Elastomer Expansion Joint with Neoprene Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ02-007	3/4	10	0	085	197.85
EJ02-010	1	10	0	085	224.34
EJ02-012	1-1/4	15	0	085	239.02
EJ02-015	1-1/2	10	0	085	294.26
EJ02-020	2	8	0	085	360.58
EJ02-025	2-1/2	4	0	085	510.09
EJ02-030	3	2	0	085	701.17

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Elastomer Expansion Joint with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ22-007C	3/4	10	0	085	205.88
EJ22-010C	1	10	0	085	234.92
EJ22-012C	1-1/4	15	0	085	256.68
EJ22-015C	1-1/2	10	0	085	314.45
EJ22-020C	2	8	0	085	392.46
EJ22-025C	2-1/2	4	0	085	573.51
EJ22-030C	3	2	0	085	779.00

PVC Elastomer Expansion Joint with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ22-007	3/4	10	0	085	201.88
EJ22-010	1	10	0	085	228.89
EJ22-012	1-1/4	15	0	085	246.41
EJ22-015	1-1/2	10	0	085	299.36
EJ22-020	2	8	0	085	367.94
EJ22-025	2-1/2	4	0	085	520.48
EJ22-030	3	2	0	085	715.45

CPVC Elastomer Expansion Joint with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ21-007CSR	3/4	10	0	085	208.22
EJ21-010CSR	1	10	0	085	239.45
EJ21-012CSR	1-1/4	15	0	085	264.60
EJ21-015CSR	1-1/2	10	0	085	337.27
EJ21-020CSR	2	8	0	085	445.81
EJ21-025CSR	2-1/2	4	0	085	619.13
EJ21-030CSR	3	2	0	085	824.60

PVC Elastomer Expansion Joint with Neoprene Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ01-007SR	3/4	10	0	085	200.62
EJ01-010SR	1	10	0	085	228.47
EJ01-012SR	1-1/4	15	0	085	248.49
EJ01-015SR	1-1/2	10	0	085	317.23
EJ01-020SR	2	8	0	085	381.13
EJ01-025SR	2-1/2	4	0	085	555.41
EJ01-030SR	3	2	0	085	746.94

PVC Elastomer Expansion Joint with EPDM Bellows SR Fipt - Stainless Steel Collar



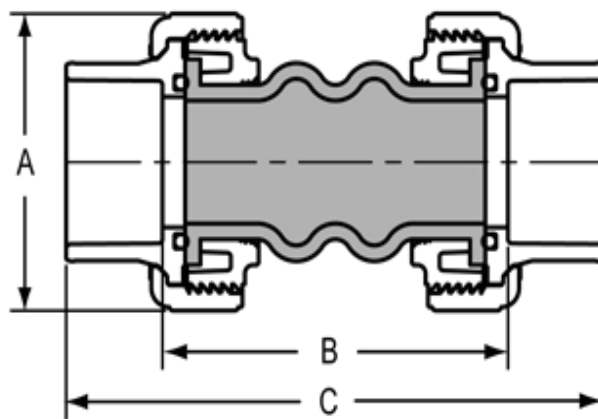
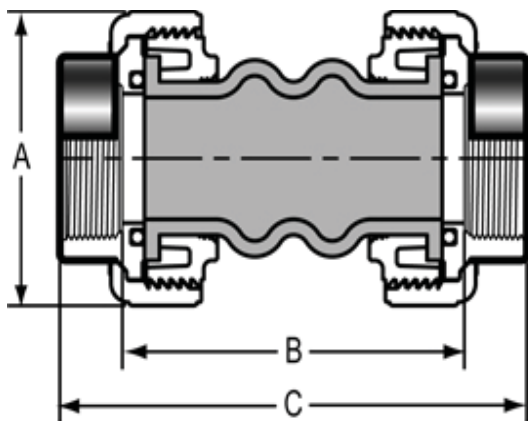
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ21-007SR	3/4	10	0	085	204.69
EJ21-010SR	1	10	0	085	233.14
EJ21-012SR	1-1/4	15	0	085	253.59
EJ21-015SR	1-1/2	10	0	085	323.68
EJ21-020SR	2	8	0	085	388.92
EJ21-025SR	2-1/2	4	0	085	563.59
EJ21-030SR	3	2	0	085	762.18



Expansion Joints Elastomer Expansion Joints

Technical Information



Dimensions

Size	A	B		C		MAXIMUM MOVEMENTS			
		Socket	Thread	Socket	Thread	COMPRESSION	EXTENSION	LATERAL	ANGULAR
3/4	2-1/4	6-3/8	6-3/8	8-3/8	7-13/16	7/8	1/4	7/8	35°
1	2-9/16	5-15/16	6	8-3/16	7-3/4	7/8	1/4	7/8	25°
1-1/4	3-1/8	6-1/16	6-1/16	8-9/16	7-15/16	7/8	1/4	7/8	25°
1-1/2	3-9/16	5-7/8	5-7/8	8-5/8	7-3/4	7/8	1/4	7/8	20°
2	4-3/16	5-7/16	5-7/16	8-7/16	7-3/8	7/8	1/4	7/8	15°
2-1/2	6-1/8	6-3/16	6-3/16	9-3/4	9	7/8	1/4	7/8	15°
3	6-1/8	6-3/16	6-3/16	10	9	7/8	1/4	7/8	15°

Expansion Joints Repair Couplings



(S119) Socket x Socket



(S118) Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC - Spig x Soc

PVC White with EPDM O-ring



Can be used as short-stroke Expansion Joint

S118-05	1/2	25	0	025	5.56
S118-07	3/4	30	0	025	6.32
S118-10	1	15	0	025	7.29
S118-12	1-1/4	23	0	025	13.74
S118-15	1-1/2	25	0	025	14.96
S118-20	2	12	0	025	23.14
S118-25	2-1/2	5	0	025	33.57
S118-30	3	4	0	025	41.94
S118-40	4	2	0	025	73.40
S118-60	6	1	0	025	179.60

PVC - Spig x Soc

PVC Gray with EPDM O-ring



Can be used as short-stroke Expansion Joint

S118E-05G	1/2	25	0	025	6.46
S118E-07G	3/4	24	0	025	7.34
S118E-10G	1	15	0	025	8.49
S118E-12G	1-1/4	12	0	025	15.97
S118E-15G	1-1/2	25	0	025	17.39
S118E-20G	2	12	0	025	26.92
S118E-25G	2-1/2	5	0	025	39.48
S118E-30G	3	4	0	025	49.33
S118E-40G	4	2	0	025	86.36
S118E-60G	6	1	0	025	230.85

PVC - Spig x Soc

PVC Gray with FKM O-ring



Can be used as short-stroke Expansion Joint

S118V-05G	1/2	25	0	025	7.06
S118V-07G	3/4	24	0	025	8.05
S118V-10G	1	15	0	025	9.31
S118V-12G	1-1/4	12	0	025	17.49
S118V-15G	1-1/2	25	0	025	19.07
S118V-20G	2	12	0	025	29.51
S118V-25G	2-1/2	5	0	025	44.37
S118V-30G	3	4	0	025	55.42
S118V-40G	4	2	0	025	97.02
S118V-60G	6	1	0	025	262.34

PVC - Soc x Soc

PVC White with EPDM O-ring



Can be used as short-stroke Expansion Joint

S119-05	1/2	30	0	025	5.56
S119-07	3/4	24	0	025	6.32
S119-10	1	20	0	025	7.29
S119-12	1-1/4	10	0	025	13.74
S119-15	1-1/2	16	0	025	14.96
S119-20	2	10	0	025	23.14

- Multi-function Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White and PVC Gray
- Double O-ring Seal in EPDM or high-grade FKM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC - Soc x Soc (continued)

PVC White with EPDM O-ring

S119-25	2-1/2	5	0	025	33.57
S119-30	3	4	0	025	41.94
S119-40	4	2	0	025	73.40
S119-60	6	1	0	025	179.60

PVC - Soc x Soc

PVC Gray with FKM O-ring



Can be used as short-stroke Expansion Joint

S119V-05G	1/2	28	0	025	7.06
S119V-07G	3/4	24	0	025	8.05
S119V-10G	1	20	0	025	9.31
S119V-12G	1-1/4	10	0	025	17.49
S119V-15G	1-1/2	16	0	025	19.07
S119V-20G	2	10	0	025	29.51
S119V-25G	2-1/2	5	0	025	44.37
S119V-30G	3	4	0	025	55.42
S119V-40G	4	2	0	025	97.02
S119V-60G	6	1	0	025	262.34

PVC - Soc x Soc

PVC Gray with EPDM O-ring



Can be used as short-stroke Expansion Joint

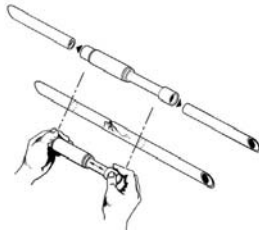
S119E-05G	1/2	28	0	025	6.46
S119E-07G	3/4	24	0	025	7.34
S119E-10G	1	20	0	025	8.49
S119E-12G	1-1/4	10	0	025	15.97
S119E-15G	1-1/2	16	0	025	17.39
S119E-20G	2	10	0	025	26.92
S119E-25G	2-1/2	5	0	025	39.48
S119E-30G	3	4	0	025	49.33
S119E-60G	6	1	0	025	230.85



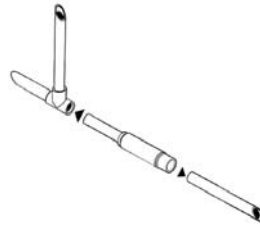
Expansion Joints Repair Couplings

Versatile Repair Capability

Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket configurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket configurations are excellent for lateral and riser add-ons, damaged fitting replacement, or for installing valves in existing piping systems. Order the wrong configuration? Simply cut coupling from Socket shaft end to function as a spigot or add a coupling to Spigot shaft end for Socket connections.



Pipe Damage Repair
Or Use as Expansion Joint



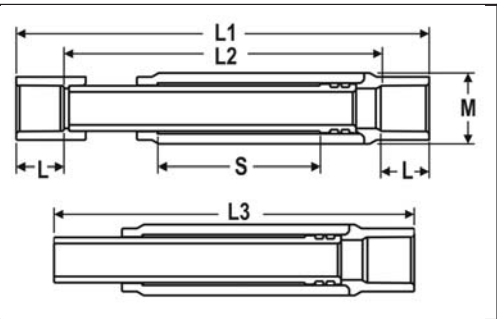
Lateral Add-on Or Fitting Replacement



Valve Retrofit Installation

Dimensions

Size	L	L1	L2	L3	S	M
1/2	7/8	7-5/8	5-7/8	6-3/4	3	1-7/16
3/4	1	9-3/8	7-3/8	8-1/4	4	1-3/4
1	1-1/8	10-1/8	7-7/8	8-7/8	4	2-1/16
1-1/4	1-1/4	10-7/8	8-3/8	9-5/8	4	2-7/16
1-1/2	1-3/8	11-3/8	8-5/8	9-7/8	4	2-11/16
2	1-1/2	12-1/4	9-1/4	10-5/8	4	3-3/16
2-1/2	1-3/4	15-7/8	12-3/8	13-7/8	6	3-15/16
3	1-7/8	16-1/8	12-3/8	14-1/8	6	4-9/16
4	2-1/4	17-3/4	13-1/4	15-1/4	6	5-11/16
6	3	22	16	18-3/4	6	8-3/8



INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

Expansion Joints Short Repair Couplings



Space Saving, Compact Version of Standard Repair Coupling
Requires 1/3 less Space

(SH119) Socket x Socket



(SH118) Spigot x Socket

- Compact Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White, Sizes 1/2" - 2"
- EPDM Double O-ring Seal
- Pressure Rated to 235 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC - Spig x Soc

PVC White with EPDM O-ring



SH118-05	1/2	36	0	025	5.56
SH118-07	3/4	30	0	025	6.32
SH118-10	1	35	0	025	7.29
SH118-12	1-1/4	25	0	025	13.74
SH118-15	1-1/2	32	0	025	14.96
SH118-20	2	15	0	025	23.14

PVC - Soc x Soc

PVC White with EPDM O-ring



SH119-05	1/2	40	0	025	5.56
SH119-07	3/4	30	0	025	6.32
SH119-10	1	30	0	025	7.29
SH119-12	1-1/4	20	0	025	13.74
SH119-15	1-1/2	21	0	025	14.96
SH119-20	2	12	0	025	23.14

Dimensions

Size	L1	L2	L3	L4	L5	S	M
1/2	5-7/8	4-5/16	4-15/16	7/8	3/4	2	1-7/16
3/4	6-9/16	4-3/4	5-7/16	1	13/16	2-1/4	1-3/4
1	6-13/16	4-3/4	5-9/16	1-1/8	15/16	2-3/16	2-1/16
1-1/4	7-15/16	5-11/16	6-5/8	1-1/4	1	2-1/2	2-7/16
1-1/2	8-1/4	5-13/16	6-3/4	1-3/8	1-1/8	2-13/16	2-11/16
2	10-1/16	7-3/8	8-5/16	1-1/2	1-3/16	3-1/8	3-1/4

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.



DWV PVC DWV Drain Waste Vent Fittings

STANDARDS & SPECIFICATIONS

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured.

ASTM D 2665	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
ASTM D 3311	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns.
ASTM F 1866	Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.
ASTM D 1784	Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.



NSF® International Standard 14 (NSF®-dwv) Certified
NSF® International Certified to Uniform Plumbing Code (NSF®-U.P. Code)
See official listing

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
-------------	------	--------	---------	-----------	------------

P100 Coupling H x H



P100-015	1-1/2	100	7200	051	.88
P100-020	2	100	3600	051	1.18
P100-030	3	60	840	051	4.32
P100-040	4	25	450	051	7.46
P100-060	6	5	175	051	24.25
P100-080	8	8	64	051	59.41
P100-100	10	1	36	052	120.98
P100-120	12	1	21	052	206.04
P100-140	14	1	12	052	315.89

P101 Female Adapter FPT x H



P101-015	1-1/2	100	4800	051	1.76
P101-020	2	100	3500	051	2.97
P101-030	3	35	1260	051	8.00
P101-040	4	10	480	051	10.24
P101-060	6	10	180	051	34.42

P102 Pipe Increaser - Reducer H x H



P102-251	2X1-1/2	25	4200	051	2.60
P102-337	3X1-1/2	25	1200	051	8.26
P102-338	3X2	20	960	051	6.34
P102-420	4X2	10	720	051	12.58
P102-422	4X3	20	720	051	13.38
3729-528*	6X2	1	120	390	106.04
3729-530*	6X3	1	120	390	104.38
P102-532	6X4	4	144	051	49.44
P102-582	8X4	2	96	051	75.33
P102-585	8X6	2	96	051	66.37
3729-624*	10X4	1	22	390	211.83
P102-626	10X6	1	36	052	309.17
3729-626*	10X6	1	32	390	197.41
P102-628	10X8	1	36	052	206.34
3729-628*	10X8	1	24	390	138.17
3729-661*	12X2	1	12	390	513.37
3729-663*	12X3	1	8	390	509.97
3729-664*	12X4	1	12	390	398.29
3729-666*	12X6	1	12	390	302.00
P102-668	12X8	1	16	052	315.09
3729-670*	12X10	1	18	390	201.13
3729-691*	14X2	1	18	390	750.73
3729-694*	14X4	1	18	390	640.96
3729-696*	14X6	1	18	390	620.52
3729-698*	14X8	1	18	390	449.17
3729-700*	14X10	1	18	390	379.36
3729-702*	14X12	1	16	390	336.89

* Fabricated

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
-------------	------	--------	---------	-----------	------------

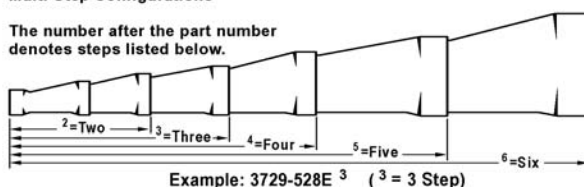
Pipe Increaser - Eccentric Reducer H x H



P102-338E	3X2	20	300	051	18.48
3729-528E ^{3*}	6X2	1	72	390	103.09
3729-530E ^{2*}	6X3	1	48	390	94.96
3729-532E ²	6X4	1	96	390	47.48
3729-580E ^{3*}	8X3	1	24	390	195.86
3729-582E ^{2*}	8X4	1	22	390	97.80
3729-585E [*]	8X6	1	32	390	79.06
3729-624E ^{2*}	10X4	1	16	390	223.63
3729-626E [*]	10X6	1	20	390	205.62
3729-628E [*]	10X8	1	24	390	193.86
3729-664E ^{3*}	12X4	1	8	390	417.24
3729-666E ^{2*}	12X6	1	12	390	342.84
3729-668E ^{2*}	12X8	1	12	390	227.35
3729-670E [*]	12X10	1	18	390	197.12

Eccentric Reducer Footnotes Multi-Step Configurations

The number after the part number denotes steps listed below.



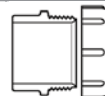
* Fabricated

P103 Trap Adapter - Male S x SLIP



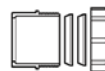
P103-015	1-1/2	50	5250	051	2.39
P103-020	2	25	4200	051	6.59

P103P Trap Adapter - Male S x SLIP w/Plastic Nut - Built-in Washer



P103P-212	1-1/2X1-1/4	75	5400	051	2.73
P103P-015	1-1/2	50	5250	051	2.54
P103P-020	2	25	4200	051	8.74

P103R Trap Adapter - Male with 1-1/2 Plastic Nut & Washer and 1-1/2 x1-1/4 Washer S x SLIP w/Plastic Nut



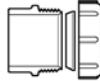
P103R-015	1-1/2	50	3600	051	2.62
-----------	-------	----	------	-----	------

DWV
PVC DWV Drain Waste Vent Fittings



Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P103X Trap Adapter-Male
S x SLIP w/Chrome Nut & Washer



P103X-212	1-1/2X1-1/4	100	7200	051	3.84
P103X-015	1-1/2	50	5250	051	3.44
P103X-020	2	25	4200	051	11.19

P104 Trap Adapter - Female
H x SLIP



P104-015	1-1/2	50	8400	051	1.86
P104-020	2	50	3600	051	5.36

P104P Trap Adapter - Female
H x SLIP w/Plastic Nut



P104P-212	1-1/2X1-1/4	50	5250	051	2.75
P104P-012	1-1/4	50	5250	051	3.51
P104P-015	1-1/2	50	5250	051	2.35

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer
H x SLIP w/Plastic Nut



P104R-015	1-1/2	50	3600	051	2.66
-----------	-------	----	------	-----	------

P104X Trap Adapter - Female
H x SLIP w/Chrome Nut & Washer



P104X-212	1-1/2X1-1/4	50	3600	051	3.84
P104X-015	1-1/2	50	3600	051	3.44
P104X-020	2	50	3600	051	7.52

P000P HDPE Slip Joint Nut
(Plastic Nut)



P000P-015	1-1/2	350	16800	051	.82
P000P-020	2	450	13500	051	1.31
P000P-169	1-1/4X1-1/2	400	19200	051	1.41

P105 Fitting Cleanout Adapter
S x FPT



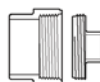
P105-015	1-1/2	50	5250	051	2.01
P105-020	2	50	3600	051	2.84
P105-030	3	25	1200	051	8.03
P105-040	4	10	720	051	13.19
P105-060	6	10	180	051	35.33
P105-080	8	8	112	051	104.57

P105H Female Cleanout Adapter
H x FPT



P105H-040	4	10	720	051	10.24
P105H-060	6	10	180	051	34.42

P105X Fitting Cleanout Adapter w/C.O. Plug
S x FPT



P105X-015	1-1/2	50	5250	051	3.02
P105X-020	2	50	3600	051	4.14
P105X-030	3	25	900	051	8.38
P105X-040	4	10	480	051	15.17
P105X-060	6	10	180	051	43.73
P105X-080	8	8	112	051	130.65
3978-100"	10	1	64	400	465.43

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P105X Fitting Cleanout Adapter w/C.O. Plug (continued)
S x FPT

3978-120"	12	1	32	400	649.82
3978-140"	14	1	16	400	805.83

* Fabricated - PVC Gray with HDPE Plug

P106 Cleanout Plug
MPT



P106-015	1-1/2	50	12000	051	1.65
P106-020	2	50	8400	051	1.71
P106-025	2-1/2	50	5250	051	5.48
P106-030	3	25	2625	051	3.29
P106-040	4	30	2160	051	4.86
P106-060	6	10	1050	051	16.16
P106-080	8	12	576	051	84.21

P107 Flush Bushing
S x H



*Outlet-sized with Bushing

P107-251	2X1-1/2	50	8400	051	1.60
P107-337	3X1-1/2	30	2520	051	7.72
P107-338	3X2	30	2520	051	3.53
P107-420	4X2	30	1080	051	13.45
P107-422	4X3	30	1080	051	6.86
P107-532	6X4	10	300	051	35.58
P107-582	8X4	3	144	051	70.34
P107-585	8X6	4	120	051	77.42
P107-624 ¹	10X4	2	60	052	157.53
P107-626 ¹	10X6	2	60	052	229.13
P107-628	10X8	4	56	052	255.39
P107-666 ¹	12X6	2	42	052	342.77
P107-668 ¹	12X8	1	42	052	352.69
P107-670	12X10	2	60	052	360.00

¹ Bushed

P108 Flush Bushing (Cleanout Adapter)
S x FPT



P108-628	10X8	4	56	052	490.12
P108-668	12X8	1	30	052	711.97

P108X Flush Bushing (Cleanout Adapter) w/Plug
S x FPT



P108X-628	10X8	1	56	052	721.20
P108X-668	12X8	1	30	052	1055.24

P109 Male Adapter (Will not accept tail piece)
MPT x H



P109-015	1-1/2	50	5250	051	1.81
P109-020	2	50	3600	051	2.35
P109-030	3	25	1200	051	6.77
P109-040	4	25	900	051	14.98
P109-060	6	7	245	051	45.11

P110 Flush C.O. Plug
MPT



P110-015	1-1/2	25	9600	051	6.68
P110-020	2	25	9600	051	5.59
P110-025	2-1/2	50	5250	051	7.02
P110-030	3	50	5250	051	6.47



DWV PVC DWV Drain Waste Vent Fittings

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P110 Flush C.O. Plug (continued)

MPT

P110-040	4	25	2400	051	6.35
P110-060	6	10	960	051	16.01

P116 Cap SOC



P116-015	1-1/2	20	7680	051	3.74
P116-020	2	15	5760	051	6.21
P116-030	3	10	1680	051	10.77
P116-040	4	5	840	051	15.39
P116-060	6	5	240	051	38.85
P116-080	8	3	90	051	116.41
3747-100*	10	1	108	390	116.99
3747-120*	12	1	70	390	147.74
3747-140*	14	1	44	390	251.21

Note: 8" Cap is Domed Style
* Fabricated

P117 Adapter Coupling (Adapts S&D Spigot to DWV Spigot)

H x H



P117-040	4	20	700	051	14.45
P117-422	4X3	20	600	051	11.00

P118 Adapter Bushing (Adapts DWV Hub to S&D Spigot)

DWV SPIGOT x HUB



P118-030	3	25	1800	051	5.32
P118-040	4	10	1050	051	5.75

P119 No-Hub Adapter S x H



P119-015	1-1/2	25	4200	051	10.03
P119-020	2	25	2625	051	4.87
P119-030	3	20	960	051	7.04
P119-040	4	15	720	051	9.06
P119-251	2X1-1/2	35	3675	051	9.52
P119-422	4X3	10	720	051	11.58

P122 Spigot Adapter, Cast Iron H x H



P122-040	4	15	210	051	18.80
----------	---	----	-----	-----	-------

P123 Hub Adapter, Cast Iron H x S



P123-020	2	20	1440	051	7.89
P123-030	3	25	750	051	14.15
P123-040	4	10	350	051	24.74

P123R Hub Adapter, Cast Iron, Increaser (Plain End: Joint can be made with compression gasket or plastic lead & seal rope - Do Not use hot lead)

H x S



P123R-213	1-1/2X2	10	1680	051	9.04
P123R-342	3X4	10	350	051	16.68

P130 Repair Coupling H x H



P130-015	1-1/2	25	6000	051	5.09
----------	-------	----	------	-----	------

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P130 Repair Coupling (continued)

H x H

P130-020	2	25	2625	051	3.56
P130-030	3	10	960	051	8.98
P130-040	4	5	480	051	17.27
P130-060	6	5	175	051	63.48
P130-080	8	8	64	051	77.43
P130-100	10	1	36	052	167.65

P131 Test Cap



P131-015	1-1/2	100	38400	051	1.35
P131-020	2	100	24000	051	1.28
P131-030	3	50	8400	051	1.65
P131-040	4	100	4800	051	2.07

P300 1/4 Bend

H x H



P300-015	1-1/2	100	3000	051	1.98
P300-020	2	50	1500	051	2.91
P300-030	3	25	350	051	9.02
P300-040	4	10	180	051	16.47
P300-060	6	4	56	051	60.54
P300-080	8	2	28	051	122.61
P300-100	10	1	12	052	327.77
P300-120	12	1	5	052	504.81

P300S 1/4 Bend with Side Inlet ALL HUB



P300S-338	3X3X2	10	360	051	17.85
-----------	-------	----	-----	-----	-------

P302 1/4 Bend, Street S x H



P302-015	1-1/2	100	3000	051	2.42
P302-020	2	50	1500	051	3.74
P302-030	3	20	360	051	9.27
P302-040	4	10	180	051	18.24
P302-060	6	4	56	051	84.33
P302-080	8	2	28	051	168.13
P302-100	10	1	12	052	326.37
P302-120	12	1	7	052	502.95

P303 1/4 Bend w/Low Heel Inlet H x H x H



P303-338	3X3X2	25	200	051	15.76
P303-420	4X4X2	6	180	051	31.09

P304 Long Sweep 1/4 Bend H x H



P304-015	1-1/2	50	1750	051	4.53
P304-020	2	25	875	051	4.88
P304-030	3	10	300	051	11.23
P304-040	4	5	150	051	21.42
P304-060 ¹	6	5	35	051	82.46

¹ 6" size assembled from 2-Molded 1/8 Bends

P309 Long Sweep 1/4 Bend, Street H x S



P309-015	1-1/2	50	1750	051	5.98
----------	-------	----	------	-----	------

DWV
PVC DWV Drain Waste Vent Fittings



Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P309 Long Sweep 1/4 Bend, Street (continued)

H x S

P309-020	2	25	900	051	7.60
P309-030	3	20	280	051	20.89
P309-040	4	5	150	051	32.18
P309-060	6	5	35	051	148.75

P310 1/4 Bend, Street w/Low Heel Inlet

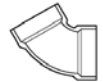
H x S x H



P310-338	3X3X2	15	270	051	28.21
----------	-------	----	-----	-----	-------

P319 1/6 Bend

H x H



P319-015	1-1/2	40	2880	051	3.55
P319-020	2	25	1200	051	4.73
P319-030	3	20	600	051	16.81
P319-040	4	10	180	051	23.89
3724-060°	6	1	32	390	127.62
3724-080°	8	1	16	390	182.08
3724-100°	10	1	16	390	305.13
3724-120°	12	1	6	390	399.78
3724-140°	14	1	4	390	732.80

* Fabricated

P320 1/6 Bend, Street

H x S



P320-015	1-1/2	40	2880	051	7.09
P320-020	2	25	1800	051	9.60
P320-030	3	20	360	051	22.49
P320-040	4	10	300	051	30.06

P321 1/8 Bend

H x H



P321-015	1-1/2	100	3000	051	1.81
P321-020	2	50	1500	051	2.79
P321-030	3	25	450	051	7.64
P321-040	4	15	270	051	13.13
P321-060	6	5	90	051	55.41
P321-080	8	1	36	051	110.13
P321-100	10	1	21	052	275.04
P321-120	12	1	12	052	378.46
3717-140°	14	1	6	390	512.16

* Fabricated

P323 1/8 Bend, Street

H x S



P323-015	1-1/2	100	3600	051	1.83
P323-020	2	50	1800	051	2.81
P323-030	3	25	450	051	7.34
P323-040	4	10	300	051	11.88
P323-060	6	5	90	051	67.86
P323-080	8	1	36	051	119.53
3727-100°	10	1	22	390	210.32
3727-120°	12	1	10	390	295.38
3727-140°	14	1	12	390	512.16

* Fabricated

P324 1/16 Bend

H x H



P324-015	1-1/2	50	3600	051	2.60
----------	-------	----	------	-----	------

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P324 1/16 Bend (continued)

H x H

P324-020	2	25	1800	051	3.21
P324-030	3	20	720	051	8.24
P324-040	4	15	270	051	12.58
P324-060	6	3	105	051	75.65
P324-080	8	2	36	051	90.07
3716-100°	10	1	30	390	168.54
3716-120°	12	1	12	390	266.62
3716-140°	14	1	6	390	419.17

* Fabricated

P326 1/16 Bend, Street

H x S

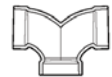


P326-015	1-1/2	50	3600	051	7.34
P326-020	2	25	1800	051	7.85
P326-030	3	20	720	051	12.36
P326-040	4	10	350	051	18.00
P326-060	6	5	90	051	73.27
P326-080	8	2	36	051	100.86
3742-100°	10	1	30	390	185.38
3742-120°	12	1	12	390	293.27
3742-140°	14	1	6	390	461.07

* Fabricated

P327 Double 1/4 Bend

H x H x H



P327-015	1-1/2	20	1440	051	6.46
P327-020	2	25	875	051	9.04
P327-030	3	15	270	051	27.66
P327-040	4	6	108	051	38.18

P327 Double 1/4 Bend, Reducing

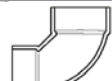
H x H x H



P327-241	2X1-1/2X1-1/2	25	1200	051	8.61
----------	---------------	----	------	-----	------

P329 Closet Bend, Reducing

H x H



P329-342	3X4	10	300	051	14.16
----------	-----	----	-----	-----	-------

P330 Closet Bend, Reducing

H x S



P330-342	3X4	10	300	051	19.16
----------	-----	----	-----	-----	-------

P330X Closet Bend, Reducing with TEST CAP

H x S



P330X-342	3X4	10	300	051	26.28
-----------	-----	----	-----	-----	-------

P331 Vent Ell

H x H



P331-015	1-1/2	25	1800	051	3.78
P331-020	2	30	1440	051	5.27
P331-030	3	25	450	051	13.27
P331-040	4	10	180	051	33.38
P331-060	6	5	40	051	105.21
P331-080	8	2	28	051	109.64
P331-100	10	1	16	052	311.35
P331-120	12	1	12	052	479.61
3706-140°	14	1	2	390	520.49



DWV PVC DWV Drain Waste Vent Fittings

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P331 Vent Ell (continued)

H x H

* Fabricated

P333 Vent Ell, Street

H x S



P333-015	1-1/2	25	2400	051	3.21
P333-020	2	20	1440	051	5.49
P333-030	3	25	450	051	14.43
P333-040	4	10	180	051	50.07
3709-060	6	1	32	390	122.13
3709-080	8	1	16	390	168.00
3709-100	10	1	10	390	280.72
3709-120	12	1	5	390	409.11
3709-140	14	1	2	390	565.74

* Fabricated

P400 Sanitary Tee

ALL HUB



P400-015	1-1/2	60	1800	051	3.40
P400-020	2	35	630	051	5.02
P400-030	3	30	240	051	12.85
P400-040	4	5	150	051	22.38
P400-060	6	6	42	051	97.69
P400-080	8	2	16	051	292.44
P400-100	10	1	7	052	766.27
P400-120	12	1	8	052	1068.24
3790-140	14	1	2	390	1404.22

* Fabricated

P401 Sanitary Tee, Reducing

ALL HUB



P401-241	2X1-1/2X1-1/2	25	875	051	4.40
P401-251	2X2X1-1/2	50	900	051	4.43
P401-257	2X1-1/2X2	25	875	051	5.33
P401-337	3X3X1-1/2	10	350	051	8.15
P401-338	3X3X2	10	350	051	9.60
P401-420	4X4X2	10	300	051	20.94
P401-422	4X4X3	10	180	051	28.44
3790-528	6X2	1	32	390	104.27
3790-530	6X3	1	32	390	114.48
P401-532	6X4	4	72	051	94.51
3790-578	8X2	1	16	390	159.32
3790-580	8X3	1	16	390	210.53
3790-582	8X4	1	16	390	199.78
3790-585	8X6	1	8	390	239.32
3790-621	10X2	1	8	390	244.49
3790-623	10X3	1	8	390	248.63
3790-624	10X4	1	8	390	266.39
3790-626	10X6	1	8	390	342.84
3790-628	10X8	1	6	390	419.78
3790-661	12X2	1	6	390	410.27
3790-663	12X3	1	6	390	414.95
3790-664	12X4	1	4	390	427.08
3790-666	12X6	1	4	390	465.66
3790-668	12X8	1	6	390	518.46
3790-670	12X10	1	6	390	653.08
3790-691	14X2	1	4	390	556.37
3790-693	14X3	1	4	390	603.71
3790-694	14X4	1	4	390	609.61
3790-696	14X6	1	4	390	727.02
3790-698	14X8	1	4	390	829.24
3790-700	14X10	1	4	390	996.07
3790-702	14X12	1	3	390	1174.27

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P401 Sanitary Tee, Reducing (continued)

ALL HUB

* Fabricated

P403 Sanitary Tee, Street

S x H x H



P403-015	1-1/2	20	1440	051	9.19
P403-020	2	25	750	051	10.02
P403-030	3	30	210	051	16.67
P403-040	4	10	140	051	43.53
P403-060	6	4	32	051	88.55
P403-080	8	2	16	051	302.98
P403-100	10	1	10	052	848.99
P403-120	12	1	8	052	1271.61

P404 Sanitary Tee, Street, Reducing

S x H x H



P404-241	2X1-1/2X1-1/2	50	1500	051	8.37
P404-251	2X2X1-1/2	50	700	051	7.84
P404-257	2X1-1/2X2	50	900	051	7.58
P404-337	3X3X1-1/2	10	350	051	17.43
P404-338	3X3X2	10	350	051	16.46
P404-420	4X4X2	5	240	051	26.28
P404-422	4X4X3	5	150	051	29.45

P416 Sanitary Tee with Left Side Inlet

ALL HUB



P416-337	3X3X3X1-1/2	10	180	051	24.88
P416-338	3X3X3X2	10	180	051	23.97
P416-420	4X4X4X2	4	120	051	42.85

P417 Sanitary Tee with Right Side Inlet

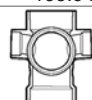
ALL HUB



P417-337	3X3X3X1-1/2	10	180	051	24.88
P417-338	3X3X3X2	10	180	051	23.97
P417-420	4X4X4X2	10	80	051	135.94

P418 Sanitary Tee with R&L Side Inlets

ALL HUB



P418-337	3X3X3X1-1/2	5	175	051	32.73
P418-338	3X3X3X2X2	5	90	051	31.71
P418-420	4X4X4X2X2	5	90	051	101.69

P428 Double Sanitary Tee

ALL HUB

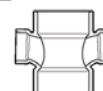


P428-015	1-1/2	25	1200	051	6.98
P428-020	2	25	750	051	10.23
P428-030	3	8	240	051	28.62
P428-040	4	6	108	051	46.02
3791-060	6	1	6	390	210.94
3791-080	8	1	5	390	336.37
3791-100	10	1	3	390	600.76
3791-120	12	1	6	390	872.12
3791-140	14	1	2	390	1510.54

* Fabricated

P429 Double Sanitary Tee, Reducing

ALL HUB



P429-251	2X2X1-1/2X1-1/2	25	900	051	7.72
----------	-----------------	----	-----	-----	------

DWV
PVC DWV Drain Waste Vent Fittings



Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P429 Double Sanitary Tee, Reducing (continued)

ALL HUB

P429-337	3X3X1-1/2X1-1/2	6	432	051	16.43
P429-338	3X3X2X2	10	300	051	17.27
P429-419	4X4X1-1/2X1-1/2	7	245	051	60.87
P429-420	4X4X2X2	7	245	051	38.07
P429-422	4X4X3X3	8	144	051	39.06
3791-528"	6X2	1	16	390	151.05
3791-530"	6X3	1	16	390	158.25
3791-532"	6X4	1	8	390	164.31
3791-578"	8X2	1	16	390	184.42
3791-580"	8X3	1	8	390	229.81
3791-582"	8X4	1	4	390	234.09
3791-585"	8X6	1	4	390	265.28
3791-621"	10X2	1	8	390	274.36
3791-623"	10X3	1	6	390	287.34
3791-624"	10X4	1	4	390	293.69
3791-626"	10X6	1	6	390	369.51
3791-628"	10X8	1	4	390	459.75
3791-661"	12X2	1	6	390	444.58
3791-663"	12X3	1	6	390	453.99
3791-664"	12X4	1	4	390	464.20
3791-666"	12X6	1	4	390	515.82
3791-668"	12X8	1	4	390	578.72
3791-670"	12X10	1	6	390	720.02
3791-691"	14X2	1	4	390	606.21
3791-693"	14X3	1	4	390	684.07
3791-694"	14X4	1	4	390	723.51
3791-696"	14X6	1	4	390	823.21
3791-698"	14X8	1	4	390	905.67
3791-700"	14X10	1	4	390	1071.85
3791-702"	14X12	1	3	390	1264.80

* Fabricated

P439 Double Sanitary Tee with R&L Side Inlets

ALL HUB

P439-338	3X3X3X3X2X2	4	120	051	36.53
P439-420	4X4X4X4X2X2	4	72	051	50.89

P441 Vent Tee

ALL HUB

P441-015	1-1/2	25	1800	051	8.79
P441-020	2	25	900	051	7.46
P441-030	3	10	300	051	23.20
P441-040	4	5	175	051	30.73
P441-060	6	4	32	051	83.43
P441-080	8	2	28	051	214.83
P441-100	10	1	12	052	400.47
P441-120	12	1	10	052	665.75
3701-140"	14	1	4	390	964.59

* Fabricated

P442 Vent Tee, Reducing

ALL HUB

P442-251	2X1-1/2	25	1200	051	9.00
3701-528"	6X2	1	40	390	100.71
3701-530"	6X3	1	24	390	105.78
P442-532	6X4	2	72	051	60.36
3701-578"	8X2	1	24	390	118.41
3701-580"	8X3	1	24	390	124.17
P442-582	8X4	2	36	051	66.38
P442-585	8X6	2	28	051	85.78
3701-621"	10X2	1	16	390	192.76
3701-623"	10X3	1	12	390	196.33

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P442 Vent Tee, Reducing (continued)

ALL HUB

P442-624	10X4	1	12	052	255.69
P442-626	10X6	1	14	052	314.62
P442-628	10X8	1	12	052	354.92
3701-661"	12X2	1	12	390	257.35
3701-663"	12X3	1	8	390	261.15
P442-664	12X4	1	10	052	345.69
P442-666	12X6	1	10	052	394.75
P442-668	12X8	1	10	052	454.01
P442-670	12X10	1	10	052	541.74
3701-691"	14X2	1	12	390	408.13
3701-693"	14X3	1	8	390	451.72
3701-694"	14X4	1	12	390	503.61
3701-696"	14X6	1	6	390	591.03
3701-698"	14X8	1	6	390	704.67
3701-700"	14X10	1	6	390	801.01
3701-702"	14X12	1	4	390	947.58

* Fabricated

3701 Test Tee

SOC x FPT with Plug

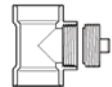


3701-060TEST"	6	1	48	390	411.12
3701-080TEST"	8	1	22	390	455.66
3701-100TEST"	10	1	11	390	669.71
3701-120TEST"	12	1	8	390	1140.53

* Fabricated

P444X Cleanout Tee w/C.O. Plug

H x H



P444X-015	1-1/2	20	1440	051	8.62
P444X-020	2	10	720	051	9.96
P444X-030	3	10	350	051	19.02
P444X-040	4	10	180	051	29.93
P444X-060	6	2	70	051	151.92

P445 Flush C.O. Tee

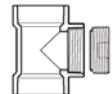
H x H x FPT



P445-015	1-1/2	20	2100	051	6.18
P445-020	2	25	1200	051	7.60
P445-030	3	10	360	051	15.17
P445-040	4	10	180	051	28.22
P445-060	6	3	54	051	94.78

P445X Flush C.O. Tee w/C.O. Plug

H x H



P445X-015	1-1/2	20	1440	051	8.07
P445X-020	2	10	1050	051	11.82
P445X-030	3	10	300	051	22.27
P445X-040	4	10	180	051	30.51
P445X-060	6	2	36	051	151.92

P447 Horizontal Twin Tee

ALL HUB



P447-337	3X3X1-1/2X1-1/2	5	360	051	45.01
----------	-----------------	---	-----	-----	-------

P448 2-WAY Cleanout

ALL HUB



P448-030	3	12	216	051	30.66
P448-040	4	5	90	051	39.69



DWV PVC DWV Drain Waste Vent Fittings

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P500 Double Fixture Fitting ALL HUB



P500-020	2X2X2X2	10	360	051	17.40
P500-030	3X3X3X3	10	80	051	37.61
P500-241	2X1-1/2X1-1/2X1-1/2	20	600	051	19.16
P500-251	2X2X1-1/2X1-1/2	20	600	051	20.02
P500-338	3X2X3X3	10	80	051	37.24

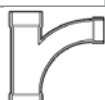
P501 Combination Wye and 1/8 Bend (One Piece) ALL HUB



P501-015	1-1/2	50	900	051	7.40
P501-020	2	20	600	051	8.81
P501-030	3	10	180	051	21.38
P501-040	4	8	96	051	38.02
3777-060°	6	1	20	390	197.67
3777-080°	8	1	8	390	315.23
3777-100°	10	1	8	390	563.03
3777-120°	12	1	3	390	817.35
3777-140°	14	1	2	390	1415.75

* Fabricated

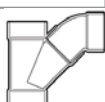
P502 Combination Wye and 1/8 Bend, Reducing (One Piece) ALL HUB



P502-251	2X2X1-1/2	20	700	051	10.64
P502-337	3X3X1-1/2	15	450	051	18.44
P502-338	3X3X2	10	180	051	14.14
P502-420	4X4X2	5	150	051	23.58
P502-422	4X4X3	5	90	051	28.73
3777-528°	6X2	1	32	390	144.06
3777-532°	6X4	1	22	390	154.00
3777-578°	8X2	1	16	390	172.85
3777-580°	8X3	1	8	390	215.39
3777-621°	10X2	1	16	390	257.13
3777-623°	10X3	1	8	390	269.31
3777-624°	10X4	1	8	390	275.26
3777-626°	10X6	1	4	390	346.29
3777-628°	10X8	1	8	390	430.89
3777-661°	12X2	1	4	390	416.68
3777-663°	12X3	1	4	390	425.48
3777-664°	12X4	1	6	390	435.06
3777-666°	12X6	1	12	390	483.43
3777-668°	12X8	1	6	390	542.36
3777-670°	12X10	1	6	390	674.80
3777-691°	14X2	1	4	390	626.97
3777-693°	14X3	1	4	390	641.13
3777-694°	14X4	1	4	390	678.06
3777-696°	14X6	1	4	390	771.52
3777-698°	14X8	1	4	390	848.81
3777-700°	14X10	1	4	390	1004.55
3777-702°	14X12	1	4	390	1185.38

* Fabricated

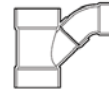
P503 Combination Wye and 1/8 Bend (Two Piece) ALL HUB



P503-030	3	10	180	051	23.98
P503-040	4	5	40	051	56.02
P503-060	6	4	28	051	173.84
P503-080	8	1	4	051	323.06
P503-100	10	1	4	052	1054.17
P503-120	12	0	0	052	1227.31

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece) ALL HUB



P504-422	4X3	5	90	051	43.22
P504-530	6X3	5	40	051	174.91
P504-532	6X4	5	35	051	161.64
P504-580	8X3	2	16	051	176.78
P504-582°	8X4	2	16	051	195.82
P504-585	8X6	1	8	051	349.04
P504-623°	10X3	1	12	052	349.75
P504-624°	10X4	1	8	052	370.33
P504-626	10X6	1	8	052	465.69
P504-628	10X8	1	8	052	579.69
P504-664	12X4	1	4	052	575.93
P504-666	12X6	1	4	052	598.25
P504-668	12X8	1	6	052	729.45
P504-670°	12X10	1	6	052	1080.85

* Bushed

P507 Double Combination Wye and 1/8 Bend ALL HUB



P507-015	1-1/2	10	350	051	20.36
P507-020	2	10	300	051	30.57
P507-030	3	10	80	051	59.28
P507-040	4	5	35	051	118.25
P507-251	2X2X1-1/2X1-1/2	20	360	051	27.05
P507-338	3X3X2X2	10	80	051	50.25
P507-420	4X4X2X2	5	70	051	95.82
P507-422	4X4X3X3	5	40	051	94.38
3792-060°	6	1	6	390	217.44
3792-080°	8	1	5	390	346.78
3792-100°	10	1	1	390	619.33
3792-120°	12	1	0	390	899.09
3792-140°	14	1	2	390	1557.25
3792-528°	6X2	1	24	390	155.73
3792-530°	6X3	1	24	390	163.17
3792-532°	6X4	1	8	390	169.41
3792-578°	8X2	1	16	390	190.15
3792-580°	8X3	1	8	390	236.92
3792-582°	8X4	1	4	390	241.35
3792-585°	8X6	1	5	390	273.48
3792-621°	10X2	1	16	390	282.82
3792-623°	10X3	1	8	390	296.22
3792-624°	10X4	1	4	390	302.78
3792-626°	10X6	1	4	390	380.93
3792-628°	10X8	1	4	390	473.99
3792-661°	12X2	1	4	390	458.33
3792-663°	12X3	1	6	390	468.03
3792-664°	12X4	1	12	390	478.56
3792-666°	12X6	1	6	390	531.78
3792-668°	12X8	1	6	390	596.61
3792-670°	12X10	1	3	390	742.29
3792-691°	14X2	1	4	390	624.96
3792-693°	14X3	1	4	390	705.25
3792-694°	14X4	1	4	390	745.86
3792-696°	14X6	1	4	390	848.66
3792-698°	14X8	1	4	390	933.71
3792-700°	14X10	1	4	390	1105.02
3792-702°	14X12	1	4	390	1303.91

* Fabricated

P515 Combination Wye and 1/8 Bend with Left Side Inlet ALL HUB



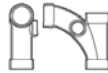
P515-338	3X3X3X2	10	140	051	43.94
----------	---------	----	-----	-----	-------

DWV PVC DWV Drain Waste Vent Fittings



Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P516 Combination Wye and 1/8 Bend with Right Side Inlet ALL HUB



P516-338	3X3X3X2	10	140	051	43.94
----------	---------	----	-----	-----	-------

P517 Combination Wye and 1/8 Bend with R&L Side Inlets ALL HUB



P517-338	3X3X3X2	10	80	051	49.34
----------	---------	----	----	-----	-------

P600 Wye ALL HUB



P600-015	1-1/2	50	700	051	5.21
P600-020	2	25	750	051	6.11
P600-030	3	8	240	051	15.76
P600-040	4	8	144	051	29.18
P600-060	6	4	48	051	90.35
P600-080	8	1	12	051	210.47
P600-100	10	1	6	052	495.95
P600-120	12	1	4	052	805.65
3775-140	14	1	4	390	1189.69

* Fabricated

P601 Wye, Reducing ALL HUB



P601-241	2X1-1/2X1-1/2	25	875	051	8.62
P601-251	2X2X1-1/2	25	875	051	7.52
P601-257	2X1-1/2X2	10	480	051	11.80
P601-337	3X3X1-1/2	15	450	051	10.53
P601-338	3X3X2	12	360	051	11.91
P601-419	4X4X1-1/2	10	180	051	32.25
P601-420	4X4X2	10	180	051	16.29
P601-422	4X4X3	10	140	051	23.20
P601-528	6X6X2	5	40	051	90.95
P601-530	6X6X3	6	48	051	87.78
P601-532	6X6X4	5	40	051	66.41
P601-578	8X8X2	3	24	051	177.79
3775-580	8X3	1	24	390	142.23
P601-582	8X8X4	2	28	051	163.46
P601-585	8X8X6	1	14	051	158.91
3775-621	10X2	1	11	390	245.03
3775-623	10X3	1	11	390	256.64
P601-624	10X10X4	1	12	052	282.51
P601-626	10X10X6	1	12	052	366.45
3775-626	10X6	1	11	390	318.00
P601-628	10X10X8	1	10	052	433.64
3775-661	12X2	1	6	390	291.54
3775-663	12X3	1	6	390	302.76
3775-664	12X4	1	6	390	313.12
P601-664	12X12X4	1	6	052	437.54
P601-666	12X12X6	1	6	052	477.73
3775-666	12X6	1	6	390	373.12
P601-668	12X12X8	1	6	052	567.35
3775-668	12X8	1	8	390	414.57
P601-670	12X12X10	1	6	052	635.34
3775-691	14X2	1	4	390	591.88
3775-693	14X3	1	4	390	620.75
3775-694	14X4	1	4	390	631.15
3775-696	14X6	1	4	390	681.23
3775-698	14X8	1	4	390	779.57
3775-700	14X10	1	4	390	833.31
3775-702	14X12	1	4	390	1065.43
3775-756	16X6	1	4	390	800.48
3775-786	18X6	1	4	390	1211.79

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P601 Wye, Reducing (continued)

ALL HUB

3775-816	20X6	1	3	390	1387.01
3775-906	24X6	1	2	390	1900.94

* Fabricated

P602 Wye, Street S x H x H



P602-015	1-1/2	50	1500	051	8.26
P602-020	2	30	540	051	9.82
P602-030	3	10	180	051	20.92
P602-040	4	10	80	051	41.44

P603 Wye, Street, Reducing S x H x H



P603-251	2X2X1-1/2	25	875	051	11.26
P603-420	4X4X2	10	180	051	45.69
P603-422	4X4X3	10	80	051	38.80

P611 Double Wye ALL HUB



P611-015	1-1/2	40	720	051	11.79
P611-020	2	20	600	051	12.69
P611-030	3	15	120	051	32.73
P611-040	4	5	70	051	66.36
P611-060	6	2	16	051	130.43
3776-080	8	1	5	390	299.66
3776-100	10	1	6	390	439.52
3776-120	12	1	3	390	717.57
3776-140	14	1	3	390	1272.75

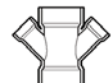
* Fabricated

P611S Double Wye, with 2" Side Inlet ALL HUB



P611S-030	3	10	140	051	128.57
-----------	---	----	-----	-----	--------

P612 Double Wye, Reducing ALL HUB



P612-251	2X2X1-1/2X1-1/2	10	720	051	11.59
P612-337	3X3X1-1/2X1-1/2	10	300	051	23.14
P612-338	3X3X2X2	15	210	051	24.38
P612-420	4X4X2X2	5	150	051	39.80
P612-422	4X4X3X3	5	90	051	52.56
3776-528	6X2	1	24	390	114.17
3776-530	6X3	1	16	390	118.18
P612-532	6X6X4X4	5	35	051	132.74
3776-578	8X2	1	16	390	163.16
3776-580	8X3	1	8	390	174.32
3776-582	8X4	1	8	390	181.71
3776-585	8X6	1	4	390	229.44
3776-621	10X2	1	4	390	232.25
3776-623	10X3	1	4	390	242.66
3776-624	10X4	1	8	390	254.81
3776-626	10X6	1	4	390	315.23
3776-628	10X8	1	4	390	381.69
3776-661	12X2	1	4	390	314.38
3776-663	12X3	1	4	390	324.72
3776-664	12X4	1	4	390	331.99
3776-666	12X6	1	4	390	395.19
3776-668	12X8	1	4	390	504.43
3776-670	12X10	1	3	390	645.79



DWV PVC DWV Drain Waste Vent Fittings

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
-------------	------	--------	---------	-----------	------------

P612 Double Wye, Reducing (continued)

ALL HUB

3776-691'	14X2	1	3	390	606.52
3776-693'	14X3	1	3	390	634.83
3776-694'	14X4	1	3	390	661.52
3776-696'	14X6	1	3	390	736.45
3776-698'	14X8	1	3	390	853.44
3776-700'	14X10	1	3	390	901.92
3776-702'	14X12	1	3	390	1168.07
3776-756'	16X6	1	3	390	892.40
3776-786'	18X6	1	4	390	1308.65
3776-816'	20X6	1	1	390	1536.66
3776-906'	24X6	1	1	390	2081.00

* Fabricated

P335 Trap Elbow (for use with Traps only)

H x S

P335-030	3	30	540	051	14.43
P335-040	4	25	200	051	46.26

P700 Return Bend

H x H

P700-015	1-1/2	20	1440	051	5.22
P700-020	2	35	630	051	10.02
P700-030	3	8	240	051	27.85
P700-040	4	6	108	051	55.02
P700-060	6	2	28	051	121.25
P700-080	8	1	7	051	167.12

P704P Tail Piece Adapter

S x SLIP w/Plastic Nut - Built-in Washer

P704P-015	1-1/2	25	4200	051	3.55
-----------	-------	----	------	-----	------

P704X Tail Piece Adapter

S x SLIP w/Chrome Nut & Washer

P704X-015	1-1/2	25	4200	051	5.03
-----------	-------	----	------	-----	------

P706X P-Trap

H x H

P706X-015	1-1/2	25	875	051	6.54
P706X-020	2	20	360	051	8.60
P706X-030	3	10	80	051	29.89
P706X-040	4	4	72	051	68.17
P706X-060	6	2	14	051	209.80
P706X-080	8	1	7	051	408.22
P706X-100	10	1	1	052	1030.23
P706X-120	12	1	1	052	1404.34

P707X P-Trap w/Cleanout

H x H

P707X-015	1-1/2	10	720	051	10.80
-----------	-------	----	-----	-----	-------

P708P Adjustable P-Trap w/Plastic Nut

H x H

P708P-015	1-1/2	25	875	051	8.37
P708P-020	2	25	450	051	18.18

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
-------------	------	--------	---------	-----------	------------

P711P L.A. Pattern P-Trap w/Plastic Nut

SLIP x H w/Plastic Nut & Washer

P711P-169	1-1/4X1-1/2	25	750	051	14.25
P711P-015	1-1/2	25	750	051	14.25

P711X L.A. Pattern P-Trap w/Chrome Nut

SLIP x H w/Chrome Nut & Washer

P711X-015	1-1/2	25	900	051	16.66
-----------	-------	----	-----	-----	-------

P800 Closet Flange

H

P800-422	4X3	25	750	051	7.67
P800-040	4X4	30	540	051	8.73

P800G Closet Flange w/Gussets

H

P800G-040	4	30	540	051	37.86
-----------	---	----	-----	-----	-------

P800KO Closet Flange with Knockout

H

P800KO-422	4X3	25	750	051	8.93
------------	-----	----	-----	-----	------

P800S Closet Flange with Stop

H

P800S-422	4X3	16	560	051	7.67
-----------	-----	----	-----	-----	------

P801 Closet Flange, Reducing

SPIGOT

P801-422	4X3	25	750	051	9.33
----------	-----	----	-----	-----	------

P811 Closet Flange w/Adjustable Metal Ring

H

P811-040	4	30	540	051	21.25
P811-422	4X3	30	540	051	15.02

P811KO Closet Flange w/Adjustable Metal Ring and Knockout

H

P811KO-422	4X3	25	350	051	21.38
------------	-----	----	-----	-----	-------

P812 Closet Flange w/Adjustable Metal Ring

SPIGOT

P812-040	4	25	450	051	23.18
P812-422	4X3	25	450	051	20.13

P813 Flush Closet Flange w/Adjustable Metal Ring

Fits Over 3" Pipe or Inside 4" Pipe

P813-422	4X3	25	750	051	20.13
----------	-----	----	-----	-----	-------

P815 Flush Closet Flange

Fits Over 3" Pipe or Inside 4" Pipe

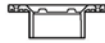
P815-040	4X4 / 4X3	25	750	051	14.76
----------	-----------	----	-----	-----	-------

DWV
PVC DWV Drain Waste Vent Fittings



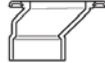
Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P815KO Flush Closet Flange with Knockout
Fits Over 3" Pipe or Inside 4" Pipe



P815KO-040	4X4 / 4X3	25	750	051	14.28
------------	-----------	----	-----	-----	-------

P820 Offset Closet Flange w/Adjustable Metal Ring
(1-1/2" Offset) H



P820-422	4X3	15	450	051	26.54
----------	-----	----	-----	-----	-------

Uniform Plumbing Code does not accept offset closet flanges

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



P1500-015S	1-1/2X5	4	216	168	378.74
P1600-015S	1-1/2X6	4	216	168	407.98
P1700-015S	1-1/2X7	4	0	168	422.63
P1800-015S	1-1/2X8	4	216	168	543.58
P1500-020S	2X5	4	216	168	378.74
P1600-020S	2X6	4	400	168	407.98
P1700-020S	2X7	4	0	168	422.63
P1800-020S	2X8	4	0	168	543.58
P1500-030S	3X5	4	216	168	378.74
P1600-030S	3X6	4	400	168	407.98
P1700-030S	3X7	2	54	168	422.63
P1800-030S	3X8	4	216	168	543.58
P1500-040S	4X5	4	216	168	378.74
P1600-040S	4X6	4	1	168	407.98
P1700-040S	4X7	4	400	168	422.63
P1800-040S	4X8	4	144	168	543.58

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



P150M-015S	1-1/2X5	4	216	168	407.47
P160M-015S	1-1/2X6	4	216	168	461.68
P170M-015S	1-1/2X7	4	0	168	475.68
P180M-015S	1-1/2X8	4	216	168	566.95
P150M-020S	2X5	1	175	168	407.47
P160M-020S	2X6	4	216	168	461.68
P170M-020S	2X7	4	0	168	475.68
P180M-020S	2X8	4	0	168	566.95
P150M-030S	3X5	4	216	168	407.47
P160M-030S	3X6	4	216	168	461.68
P170M-030S	3X7	2	54	168	475.68
P180M-030S	3X8	2	144	168	566.95
P150M-040S	4X5	4	216	168	407.47
P160M-040S	4X6	4	216	168	461.68
P170M-040S	4X7	4	192	168	475.68
P180M-040S	4X8	4	0	168	566.95

Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



P1510-015S	1-1/2X5	4	216	168	422.89
P1510-020S	2X5	6	210	168	422.89
P1510-030S	3X5	4	400	168	422.89
P1510-040S	4X5	4	400	168	422.89

Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



P151M-015S	1-1/2X5	4	216	168	445.43
------------	---------	---	-----	-----	--------

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar (continued)

P151M-020S	2X5	4	216	168	445.43
P151M-030S	3X5	4	216	168	445.43
P151M-040S	4X5	4	54	168	445.43

S119 Expansion Joint

Soc x Soc - PVC White with EPDM O-ring



S119-15	1-1/2	16	768	025	14.96
S119-20	2	10	480	025	23.14
S119-25	2-1/2	5	225	025	33.57
S119-30	3	4	144	025	41.94
S119-40	4	2	70	025	73.40
S119-60	6	1	36	025	179.60

826 Large Diameter Expansion Joint

Soc x Soc - PVC Gray with EPDM O-ring



826-080X6	8	1	12	085	1352.21
826-100X6	10	1	12	085	1587.88
826-120X6	12	1	4	085	2813.54
826-140X6	14	1	4	085	3213.82

Air Admittance Valve Spigot



Maximum 6 DFU (Drainage Fixture Units)

AAV-015	1-1/2	1	0	285	51.16
---------	-------	---	---	-----	-------



DWV Sewer Disconnect

Sewer Disconnect Application

Requires Purchase of SDC-040 Body and SDCP-040 Plunger, Sold Separately.



Screw-down Plunger installs in Body to provide temporary shut-off of Sewer line or to minimize sewage backup from sewer mains during flooding. Body accepts SDR-35 Sewer Pipe (or any ASTM D 3034 /D 2729 pipe), but can easily adapt to Schedule 40 drainage pipe using 4" IPS socket x Sewer spigot adapters, Spears® part no. 3729-04013IXS.

Standpipe to grade can be easily fabricated from user-supplied SDR-35 Sewer Pipe or optionally from Schedule 40 drainage pipe with the addition of a 4" Schedule 40 DWV socket Coupling, Spears® part no. P100-040. For Closure, a 4" Sewer Cap, Spears® part no. 4047-040; or 4" Schedule 40 DWV Cap, Spears® part no. P116-040 can be used as applicable.

A T-handle extension for easy Plunger operation can also be fabricated from user supplied 1" Schedule 40 pipe and a Tee fitting, Spears® part no. 401-010. See installation instructions included with product for additional detail.

Sewer Disconnect Body

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
-------------	------	--------	---------	-----------	------------

Sewer Socket X Sewer Socket.

Requires Separate Purchase of SDCP-040 Plunger

Requires Purchase of SDCP-040 Plunger

SDC-040	4	6	108	055	72.66
---------	---	---	-----	-----	-------

Sewer Disconnect Plunger

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
-------------	------	--------	---------	-----------	------------

For Use With Sewer Disconnect

Body. Requires Separate Purchase of SDC-040 Body

Requires Purchase of SDC-040 Body

SDCP-040	4	12	420	055	25.02
----------	---	----	-----	-----	-------

DWV Industrial PVC Backwater Valves



Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flap assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves



PVC Backwater Valves Soc x Soc - Valve Only

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
S275P	2	1	3840	055	59.05
S375P	3	2	210	055	59.17
S475P	4	1	54	055	65.55
S675P	6	1	30	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length



PVC Backwater Valves with Extension Kit to Premade Length Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
S275P-120 ¹	2X12HT	1	98	055	178.12
S275P-160 ¹	2X16HT	1	98	055	191.59
S275P-200 ¹	2X20HT	1	98	055	205.05
S275P-240 ¹	2X24HT	1	98	055	218.53
S275P-360 ¹	2X36HT	1	98	055	229.52
S275P-480 ¹	2X48HT	1	98	055	252.25
S375P-120 ¹	3X12HT	1	36	055	178.12
S375P-160 ¹	3X16HT	1	15	055	191.59
S375P-200 ¹	3X20HT	1	15	055	205.05
S375P-240 ¹	3X24HT	1	15	055	218.53
S375P-360 ¹	3X36HT	1	15	055	229.52

PVC Backwater Valves with Extension Kit to Premade Length

Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
S375P-480 ¹	3X48HT	1	15	055	252.25
S475P-120 ¹	4X12HT	1	18	055	231.36
S475P-160 ¹	4X16HT	1	12	055	249.59
S475P-200 ¹	4X20HT	1	30	055	266.20
S475P-240 ¹	4X24HT	1	30	055	283.85
S475P-360 ¹	4X36HT	1	30	055	298.11
S475P-480 ¹	4X48HT	1	30	055	327.60
S675P-120 ¹	6X12HT	1	30	055	485.82
S675P-160 ¹	6X16HT	1	30	055	524.14
S675P-200 ¹	6X20HT	1	30	055	559.02
S675P-240 ¹	6X24HT	1	30	055	596.16
S675P-360 ¹	6X36HT	1	30	055	626.04
S675P-480 ¹	6X48HT	1	1	055	687.95

¹ - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length



PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Pklt Qty	Disc Code	Price Each
SAEK-020-120 ¹	2X12HT	1	65	055	55.55
SAEK-020-160 ¹	2X16HT	1	36	055	57.14
SAEK-020-200 ¹	2X20HT	1	5	055	58.65
SAEK-020-240 ¹	2X24HT	1	5	055	61.46
SAEK-020-360 ¹	2X36HT	1	5	055	64.37
SAEK-020-480 ¹	2X48HT	1	5	055	67.52
SAEK-030-120 ¹	3X12HT	1	65	055	60.24
SAEK-030-160 ¹	3X16HT	1	36	055	68.00



DWV Industrial PVC Backwater Valves

PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
SAEK-030-200 ¹	3X20HT	1	0	055	72.04
SAEK-030-240 ¹	3X24HT	1	49	055	81.19
SAEK-030-360 ¹	3X36HT	1	30	055	96.04
SAEK-030-480 ¹	3X48HT	1	30	055	113.59
SAEK-040-120 ¹	4X12HT	1	36	055	89.83
SAEK-040-160 ¹	4X16HT	1	12	055	101.27
SAEK-040-200 ¹	4X20HT	1	12	055	124.92
SAEK-040-240 ¹	4X24HT	1	12	055	136.79
SAEK-040-360 ¹	4X36HT	1	12	055	172.06
SAEK-040-480 ¹	4X48HT	1	12	055	198.64
SAEK-060-120 ¹	6X12HT	1	4	055	160.94
SAEK-060-160 ¹	6X16HT	1	12	055	182.92
SAEK-060-200 ¹	6X20HT	1	0	055	207.41
SAEK-060-240 ¹	6X24HT	1	6	055	237.97
SAEK-060-360 ¹	6X36HT	1	6	055	295.39
SAEK-060-480 ¹	6X48HT	1	7	055	366.67

¹ - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components



PVC Backwater Valve with Extension Components Soc x Soc - Components

Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
S275P-AK	2	1	240	055	87.00
S375P-AK	3	1	105	055	87.00
S475P-AK	4	1	36	055	101.77
S675P-AK	6	1	14	055	360.38

PVC Backwater Valve Extension Components Only



PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
S275P-ECK	2	1	240	055	46.33
S375P-ECK	3	1	168	055	46.33
S475P-ECK	4	1	72	055	60.37
S675P-ECK	6	1	48	055	126.83

Table 1: User Supplied Pipe Requirements For Use With Extension Components

Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe ¹
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE ³ 6" D3034 (SDR 35) PVC SEWER PIPE ²	
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE	
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE	

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.

Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.

Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit



Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	2	1	1680	055	34.48
S375P-FRK	3	1	1050	055	43.48
S475P-FRK	4	1	720	055	50.64
S675P-FRK	6	1	240	055	90.18



PVC Backwater Valve Metric Adapters



PVC Backwater Valve Metric Adapters

Part Number	Size	Std Pk	Plt Qty	Disc Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	63mm X 2	50	2400	055	15.28
S375MA-090	90mm X 3	25	750	055	16.42
S475MA-110	110mm X 4	10	480	055	19.45
S675MA-160	160mm X 6	4	120	055	44.89



DWV
PVC Schedule 40 & 80 DWV Fabricated Fittings

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

TEE (Soc x Soc x Soc)

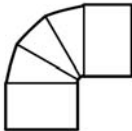
	6	3701-060 116.54	3901-060 202.68
	6X2	3701-528* 100.71	3901-528 151.01
	6X3	3701-530* 105.78	3901-530 158.12
	6X4	3701-532 110.64	3901-532 164.16
	8	3701-080 189.84	3901-080 321.71
	8X2	3701-578* 118.41	3901-578 211.51
	8X3	3701-580* 124.17	3901-580 238.31
	8X4	3701-582 127.55	3901-582 243.62
	8X6	3701-585 138.40	3901-585 252.93
	10	3701-100 369.23	3901-100 501.78
	10X2	3701-621* 192.76	3901-621 298.43
	10X3	3701-623* 196.33	3901-623 325.04
	10X4	3701-624 201.13	3901-624 367.71
	10X6	3701-626 245.85	3901-626 449.32
	10X8	3701-628 329.59	3901-628 470.85
	12	3701-120 490.71	3901-120 691.36
	12X2	3701-661* 257.35	3901-661 369.58
	12X3	3701-663* 261.15	3901-663 430.71
	12X4	3701-664 267.72	3901-664 489.34
	12X6	3701-666 310.95	3901-666 569.33
	12X8	3701-668 371.41	3901-668 626.84
	12X10	3701-670 423.23	3901-670 635.05
	14	3701-140* 964.59	3901-140 1241.67
	14X2	3701-691* 408.13	3901-691 654.45
	14X3	3701-693* 451.72	3901-693 732.20
	14X4	3701-694* 503.61	3901-694 805.84
	14X6	3701-696* 591.03	3901-696 945.67
	14X8	3701-698* 704.67	3901-698 1133.01
	14X10	3701-700* 801.01	3901-700 1191.92
	14X12	3701-702* 947.58	3901-702 1203.49
	16	3701-160 1365.40	3901-160 1956.12
	16X2	3701-751 581.98	3901-751 839.04
	16X3	3701-753 588.36	3901-753 928.06
	16X4	3701-754 624.56	3901-754 999.23
	16X6	3701-756 675.58	3901-756 1080.84
	16X8	3701-758 790.88	3901-758 1266.11
	16X10	3701-760 994.16	3901-760 1417.55

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

TEE (Soc x Soc x Soc) (continued)

	16X12	3701-762 1128.88	3901-762 1797.08
	16X14	3701-764 1339.73	3901-764 1858.28
	18	3701-180 1696.84	3901-180 2111.91
	18X4	3701-784 997.40	3901-784 1159.69
	18X6	3701-786 1013.19	3901-786 1312.28
	18X8	3701-788 1054.77	3901-788 1361.41
	18X10	3701-790 1188.84	3901-790 1375.72
	18X12	3701-792 1266.49	3901-792 1691.18
	18X14	3701-794 1358.41	3901-794 1944.79
	18X16	3701-796 1458.03	3901-796 1987.24
	20	3701-200 2259.68	3901-200 3039.14
	20X4	3701-814 1205.44	3901-814 1610.09
	20X6	3701-816 1275.55	3901-816 1815.75
	20X8	3701-818 1347.84	3901-818 2229.95
	20X10	3701-820 1446.47	3901-820 2303.86
	20X12	3701-822 1531.62	3901-822 2433.54
	20X14	3701-824 1652.83	3901-824 2646.92
	20X16	3701-826 1760.01	3901-826 2695.20
	20X18	3701-828 1941.35	3901-828 2913.97
	24	3701-240 2815.19	3901-240 3645.26
	24X4	3701-904 1659.87	3901-904 1996.06
	24X6	3701-906 1744.75	3901-906 2251.09
	24X8	3701-908 1851.04	3901-908 2435.12
	24X10	3701-910 1955.56	3901-910 2649.68
	24X12	3701-912 2060.67	3901-912 2788.15
	24X14	3701-914 2201.79	3901-914 3091.48
	24X16	3701-916 2328.91	3901-916 3190.04
	24X18	3701-918 2530.18	3901-918 3345.66
	24X20	3701-920 2716.49	3901-920 3499.60

90° ELBOW (Soc x Soc)

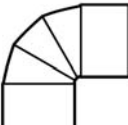
	6	3706-060 115.05	3906-060 148.94
	8	3706-080 159.83	3906-080 250.15
	10	3706-100 252.65	3906-100 493.81
	12	3706-120 388.64	3906-120 720.11
	14	3706-140* 520.49	3906-140 1059.49
	16	3706-160 771.87	3906-160 1317.69
	18	3706-180 1147.99	3906-180 1696.33

DWV
PVC Schedule 40 & 80 DWV Fabricated Fittings



	Size	SCH 40 LOW PR	SCH 80 LOW PR
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

90° ELBOW (Soc x Soc) (continued)

	20	3706-200 1291.21	3906-200 2000.03
	24	3706-240 1614.71	3906-240 2992.62

11-1/4° ELBOW (Soc x Soc)

	4	3711-040 41.13	3911-040 55.93
	6	3711-060 66.07	3911-060 104.56
	8	3711-080 111.69	3911-080 171.15
	10	3711-100 168.54	3911-100 303.33
	12	3711-120 266.62	3911-120 443.33
	14	3711-140 419.17	3911-140 678.69
	16	3711-160 571.40	3911-160 907.22
	18	3711-180 639.49	3911-180 1171.17
	20	3711-200 848.25	3911-200 1501.41
	24	3711-240 1516.51	3911-240 1718.56

15° ELBOW (Soc x Soc)

	4	3718-040 41.13	3918-040 55.93
	6	3718-060 66.07	3918-060 104.56
	8	3718-080 111.69	3918-080 171.15
	10	3718-100 168.54	3918-100 303.33
	12	3718-120 266.62	3918-120 443.33
	14	3718-140 419.17	3918-140 678.69
	16	3718-160 571.40	3918-160 907.22
	18	3718-180 639.49	3918-180 1171.17
	20	3718-200 848.25	3918-200 1501.41
	24	3718-240 1516.51	3918-240 1718.56

22-1/2° ELBOW (Soc x Soc)

	4	3716-040 41.13	3916-040 55.93
	6	3716-060 66.07	3916-060 104.56
	8	3716-080 111.69	3916-080 171.15
	10	3716-100* 168.54	3916-100 303.33
	12	3716-120* 266.62	3916-120 443.33
	14	3716-140* 419.17	3916-140 678.69
	16	3716-160 571.40	3916-160 907.22
	18	3716-180 686.21	3916-180 1171.17
	20	3716-200 848.25	3916-200 1501.41
	24	3716-240 1516.51	3916-240 1718.56

	Size	SCH 40 DWV	SCH 80 DWV
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

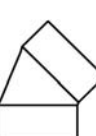
22-1/2° STREET ELL (Spig x Soc)

	6	3742-060 72.67	3942-060 114.98
	8	3742-080 122.85	3942-080 188.25
	10	3742-100* 185.38	3942-100 333.67
	12	3742-120* 293.27	3942-120 487.67
	14	3742-140* 461.07	3942-140 746.57
	16	3742-160 453.78	3942-160 997.94
	18	3742-180 754.83	3942-180 1286.63
	20	3742-200 1149.99	3942-200 1767.57
	24	3742-240 1784.12	3942-240 2022.27

30° ELBOW (Soc x Soc)

	4	3715-040 41.13	3915-040 55.93
	6	3715-060 66.07	3915-060 104.56
	8	3715-080 111.69	3915-080 171.15
	10	3715-100 168.54	3915-100 303.33
	12	3715-120 266.62	3915-120 443.33
	14	3715-140 419.17	3915-140 678.69
	16	3715-160 571.40	3915-160 907.22
	18	3715-180 686.21	3915-180 1171.17
	20	3715-200 848.25	3915-200 1501.41
	24	3715-240 1516.51	3915-240 1718.56

45° ELBOW (Soc x Soc)

	4	3717-040 100.47	3917-040 122.94
	6	3717-060 106.79	3917-060 175.23
	8	3717-080 127.87	3917-080 188.29
	10	3717-100 210.32	3917-100 344.93
	12	3717-120 295.38	3917-120 493.09
	14	3717-140* 512.16	3917-140 708.63
	16	3717-160 632.38	3917-160 917.65
	18	3717-180 729.78	3917-180 1241.33
	20	3717-200 996.44	3917-200 1559.17
	24	3717-240 1324.03	3917-240 1835.55

45° STREET ELL (Spig x Soc)

	4	3727-040 100.47	3927-040 122.94
	6	3727-060 106.79	3927-060 175.23
	8	3727-080 127.87	3927-080 188.29
	10	3727-100* 210.32	3927-100 344.93
	12	3727-120* 295.38	3927-120 493.09
	14	3727-140* 512.16	3927-140 708.63



DWV PVC Schedule 40 & 80 DWV Fabricated Fittings

	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
--	------	---	---

45° STREET ELL (Spig x Soc) (continued)

	16	3727-160 632.38	3927-160 917.65
	18	3727-180 729.78	3927-180 1241.33
	20	3727-200 996.44	3927-200 1559.17
	24	3727-240 1324.03	3927-240 1835.55

60° ELBOW (Soc x Soc)

	6	3724-060* 127.62	3924-060 186.16
	8	3724-080* 182.08	3924-080 312.74
	10	3724-100* 305.13	3924-100 586.19
	12	3724-120* 399.78	3924-120 862.77
	14	3724-140* 732.80	3924-140 1253.71
	16	3724-160 890.94	3924-160 1523.31
	18	3724-180 1144.59	3924-180 1696.33
	20	3724-200 1221.01	3924-200 2000.03
	24	3724-240 1573.16	3924-240 2136.66

90° STREET ELL (Spig x Soc)

	4	---	3909-040 140.14
	6	3709-060* 122.13	3909-060 166.07
	8	3709-080* 168.00	3909-080 273.49
	10	3709-100* 280.72	3909-100 542.07
	12	3709-120* 409.11	3909-120 796.41
	14	3709-140* 565.74	3909-140 1163.83
	16	3709-160 879.91	3909-160 1445.39
	18	3709-180 1272.57	3909-180 1861.40
	20	3709-200 1434.48	3909-200 2196.24
	24	3709-240 1793.78	3909-240 2346.36

COUPLING (Soc x Soc)

	8	3729-080 72.92	3929-080 161.42
	10	3729-100 89.66	3929-100 175.80
	12	3729-120 131.99	3929-120 202.64
	14	3729-140 214.33	3929-140 405.21
	16	3729-160 239.05	3929-160 481.75
	18	3729-180 407.66	3929-180 949.59
	20	3729-200 711.17	3929-200 1170.80
	24	3729-240 987.67	3929-240 2019.72

REPAIR COUPLING (Gasket x Gasket)

	4	3728-040 70.67	3928-040 82.57
	6	3728-060 98.31	3928-060 116.36
	8	3728-080 154.75	3928-080 196.84

	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
--	------	---	---

REPAIR COUPLING (Gasket x Gasket) (continued)

	10	3728-100 204.17	3928-100 275.43
	12	3728-120 256.14	3928-120 350.02
	14	3728-140 444.46	3928-140 775.04
	16	3728-160 654.84	3928-160 1162.79
	18	3728-180 856.07	3928-180 1511.54
	20	3728-200 1329.37	3928-200 1813.86
	24	3728-240 1802.95	3928-240 2446.61

REDUCER COUPLING (Soc x Soc)

	6X2	3729-528* 106.04	3929-528 183.86
	6X3	3729-530* 104.38	3929-530 135.82
	6X4	3729-532 37.87	3929-532 89.36
	8X2	3729-578 178.37	3929-578 248.39
	8X3	3729-580 165.13	3929-580 217.09
	8X4	3729-582* 93.87	3929-582 171.56
	8X6	3729-585* 80.68	3929-585 157.88
	10X4	3729-624* 211.83	3929-624 403.03
	10X6	3729-626* 197.41	3929-626 321.58
	10X8	3729-628* 138.17	3929-628 171.88
	12X4	3729-664* 398.29	3929-664 579.08
	12X6	3729-666* 302.00	3929-666 477.46
	12X8	3729-668* 265.79	3929-668 414.33
	12X10	3729-670* 201.13	3929-670 254.49
	14X4	3729-694* 640.96	3929-694 783.55
	14X6	3729-696* 620.52	3929-696 699.88
	14X8	3729-698* 449.17	3929-698 688.42
	14X10	3729-700* 379.36	3929-700 581.19
	14X12	3729-702* 336.89	3929-702 371.54
	16X4	3729-754 686.02	3929-754 1151.38
	16X6	3729-756 631.89	3929-756 1079.43
	16X8	3729-758 574.99	3929-758 1019.47
	16X10	3729-760 513.52	3929-760 708.78
	16X12	3729-762 466.20	3929-762 651.57
	16X14	3729-764 404.32	3929-764 549.29
	18X6	3729-786 1141.97	3929-786 1664.12
	18X8	3729-788 968.57	3929-788 1539.96
	18X10	3729-790 903.76	3929-790 1415.22
	18X12	3729-792 846.17	3929-792 1182.77

DWV
PVC Schedule 40 & 80 DWV Fabricated Fittings



Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

REDUCER COUPLING (Soc x Soc) (continued)

	18X14	3729-794 780.37	3929-794 1145.33
	18X16	3729-796 582.94	3929-796 978.99
	20X6	3729-816 1430.35	3929-816 2340.06
	20X8	3729-818 1385.24	3929-818 2312.98
	20X10	3729-820 1214.44	3929-820 2295.79
	20X12	3729-822 1197.80	3929-822 2153.01
	20X14	3729-824 1183.01	3929-824 2135.89
	20X16	3729-826 1116.02	3929-826 1710.54
	20X18	3729-828 985.94	3929-828 1179.55
	24X6	3729-906 2876.69	3929-906 3956.64
	24X8	3729-908 2794.27	3929-908 3923.63
	24X10	3729-910 2310.33	3929-910 3910.22
	24X12	3729-912 2234.16	3929-912 3847.04
	24X14	3729-914 2118.48	3929-914 3834.16
	24X16	3729-916 1945.19	3929-916 3686.85
	24X18	3729-918 1722.43	3929-918 2810.95
	24X20	3729-920 1294.84	3929-920 2520.93

ECCENTRIC REDUCER COUPLING (Soc x Soc)

	3X2	3729-338E 33.63	3929-338E 46.85
	4X2	3729-420E ² 45.67	3929-420E ² 119.53
	4X3	3729-422E 42.21	3929-422E 55.31
	6X2	3729-528E ^{3*} 103.09	3929-528E ³ 155.61
	6X3	3729-530E ^{2*} 94.96	3929-530E ² 151.18
	6X4	3729-532E ² 47.48	3929-532E 115.31
	8X3	3729-580E ^{3*} 195.86	3929-580E ³ 219.72
	8X4	3729-582E ^{2*} 97.80	3929-582E ² 199.43
	8X6	3729-585E ¹ 79.06	3929-585E 153.36
	10X4	3729-624E ^{2*} 223.63	3929-624E ³ 337.48
	10X6	3729-626E ¹ 205.62	3929-626E ² 286.43
	10X8	3729-628E ¹ 193.86	3929-628E 264.67
	12X4	3729-664E ^{3*} 417.24	3929-664E ⁴ 516.08
	12X6	3729-666E ^{2*} 342.84	3929-666E ³ 424.73
	12X8	3729-668E ^{2*} 227.35	3929-668E ² 366.94
	12X10	3729-670E ¹ 197.12	3929-670E 234.55
	14X6	3729-696E ³ 696.46	3929-696E ⁴ 840.68
	14X8	3729-698E ³ 570.52	3929-698E ³ 752.04
	14X10	3729-700E ² 517.91	3929-700E ² 544.46

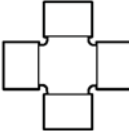
Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)

	14X12	3729-702E 316.62	3929-702E 500.72
	16X6	3729-756E ³ 727.75	3929-756E ⁵ 1553.20
	16X8	3729-758E ³ 717.55	3929-758E ³ 1422.29
	16X10	3729-760E ² 530.60	3929-760E ³ 1034.67
	16X12	3729-762E 504.89	3929-762E ² 918.62
	16X14	3729-764E 448.63	3929-764E 711.53
	18X6	3729-786E ⁴ 1034.39	3929-786E ⁶ 2144.06
	18X8	3729-788E ⁴ 1019.07	3929-788E ⁵ 2052.44
	18X10	3729-790E ³ 946.11	3929-790E ⁴ 1917.95
	18X12	3729-792E ² 853.85	3929-792E ³ 1711.92
	18X14	3729-794E ² 754.93	3929-794E ² 1411.37
	18X16	3729-796E 608.98	3929-796E 1377.17

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six-Step Design

CROSS (Soc x Soc x Soc x Soc)

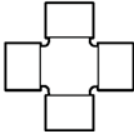
	4X2	---	3920-420 128.75
	4X3	---	3920-422 141.68
	6	3720-060 149.72	3920-060 349.19
	6X2	3720-528 112.39	3920-528 180.92
	6X3	3720-530 133.09	3920-530 203.92
	6X4	3720-532 146.74	3920-532 251.77
	8	3720-080 302.39	3920-080 420.56
	8X2	3720-578 194.14	3920-578 228.28
	8X3	3720-580 210.04	3920-580 242.52
	8X4	3720-582 230.75	3920-582 260.17
	8X6	3720-585 290.34	3920-585 337.18
	10	3720-100 492.23	3920-100 899.75
	10X2	3720-621 206.18	3920-621 413.19
	10X3	3720-623 237.47	3920-623 478.12
	10X4	3720-624 272.42	3920-624 490.23
	10X6	3720-626 312.40	3920-626 599.02
	10X8	3720-628 438.59	3920-628 790.47
	12	3720-120 648.92	3920-120 1267.88
	12X2	3720-661 272.48	3920-661 559.38
	12X3	3720-663 305.82	3920-663 625.27
	12X4	3720-664 323.31	3920-664 652.46
	12X6	3720-666 395.19	3920-666 757.61
	12X8	3720-668 480.24	3920-668 905.02



DWV
PVC Schedule 40 & 80 DWV Fabricated Fittings

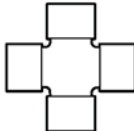
Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

CROSS (Soc x Soc x Soc x Soc) (continued)

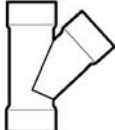
	12X10	3720-670 557.41	3920-670 1031.31
	14	3720-140 1077.99	3920-140 2254.40
	14X2	3720-691 531.85	3920-691 849.16
	14X3	3720-693 592.18	3920-693 935.49
	14X4	3720-694 657.46	3920-694 1045.88
	14X6	3720-696 739.54	3920-696 1173.82
	14X8	3720-698 852.00	3920-698 1350.13
	14X10	3720-700 968.07	3920-700 1616.67
	14X12	3720-702 1024.18	3920-702 1894.16
	16	3720-160 1574.71	3920-160 2858.03
	16X2	3720-751 729.81	3920-751 1151.72
	16X3	3720-753 802.09	3920-753 1258.22
	16X4	3720-754 832.74	3920-754 1332.33
	16X6	3720-756 900.67	3920-756 1441.11
	16X8	3720-758 1055.08	3920-758 1688.09
	16X10	3720-760 1256.81	3920-760 1943.99
	16X12	3720-762 1444.37	3920-762 2309.34
	16X14	3720-764 1516.61	3920-764 2723.43
	18	3720-180 2230.98	3920-180 3528.26
	18X4	3720-784 902.92	3920-784 1681.48
	18X6	3720-786 1273.02	3920-786 1921.92
	18X8	3720-788 1442.29	3920-788 2292.78
	18X10	3720-790 1559.93	3920-790 2598.43
	18X12	3720-792 1658.54	3920-792 2882.65
	18X14	3720-794 1747.72	3920-794 3080.84
	18X16	3720-796 2028.41	3920-796 3346.52
	20	3720-200 3795.47	3920-200 5956.54
	20X4	3720-814 1594.17	3920-814 2209.73
	20X6	3720-816 1655.49	3920-816 2390.37
	20X8	3720-818 2056.62	3920-818 2601.24
	20X10	3720-820 2349.43	3920-820 3053.78
	20X12	3720-822 2451.60	3920-822 3380.00
	20X14	3720-824 2666.73	3920-824 3651.53
	20X16	3720-826 2999.00	3920-826 4060.64
	20X18	3720-828 3244.81	3920-828 4843.02
	24	3720-240 4998.78	3920-240 7220.62
	24X4	3720-904 2037.68	3920-904 2439.46

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

CROSS (Soc x Soc x Soc x Soc) (continued)

	24X6	3720-906 2419.31	3920-906 2781.83
	24X8	3720-908 2575.44	3920-908 3630.64
	24X10	3720-910 2753.22	3920-910 3940.81
	24X12	3720-912 3032.13	3920-912 4520.83
	24X14	3720-914 3118.65	3920-914 5306.63
	24X16	3720-916 3456.43	3920-916 5626.53
	24X18	3720-918 3860.25	3920-918 5909.71
	24X20	3720-920 4674.09	3920-920 6293.38

WYE (Soc x Soc x Soc)

	8	3775-080 209.76	3975-080 350.74
	8X2	3775-578 136.85	3975-578 248.07
	8X3	3775-580* 142.23	3975-580 274.40
	8X4	3775-582 148.11	3975-582 281.26
	8X6	3775-585 194.39	3975-585 284.15
	10	3775-100 419.06	3975-100 626.00
	10X2	3775-621* 245.03	3975-621 361.17
	10X3	3775-623* 256.64	3975-623 376.44
	10X4	3775-624 263.74	3975-624 387.13
	10X6	3775-626* 318.00	3975-626 489.19
	10X8	3775-628 389.76	3975-628 532.74
	12	3775-120 552.81	3975-120 947.13
	12X2	3775-661* 291.54	3975-661 607.47
	12X3	3775-663* 302.76	3975-663 614.74
	12X4	3775-664* 313.12	3975-664 625.08
	12X6	3775-666* 373.12	3975-666 681.95
	12X8	3775-668* 414.57	3975-668 757.75
	12X10	3775-670 487.17	3975-670 890.28
	14	3775-140* 1189.69	3975-140 1438.45
	14X2	3775-691* 591.88	3975-691 972.38
	14X3	3775-693* 620.75	3975-693 987.19
	14X4	3775-694* 631.15	3975-694 995.13
	14X6	3775-696* 681.23	3975-696 1089.96
	14X8	3775-698* 779.57	3975-698 1207.59
	14X10	3775-700* 833.31	3975-700 1260.87
	14X12	3775-702* 1065.43	3975-702 1336.37
	16	3775-160 1513.68	3975-160 2214.28
	16X2	3775-751 672.53	3975-751 1127.92

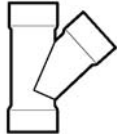
DWV
PVC Schedule 40 & 80 DWV Fabricated Fittings



Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

WYE (Soc x Soc x Soc) (continued)

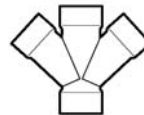
	16X3	3775-753 711.52	3975-753 1142.14
	16X4	3775-754 743.78	3975-754 1190.00
	16X6	3775-756* 800.48	3975-756 1280.73
	16X8	3775-758 912.76	3975-758 1349.63
	16X10	3775-760 1096.51	3975-760 1477.49
	16X12	3775-762 1194.15	3975-762 1979.85
	16X14	3775-764 1447.09	3975-764 2107.73
	18	3775-180 1740.56	3975-180 2974.62
	18X4	3775-784 1192.58	3975-784 1538.05
	18X6	3775-786* 1211.79	3975-786 1563.84
	18X8	3775-788 1251.29	3975-788 1685.66
	18X10	3775-790 1331.20	3975-790 1734.58
	18X12	3775-792 1457.91	3975-792 1909.45
	18X14	3775-794 1593.88	3975-794 2319.26
	18X16	3775-796 1689.82	3975-796 2796.19
	20	3775-200 2565.14	3975-200 5072.83
	20X4	3775-814 1381.98	3975-814 1793.96
	20X6	3775-816* 1387.01	3975-816 1940.66
	20X8	3775-818 1489.00	3975-818 2412.35
	20X10	3775-820 1540.94	3975-820 2510.82
	20X12	3775-822 1739.48	3975-822 2764.03
	20X14	3775-824 2023.20	3975-824 3203.15
	20X16	3775-826 2222.05	3975-826 3289.81
	20X18	3775-828 2401.45	3975-828 3438.77
	24	3775-240 3191.86	3975-240 5712.04
	24X4	3775-904 1723.04	3975-904 2554.79
	24X6	3775-906* 1900.94	3975-906 2806.17
	24X8	3775-908 2014.48	3975-908 3248.67
	24X10	3775-910 2165.69	3975-910 3293.49
	24X12	3775-912 2234.85	3975-912 3612.23
	24X14	3775-914 2341.93	3975-914 3809.29
	24X16	3775-916 2474.88	3975-916 4369.00
	24X18	3775-918 2647.92	3975-918 5130.01
	24X20	3775-920 2988.49	3975-920 5297.14



Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

DOUBLE WYE (Soc x Soc x Soc x Soc)

	6	3776-060 155.37	3976-060 198.88
	6X4	3776-532 121.56	3976-532 184.73
	8	3776-080* 299.66	3976-080 383.58
	8X2	3776-578* 163.16	3976-578 219.36
	8X3	3776-580* 174.32	3976-580 227.07
	8X4	3776-582* 181.71	3976-582 258.49
	8X6	3776-585* 229.44	3976-585 330.33
	10	3776-100* 439.52	3976-100 703.25
	10X2	3776-621* 232.25	3976-621 389.52
	10X3	3776-623* 242.66	3976-623 399.37
	10X4	3776-624* 254.81	3976-624 407.68
	10X6	3776-626* 315.23	3976-626 504.35
	10X8	3776-628* 381.69	3976-628 609.32
	12	3776-120* 717.57	3976-120 1150.75
	12X2	3776-661* 314.38	3976-661 642.34
	12X3	3776-663* 324.72	3976-663 648.00
	12X4	3776-664* 331.99	3976-664 653.56
	12X6	3776-666* 395.19	3976-666 768.96
	12X8	3776-668* 504.43	3976-668 934.14
	12X10	3776-670* 645.79	3976-670 1054.87
	14	3776-140* 1272.75	3976-140 1598.38
	14X2	3776-691* 606.52	3976-691 1137.37
	14X3	3776-693* 634.83	3976-693 1170.91
	14X4	3776-694* 661.52	3976-694 1180.98
	14X6	3776-696* 736.45	3976-696 1207.59
	14X8	3776-698* 853.44	3976-698 1278.63
	14X10	3776-700* 901.92	3976-700 1349.63
	14X12	3776-702* 1168.07	3976-702 1520.15
	16	3776-160 1670.46	3976-160 2484.22
	16X2	3776-751 784.36	3976-751 1334.44
	16X3	3776-753 831.25	3976-753 1345.64
	16X4	3776-754 843.55	3976-754 1349.63
	16X6	3776-756* 892.40	3976-756 1427.78
	16X8	3776-758 976.72	3976-758 1562.74
	16X10	3776-760 1196.29	3976-760 1782.95
	16X12	3776-762 1289.27	3976-762 1917.94
	16X14	3776-764 1543.98	3976-764 2280.96

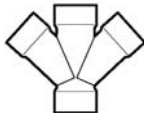




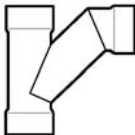
DWV
PVC Schedule 40 & 80 DWV Fabricated Fittings

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

DOUBLE WYE (Soc x Soc x Soc x Soc) (continued)

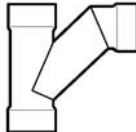
	18	3776-180 2333.55	3976-180 3280.63
	18X4	3776-784 1287.89	3976-784 1727.73
	18X6	3776-786* 1308.65	3976-786 2003.32
	18X8	3776-788 1403.52	3976-788 2055.40
	18X10	3776-790 1708.82	3976-790 2073.48
	18X12	3776-792 1740.68	3976-792 2227.84
	18X14	3776-794 1869.08	3976-794 2534.33
	18X16	3776-796 1918.24	3976-796 2962.29
	20	3776-200 3034.21	3976-200 5298.00
	20X4	3776-814 1460.77	3976-814 2126.39
	20X6	3776-816* 1536.66	3976-816 2261.37
	20X8	3776-818 1562.11	3976-818 2445.94
	20X10	3776-820 2057.14	3976-820 2805.79
	20X12	3776-822 2251.89	3976-822 3113.53
	20X14	3776-824 2459.34	3976-824 3268.93
	20X16	3776-826 2683.66	3976-826 4157.19
	20X18	3776-828 2935.08	3976-828 4420.68
	24	3776-240 3777.89	3976-240 6837.86
	24X4	3776-904 1882.15	3976-904 2764.03
	24X6	3776-906* 2081.00	3976-906 3032.61
	24X8	3776-908 2135.27	3976-908 3319.81
	24X10	3776-910 2246.54	3976-910 3489.24
	24X12	3776-912 2378.29	3976-912 3578.63
	24X14	3776-914 2527.22	3976-914 4817.62
	24X16	3776-916 2749.42	3976-916 6018.28
	24X18	3776-918 2776.77	3976-918 6102.65
	24X20	3776-920 3568.63	3976-920 6434.39

COMBO WYE (Soc x Soc x Soc)

	6	3777-060* 197.67	3977-060 316.37
	6X4	3777-532* 154.00	3977-532 277.92
	8	3777-080* 315.23	3977-080 521.24
	8X2	3777-578* 172.85	3977-578 343.01
	8X3	3777-580* 215.39	3977-580 351.41
	8X4	3777-582 219.41	3977-582 359.07
	8X6	3777-585 248.63	3977-585 397.77
	10	3777-100* 563.03	3977-100 994.48
	10X2	3777-621* 257.13	3977-621 416.77

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

COMBO WYE (Soc x Soc x Soc) (continued)

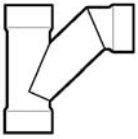
	10X3	3777-623* 269.31	3977-623 432.57
	10X4	3777-624* 275.26	3977-624 440.43
	10X6	3777-626* 346.29	3977-626 554.08
	10X8	3777-628* 430.89	3977-628 724.55
	12	3777-120* 817.35	3977-120 1248.39
	12X2	3777-661* 416.68	3977-661 680.56
	12X3	3777-663* 425.48	3977-663 691.80
	12X4	3777-664* 435.06	3977-664 696.16
	12X6	3777-666* 483.43	3977-666 777.87
	12X8	3777-668* 542.36	3977-668 923.48
	12X10	3777-670* 674.80	3977-670 1079.76
	14	3777-140* 1415.75	3977-140 1909.08
	14X2	3777-691* 626.97	3977-691 1048.79
	14X3	3777-693* 641.13	3977-693 1060.88
	14X4	3777-694* 678.06	3977-694 1084.80
	14X6	3777-696* 771.52	3977-696 1234.46
	14X8	3777-698* 848.81	3977-698 1291.93
	14X10	3777-700* 1004.55	3977-700 1469.55
	14X12	3777-702* 1185.38	3977-702 1784.76
	16	3777-160 1662.43	3977-160 2659.93
	16X2	3777-751 814.92	3977-751 1325.36
	16X3	3777-753 830.01	3977-753 1345.57
	16X4	3777-754 849.79	3977-754 1359.59
	16X6	3777-756 898.79	3977-756 1438.08
	16X8	3777-758 988.82	3977-758 1633.82
	16X10	3777-760 1118.77	3977-760 1790.06
	16X12	3777-762 1200.98	3977-762 1921.45
	16X14	3777-764 1474.36	3977-764 2313.36
	18	3777-180 2093.48	3977-180 3631.98
	18X4	3777-784 1276.35	3977-784 1611.27
	18X6	3777-786 1316.11	3977-786 1709.26
	18X8	3777-788 1351.61	3977-788 1883.52
	18X10	3777-790 1438.76	3977-790 2025.79
	18X12	3777-792 1495.47	3977-792 2673.08
	18X14	3777-794 1698.01	3977-794 3058.29
	18X16	3777-796 1931.37	3977-796 3288.36
	20	3777-200 2712.71	3977-200 6691.89

DWV
PVC Schedule 40 & 80 DWV Fabricated Fittings

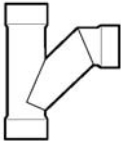


Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

COMBO WYE (Soc x Soc x Soc) (continued)

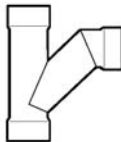
	20X4	3777-814 1411.21	3977-814 1782.68
	20X6	3777-816 1528.28	3977-816 1974.18
	20X8	3777-818 1557.25	3977-818 2459.12
	20X10	3777-820 1632.52	3977-820 2748.87
	20X12	3777-822 2051.89	3977-822 3247.02
	20X14	3777-824 2160.07	3977-824 3578.75
	20X16	3777-826 2416.89	3977-826 4557.56
	20X18	3777-828 2469.81	3977-828 6231.77
	24	3777-240 3664.36	3977-240 7126.43
	24X4	3777-904 1881.34	3977-904 2885.79
	24X6	3777-906 2054.36	3977-906 3070.49
	24X8	3777-908 2291.68	3977-908 3201.52
	24X10	3777-910 2453.49	3977-910 3784.07
	24X12	3777-912 2555.56	3977-912 4073.09
	24X14	3777-914 2602.65	3977-914 4859.00
	24X16	3777-916 3009.60	3977-916 5672.76
	24X18	3777-918 3215.08	3977-918 6430.65
	24X20	3777-920 3266.33	3977-920 6825.43

SANITARY TEE (Soc x Soc x Soc)

	6	3790-060 169.97	3990-060 285.86
	6X4	3790-532* 127.34	3990-532 225.95
	8	3790-080* 311.44	3990-080 517.57
	8X2	3790-578* 159.32	3990-578 283.11
	8X3	3790-580* 210.53	3990-580 322.46
	8X4	3790-582* 199.78	3990-582 343.80
	8X6	3790-585* 239.32	3990-585 382.83
	10	3790-100* 556.81	3990-100 983.05
	10X2	3790-621* 244.49	3990-621 381.09
	10X3	3790-623* 248.63	3990-623 391.93
	10X4	3790-624* 266.39	3990-624 426.22
	10X6	3790-626* 342.84	3990-626 539.87
	10X8	3790-628* 419.78	3990-628 695.38
	12	3790-120* 797.33	3990-120 1213.62
	12X2	3790-661* 410.27	3990-661 644.24
	12X3	3790-663* 414.95	3990-663 654.80
	12X4	3790-664* 427.08	3990-664 681.95
	12X6	3790-666* 465.66	3990-666 763.64

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

SANITARY TEE (Soc x Soc x Soc) (continued)

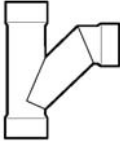
	12X8	3790-668* 518.46	3990-668 907.05
	12X10	3790-670* 653.08	3990-670 1050.83
	14	3790-140* 1404.22	3990-140 1860.47
	14X2	3790-691* 556.37	3990-691 1015.99
	14X3	3790-693* 603.71	3990-693 1031.33
	14X4	3790-694* 609.61	3990-694 1052.04
	14X6	3790-696* 727.02	3990-696 1199.59
	14X8	3790-698* 829.24	3990-698 1261.87
	14X10	3790-700* 996.07	3990-700 1434.56
	14X12	3790-702* 1174.27	3990-702 1724.44
	16	3790-160 1806.57	3990-160 2220.06
	16X2	3790-751 809.62	3990-751 1254.55
	16X3	3790-753 817.55	3990-753 1305.12
	16X4	3790-754 835.94	3990-754 1346.08
	16X6	3790-756 888.59	3990-756 1424.26
	16X8	3790-758 979.97	3990-758 1594.93
	16X10	3790-760 1107.38	3990-760 1762.53
	16X12	3790-762 1188.93	3990-762 1894.79
	16X14	3790-764 1424.99	3990-764 2067.36
	18	3790-180 1850.13	3990-180 3588.76
	18X4	3790-784 985.94	3990-784 1559.91
	18X6	3790-786 1057.42	3990-786 1654.58
	18X8	3790-788 1326.53	3990-788 1845.04
	18X10	3790-790 1509.42	3990-790 1991.28
	18X12	3790-792 1550.57	3990-792 2593.32
	18X14	3790-794 1767.65	3990-794 2667.31
	18X16	3790-796 1908.27	3990-796 3268.85
	20	3790-200 2499.27	3990-200 6588.60
	20X4	3790-814 1043.73	3990-814 1748.97
	20X6	3790-816 1194.28	3990-816 1900.33
	20X8	3790-818 1288.25	3990-818 2414.16
	20X10	3790-820 1453.43	3990-820 2684.02
	20X12	3790-822 1627.40	3990-822 3173.36
	20X14	3790-824 1935.36	3990-824 3442.62
	20X16	3790-826 2231.48	3990-826 4476.45
	20X18	3790-828 2404.57	3990-828 6197.12
	24	3790-240 3270.01	3990-240 7070.49



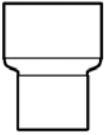
DWV PVC Schedule 40 & 80 DWV Fabricated Fittings

	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each

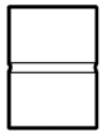
SANITARY TEE (Soc x Soc x Soc) (continued)

	24X4	3790-904 1528.33	3990-904 2818.45
	24X6	3790-906 1696.79	3990-906 2955.02
	24X8	3790-908 2251.96	3990-908 3091.56
	24X10	3790-910 2434.87	3990-910 3703.02
	24X12	3790-912 2544.26	3990-912 3988.01
	24X14	3790-914 2595.61	3990-914 4807.60
	24X16	3790-916 2976.74	3990-916 5518.78
	24X18	3790-918 3120.46	3990-918 6346.68
	24X20	3790-920 3233.16	3990-920 6703.52

IPS X SEWER ADAPTER (Soc x Spig)

	4	3729-04013IXS 17.51	---
	6	3729-06013IXS 36.95	---
	8	3729-08013IXS 71.53	---
	10	3729-10013IXS 193.69	---
	12	3729-12013IXS 210.73	---

IPS X SEWER ADAPTER (Soc x Soc)

	4	3729-040IXS 30.11	---
	6	3729-060IXS 55.01	---
	8	3729-080IXS 88.39	---
	10	3729-100IXS 142.93	---
	12	3729-120IXS 211.54	---

IPS X SEWER ADAPTER (Spig x Soc)

	4	3729-04031IXS 22.98	---
	6	3729-06031IXS 53.21	---
	8	3729-08031IXS 87.15	---
	10	3729-10031IXS 135.67	---
	12	3729-12031IXS 201.51	---

CAP (Soc)

	10	3747-100* 116.99	3947-100 228.44
	12	3747-120* 147.74	3947-120 395.49
	14	3747-140* 251.21	3947-140 448.54
	16	3747-160 321.58	3947-160 592.00
	18	3747-180 355.83	3947-180 777.78
	20	3747-200 626.78	3947-200 898.79
	24	3747-240 926.49	3947-240 1042.91

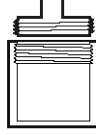
	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each

SPIGOT PLUG (Spigot)

	6	3749-060 45.22	3949-060 136.77
	8	3749-080 115.51	3949-080 230.84
	10	3749-100 131.73	3949-100 291.85
	12	3749-120 188.81	3949-120 464.69
	14	3749-140 320.34	---
	16	3749-160 390.34	3949-160 675.96

CLEANOUT ADAPTER WITH PLUG (Spig x Cleanout)

SOLD AS SET ONLY (Non-Pressure Rated)

	2	---	3978-020* 96.63
	3	---	3978-030* 123.80
	4	---	3978-040* 155.58
	5	---	3978-050* 165.38
	6	---	3978-060* 175.20
	8	---	3978-080* 278.69
	10	---	3978-100* 465.43
	12	---	3978-120* 649.82
	14	---	3978-140* 805.83
	16	---	3978-160* 1584.95
	18	---	3978-180* 1897.85
	24	---	3978-240* 2332.21

* HDPE Plug

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle

IPS O.D.x Socket Schedule 40



Non Pressure Rated

3763-528	6X2	1	10	390	35.83
3763-530	6X3	1	10	390	36.68
3763-532	6X4	1	10	390	38.15
3763-578	8X2	1	10	390	52.81
3763-580	8X3	1	10	390	53.33
3763-582	8X4	1	10	390	53.98
3763-585	8X6	1	10	390	55.51
3763-621	10X2	1	5	390	66.74
3763-623	10X3	1	10	390	67.67
3763-624	10X4	1	8	390	67.95
3763-626	10X6	1	5	390	79.52
3763-628	10X8	1	5	390	127.61
3763-661	12X2	1	10	390	78.93
3763-663	12X3	1	10	390	80.39
3763-664	12X4	1	10	390	82.11
3763-666	12X6	1	4	390	95.22
3763-668	12X8	1	5	390	151.80
3763-670	12X10	1	4	390	219.51
3763-691	14X2	1	10	390	101.16
3763-693	14X3	1	8	390	168.11
3763-694	14X4	1	5	390	115.48
3763-696	14X6	1	10	390	117.80
3763-698	14X8	1	4	390	180.77

DWV PVC Schedule 40 & 80 DWV Fabricated Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle (continued)

IPS O.D. x Socket Schedule 40

3763-700	14X10	1	3	390	232.54
3763-702	14X12	1	4	390	256.32
3763-751	16X2	1	5	390	107.66
3763-753	16X3	1	5	390	109.14
3763-754	16X4	1	10	390	110.80
3763-756	16X6	1	3	390	126.94
3763-758	16X8	1	3	390	188.67
3763-760	16X10	1	0	390	239.80
3763-762	16X12	1	0	390	265.75
3763-764	16X14	1	0	390	276.25
3763-781	18X2	1	5	390	157.82
3763-783	18X3	1	5	390	160.89
3763-784	18X4	1	10	390	163.35
3763-786	18X6	1	4	390	173.93
3763-788	18X8	1	0	390	253.79
3763-790	18X10	1	0	390	281.34
3763-792	18X12	1	0	390	289.11
3763-794	18X14	1	0	390	436.77
3763-796	18X16	1	0	390	570.18
3763-811	20X2	1	5	390	158.19
3763-813	20X3	1	4	390	160.36
3763-814	20X4	1	4	390	168.19
3763-816	20X6	1	0	390	175.66
3763-818	20X8	1	5	390	253.46
3763-820	20X10	1	0	390	281.35
3763-822	20X12	1	0	390	401.12
3763-824	20X14	1	0	390	437.67
3763-826	20X16	1	0	390	572.27
3763-828	20X18	1	0	390	648.56
3763-901	24X2	1	5	390	150.91
3763-903	24X3	1	5	390	166.80
3763-904	24X4	1	5	390	168.65
3763-906	24X6	1	5	390	178.92
3763-908	24X8	1	5	390	255.81
3763-910	24X10	1	0	390	284.56
3763-912	24X12	1	0	390	402.54
3763-914	24X14	1	0	390	450.77
3763-916	24X16	1	0	390	506.61
3763-918	24X18	1	0	390	682.74
3763-920	24X20	1	0	390	764.43

Saddle

IPS O.D. x Sockett Schedule 80



Non Pressure Rated

3963-528	6X2	1	5	400	60.22
3963-530	6X3	1	5	400	60.76
3963-532	6X4	1	5	400	61.28
3963-578	8X2	1	4	400	85.07
3963-580	8X3	1	8	400	86.11
3963-582	8X4	1	5	400	87.03
3963-585	8X6	1	5	400	89.06
3963-621	10X2	1	5	400	78.77
3963-623	10X3	1	5	400	79.88
3963-624	10X4	1	8	400	80.22
3963-626	10X6	1	5	400	93.28
3963-628	10X8	1	5	400	149.49
3963-661	12X2	1	10	400	93.06
3963-663	12X3	1	8	400	93.61
3963-664	12X4	1	5	400	94.40
3963-666	12X6	1	6	400	109.48
3963-668	12X8	1	2	400	172.28
3963-670	12X10	1	4	400	210.86
3963-691	14X2	1	5	400	114.61
3963-693	14X3	1	8	400	115.68

Saddle (continued)

IPS O.D. x Sockett Schedule 80

3963-694	14X4	1	5	400	116.24
3963-696	14X6	1	2	400	132.32
3963-698	14X8	1	4	400	202.85
3963-700	14X10	1	3	400	259.77
3963-702	14X12	1	4	400	286.83
3963-751	16X2	1	8	400	120.69
3963-753	16X3	1	8	400	121.74
3963-754	16X4	1	5	400	122.43
3963-756	16X6	1	10	400	139.54
3963-758	16X8	1	3	400	208.08
3963-760	16X10	1	0	400	264.96
3963-762	16X12	1	0	400	294.28
3963-764	16X14	1	0	400	306.66
3963-781	18X2	1	8	400	177.31
3963-783	18X3	1	4	400	178.38
3963-784	18X4	1	0	400	179.19
3963-786	18X6	1	5	400	189.65
3963-788	18X8	1	5	400	278.65
3963-790	18X10	1	0	400	308.91
3963-792	18X12	1	0	400	440.55
3963-794	18X14	1	0	400	479.48
3963-796	18X16	1	0	400	627.41
3963-811	20X2	1	0	400	179.33
3963-813	20X3	1	4	400	179.75
3963-814	20X4	1	4	400	181.91
3963-816	20X6	1	0	400	190.82
3963-818	20X8	1	0	400	275.64
3963-820	20X10	1	5	400	305.68
3963-822	20X12	1	0	400	436.02
3963-824	20X14	1	0	400	475.54
3963-826	20X16	1	0	400	623.04
3963-828	20X18	1	0	400	707.43
3963-901	24X2	1	5	400	182.47
3963-903	24X3	1	5	400	183.44
3963-904	24X4	1	5	400	184.28
3963-906	24X6	1	5	400	192.29
3963-908	24X8	1	5	409	259.52
3963-910	24X10	1	5	400	307.00
3963-912	24X12	1	0	409	407.26
3963-914	24X14	1	0	400	473.88
3963-916	24X16	1	0	400	648.61
3963-918	24X18	1	0	400	731.41
3963-920	24X20	1	0	400	823.20

Stub Saddle

IPS O.D x Socket Schedule 40



Non Pressure Rated

3765-528	6X2	1	8	390	38.53
3765-530	6X3	1	4	390	39.44
3765-532	6X4	1	10	390	41.03
3765-578	8X2	1	6	390	56.79
3765-580	8X3	1	4	390	57.34
3765-582	8X4	1	8	390	58.04
3765-585	8X6	1	4	390	59.69
3765-621	10X2	1	5	390	71.75
3765-623	10X3	1	5	390	72.77
3765-624	10X4	1	4	390	92.22
3765-626	10X6	1	2	390	85.51
3765-628	10X8	1	2	390	137.21
3765-661	12X2	1	6	390	84.86
3765-663	12X3	1	5	390	86.44
3765-664	12X4	1	2	390	88.28
3765-666	12X6	1	2	390	102.32
3765-668	12X8	1	2	390	163.23



DWV PVC Schedule 40 & 80 DWV Fabricated Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Stub Saddle (continued)

IPS O.D. x Socket Schedule 40

3765-670	12X10	1	2	390	236.03
3765-691	14X2	1	10	390	108.77
3765-693	14X3	1	2	390	110.00
3765-694	14X4	1	5	390	111.38
3765-696	14X6	1	3	390	126.67
3765-698	14X8	1	0	390	193.11
3765-700	14X10	1	0	390	250.04
3765-702	14X12	1	0	390	275.62
3765-751	16X2	1	0	390	115.76
3765-753	16X3	1	5	390	117.35
3765-754	16X4	1	5	390	119.13
3765-756	16X6	1	2	390	136.48
3765-758	16X8	1	0	390	202.87
3765-760	16X10	1	0	390	257.85
3765-762	16X12	1	0	390	285.75
3765-764	16X14	1	0	390	297.04
3765-781	18X2	1	4	390	169.68
3765-783	18X3	1	10	390	133.45
3765-784	18X4	1	10	390	175.64
3765-786	18X6	1	2	390	187.02
3765-788	18X8	1	0	390	272.88
3765-790	18X10	1	0	390	302.51
3765-792	18X12	1	0	390	310.86
3765-794	18X14	1	0	390	469.63
3765-796	18X16	1	0	390	612.58
3765-811	20X2	1	0	390	170.09
3765-813	20X3	1	2	390	172.43
3765-814	20X4	1	2	390	180.85
3765-816	20X6	1	0	390	188.89
3765-818	20X8	1	0	390	272.54
3765-820	20X10	1	0	390	302.52
3765-822	20X12	1	0	390	431.33
3765-824	20X14	1	0	390	470.62
3765-826	20X16	1	0	390	615.34
3765-828	20X18	1	0	390	697.38
3765-901	24X2	1	4	390	162.25
3765-903	24X3	1	2	390	179.34
3765-904	24X4	1	4	390	181.35
3765-906	24X6	1	3	390	192.39
3765-908	24X8	1	0	390	275.06
3765-910	24X10	1	0	390	305.96
3765-912	24X12	1	0	390	432.83
3765-914	24X14	1	0	390	484.71
3765-916	24X16	1	0	390	544.75
3765-918	24X18	1	0	390	734.11
3765-920	24X20	1	0	390	821.97

Stub Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

3965-528	6X2	1	10	400	64.76
3965-530	6X3	1	3	400	65.32
3965-532	6X4	1	10	400	65.91
3965-578	8X2	1	5	409	85.99
3965-580	8X3	1	4	400	92.59
3965-582	8X4	1	6	400	93.58
3965-585	8X6	1	4	400	95.77
3965-621	10X2	1	6	400	84.71
3965-623	10X3	1	6	409	80.75
3965-624	10X4	1	4	400	86.26
3965-626	10X6	1	4	400	100.29
3965-628	10X8	1	4	400	160.74
3965-661	12X2	1	2	400	100.06
3965-663	12X3	1	2	400	101.13

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Stub Saddle (continued)

IPS O.D. x Socket Schedule 80

3965-664	12X4	1	2	400	101.51
3965-666	12X6	1	2	400	117.73
3965-668	12X8	1	2	400	185.25
3965-670	12X10	1	2	400	271.75
3965-691	14X2	1	4	400	123.25
3965-693	14X3	1	0	400	124.40
3965-694	14X4	1	5	400	124.98
3965-696	14X6	1	2	400	142.27
3965-700	14X10	1	0	400	279.33
3965-702	14X12	1	0	400	308.41
3965-751	16X2	1	5	400	129.77
3965-753	16X3	1	4	400	130.89
3965-754	16X4	1	3	400	131.63
3965-756	16X6	1	2	400	150.03
3965-758	16X8	1	3	400	223.75
3965-760	16X10	1	3	400	284.92
3965-762	16X12	1	0	400	316.43
3965-764	16X14	1	0	400	329.76
3965-781	18X2	1	2	400	190.64
3965-783	18X3	1	0	400	191.80
3965-784	18X4	1	0	400	192.67
3965-786	18X6	1	2	400	203.93
3965-788	18X8	1	0	400	299.62
3965-790	18X10	1	0	400	332.16
3965-792	18X12	1	0	400	473.71
3965-794	18X14	1	0	400	515.58
3965-796	18X16	1	0	400	674.63
3965-811	20X2	1	0	400	192.82
3965-813	20X3	1	2	400	193.27
3965-814	20X4	1	0	400	195.59
3965-816	20X6	1	0	400	205.17
3965-818	20X8	1	0	400	296.39
3965-820	20X10	1	0	400	328.69
3965-822	20X12	1	0	400	468.84
3965-824	20X14	1	0	400	511.33
3965-826	20X16	1	0	400	669.96
3965-828	20X18	1	0	400	760.68
3965-901	24X2	1	5	400	196.20
3965-903	24X3	1	5	400	197.24
3965-904	24X4	1	5	400	198.15
3965-906	24X6	1	3	400	206.78
3965-908	24X8	1	0	400	296.86
3965-910	24X10	1	0	400	330.12
3965-912	24X12	1	0	409	437.93
3965-914	24X14	1	0	400	509.55
3965-916	24X16	1	0	400	697.43
3965-918	24X18	1	0	400	786.46
3965-920	24X20	1	0	400	885.16

CTS CPVC Hot & Cold Water Distribution System
EverTUFF® CPVC CTS Fittings, Valves & Pipe



PRODUCT INFORMATION

APPLICATION

Spears® Copper Tube Size (CTS) fittings are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR-11 piping systems of CTS outside diameter in hot and cold water distribution systems. Check state and local codes for application and restrictions.

CONFORMANCE STANDARDS

Spears® CPVC CTS fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

WORKING PRESSURE

Spears® CPVC CTS fittings have a continuous working pressure rating of 100 psi at 180°F (82°C) [400 psi at 73°F (23°C)].

PRODUCT CERTIFICATION

Spears® CPVC CTS fittings and Special Reinforced (SR) Thread transition adapters are tested and certified by the National Sanitation Foundation (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, and for safe use in potable water systems under NSF® Standard 14/61.

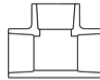
TESTING

Once the system has been installed and allowed to cure properly, the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Failure to do so can cause damage to the piping system and could be harmful to the job site personnel should a failure occur. If a leak is found, the affected product must be cut out and discarded. A new section can be installed using couplings or other approved means.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

TEE

Socket x Socket x Socket



4101-005	1/2	25	300	035	1.56
4101-007	3/4	25	200	035	2.92
4101-010	1	10	120	035	15.31
4101-012	1-1/4	10	80	035	23.48
4101-015	1-1/2	5	60	035	30.59
4101-020	2	5	0	035	49.45

DROP EAR TEE (Fitting with Bracket)

Socket x Socket x Socket



DE4101-005	1/2	25	150	035	3.32
------------	-----	----	-----	-----	------

DROP EAR BRACKET ONLY

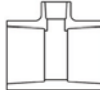
For 4101-005 and 4106-005



DES-005	1/2	800	0	035	6.17
---------	-----	-----	---	-----	------

REDUCING TEE

Socket x Socket x Socket



4101-074	1/2X1/2X3/4	25	300	035	5.42
4101-094	3/4X1/2X1/2	25	300	035	2.91
4101-095	3/4X1/2X3/4	25	300	035	2.91
4101-101	3/4X3/4X1/2	25	300	035	3.01
4101-102	3/4X3/4X1	10	60	035	33.77
4101-120	1X1/2X1/2	10	120	035	36.39
4101-121	1X1/2X3/4	10	120	035	35.78
4101-122	1X1/2X1	10	120	035	27.52
4101-124	1X3/4X1/2	10	120	035	34.28
4101-125	1X3/4X3/4	10	120	035	18.56
4101-126	1X3/4X1	10	120	035	25.73
4101-130	1X1X1/2	10	120	035	17.39
4101-131	1X1X3/4	10	120	035	16.59
4101-138	1-1/4X1/2X1/2	10	80	035	45.34
4101-139	1-1/4X1/2X3/4	10	80	035	45.34
4101-142	1-1/4X1/2X1-1/4	10	80	035	40.16
4101-146	1-1/4X3/4X1/2	10	80	035	45.34
4101-147	1-1/4X3/4X3/4	10	80	035	45.34
4101-148	1-1/4X3/4X1	10	80	035	45.34
4101-149	1-1/4X3/4X1-1/4	10	80	035	45.34
4101-156	1-1/4X1X1/2	10	80	035	45.34
4101-157	1-1/4X1X3/4	10	80	035	45.34
4101-158	1-1/4X1X1	10	80	035	45.34
4101-159	1-1/4X1X1-1/4	10	80	035	40.16
4101-166	1-1/4X1-1/4X1/2	10	120	035	41.37
4101-167	1-1/4X1-1/4X3/4	10	80	035	41.37
4101-168	1-1/4X1	10	40	035	37.75
4101-169	1-1/4X1-1/4X1-1/2	5	40	035	56.35
4101-173	1-1/2X1/2X1/2	5	40	035	56.35
4101-174	1-1/2X1/2X3/4	5	40	035	56.35

REDUCING TEE (continued)

Socket x Socket x Socket

4101-175	1-1/2X1/2X1	5	40	035	56.35
4101-176	1-1/2X1/2X1-1/4	5	40	035	56.35
4101-177	1-1/2X1/2X1-1/2	5	40	035	40.16
4101-182	1-1/2X3/4X1/2	5	40	035	56.35
4101-184	1-1/2X3/4X3/4	5	40	035	56.35
4101-185	1-1/2X3/4X1	5	40	035	56.35
4101-186	1-1/2X3/4X1-1/4	5	40	035	56.35
4101-188	1-1/2X3/4X1-1/2	5	40	035	40.16
4101-193	1-1/2X1X1/2	5	40	035	56.35
4101-194	1-1/2X1X3/4	5	40	035	56.35
4101-195	1-1/2X1X1	5	40	035	37.75
4101-196	1-1/2X1X1-1/4	5	40	035	53.52
4101-197	1-1/2X1X1-1/2	5	40	035	40.16
4101-199	1-1/2X1-1/4X1/2	5	40	035	56.35
4101-201	1-1/2X1-1/4X3/4	5	40	035	56.35
4101-202	1-1/2X1-1/4X1	5	40	035	56.35
4101-203	1-1/2X1-1/4X1-1/4	5	40	035	56.35
4101-204	1-1/2X1-1/4X1-1/2	5	40	035	40.16
4101-209	1-1/2X1-1/2X1/2	5	30	035	40.16
4101-210	1-1/2X1-1/2X3/4	5	30	035	41.24
4101-211	1-1/2X1	10	30	035	56.35
4101-212	1-1/2X1-1/2X1-1/4	5	40	035	40.16
4101-213	1-1/2X1-1/2X2	5	0	035	99.16
4101-216	2X1/2X1/2	5	0	035	99.16
4101-217	2X1/2X3/4	5	0	035	99.16
4101-218	2X1/2X1	5	0	035	99.16
4101-219	2X1/2X1-1/4	5	0	035	99.16
4101-220	2X1/2X1-1/2	5	0	035	99.16
4101-221	2X1/2X2	5	0	035	79.19
4101-222	2X3/4X1/2	5	0	035	99.16
4101-223	2X3/4X3/4	5	0	035	99.16
4101-224	2X3/4X1	5	0	035	99.16
4101-225	2X3/4X1-1/4	5	0	035	99.16
4101-226	2X3/4X1-1/2	5	0	035	99.16
4101-227	2X3/4X2	5	0	035	79.19
4101-228	2X1X1/2	5	0	035	99.16
4101-229	2X1X3/4	5	0	035	99.16
4101-230	2X1X1	5	0	035	99.16
4101-231	2X1X1-1/4	5	0	035	99.16
4101-232	2X1X1-1/2	5	0	035	99.16
4101-233	2X1X2	5	0	035	79.19
4101-234	2X1-1/4X1/2	5	0	035	99.16
4101-235	2X1-1/4X3/4	5	0	035	99.16
4101-236	2X1-1/4X1	5	0	035	99.16
4101-237	2X1-1/2X1/2	5	0	035	99.16
4101-238	2X1-1/2X3/4	5	0	035	99.16
4101-239	2X1-1/2X1	5	0	035	99.16
4101-240	2X1-1/2X1-1/4	5	0	035	99.16
4101-241	2X1-1/2X1-1/2	5	0	035	99.16
4101-242	2X1-1/4X1-1/4	5	0	035	99.16
4101-243	2X1-1/4X1-1/2	5	0	035	99.16
4101-244	2X1-1/4X2	5	0	035	79.19
4101-247	2X2X1/2	10	0	035	58.49



CTS CPVC Hot & Cold Water Distribution System EverTUFF® CPVC CTS Fittings, Valves & Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

REDUCING TEE (continued)

Socket x Socket x Socket

4101-248	2X2X3/4	5	40	035	52.37
4101-249	2X1	5	15	035	49.62
4101-250	2X2X1-1/4	5	0	035	49.62
4101-251	2X2X1-1/2	5	15	035	52.95
4101-257	2X1-1/2X2	5	0	035	52.95

* Outlet sized with bushing.

90° ELL

Socket x Socket

4106-005	1/2	25	600	035	1.21
4106-007	3/4	25	300	035	2.00
4106-010	1	10	150	035	5.84
4106-012	1-1/4	10	80	035	11.63
4106-015	1-1/2	10	80	035	20.99
4106-020	2	5	30	035	40.25

REDUCING 90° ELL

Socket x Socket

4106-101	3/4X1/2	25	300	035	4.21
4106-130	1X1/2	25	200	035	14.81
4106-131	1X3/4	25	200	035	14.81
4106-167	1-1/4X3/4	10	80	035	22.80
4106-168	1-1/4X1	10	80	035	22.80
4106-209	1-1/2X1/2	10	0	035	31.58
4106-210	1-1/2X3/4	10	0	035	31.58
4106-211	1-1/2X1	10	0	035	31.58
4106-212	1-1/2X1-1/4	10	0	035	31.58
4106-247	2X1/2	5	30	035	70.16
4106-248	2X3/4	5	30	035	70.16
4106-249	2X1	5	30	035	70.16
4106-250	2X1-1/4	5	30	035	70.16
4106-251	2X1-1/2	5	30	035	70.16

* Outlet sized with bushing.

SPECIAL REINFORCED 90° ELL

Socket x SR Fipt - Stainless Steel Collar

4107-005SR	1/2	50	300	035	9.01
------------	-----	----	-----	-----	------

ZINC DROP EAR REINFORCED CTS 90° ELL

(One Piece Unit)

Socket x SR Fipt - Zinc Collar

DEZ4107-005SR	1/2	10	150	035	20.26
---------------	-----	----	-----	-----	-------

DROP EAR 90° ELL (Fitting with Bracket)

Socket x Socket

DE4106-005	1/2	25	150	035	3.62
------------	-----	----	-----	-----	------

DROP EAR BRACKET ONLY

For 4101-005 and 4106-005

DES-005	1/2	800	0	035	6.17
---------	-----	-----	---	-----	------

DROP EAR SPECIAL REINFORCED 90° ELL

(Fitting Plus Bracket)

Socket x SR Fipt - Stainless Steel Collar

DE4107-005SR	1/2	10	200	035	13.93
--------------	-----	----	-----	-----	-------

DROP EAR BRACKET ONLY

For 4107-005SR

DET-005	1/2	400	0	035	6.17
---------	-----	-----	---	-----	------

90° STREET ELL

Spigot x Socket

4109-005	1/2	25	500	035	1.43
4109-007	3/4	25	300	035	2.24
4109-010	1	10	100	035	10.25

45° ELL

Socket x Socket

4117-005	1/2	25	500	035	1.54
4117-007	3/4	25	300	035	2.66
4117-010	1	10	100	035	6.77
4117-012	1-1/4	10	120	035	14.34
4117-015	1-1/2	10	80	035	20.78
4117-020	2	10	0	035	43.51

45° STREET ELL

Spigot x Socket

4127-005	1/2	25	600	035	3.26
4127-007	3/4	25	400	035	4.37
4127-010	1	10	150	035	12.56

COUPLING

Socket x Socket

4129-005	1/2	25	600	035	1.00
4129-007	3/4	25	300	035	1.32
4129-010	1	10	250	035	5.94
4129-012	1-1/4	10	120	035	7.67
4129-015	1-1/2	10	120	035	10.84
4129-020	2	10	0	035	20.64

REDUCER COUPLING

Socket x Socket

4129-101	3/4X1/2	25	300	035	2.12
4129-130	1X1/2	25	150	035	12.52
4129-131	1X3/4	25	150	035	6.78
4129-166	1-1/4X1/2	10	120	035	15.69
4129-167	1-1/4X3/4	10	120	035	15.69
4129-168	1-1/4X1	10	120	035	22.33
4129-209	1-1/2X1/2	10	80	035	21.28
4129-210	1-1/2X3/4	10	60	035	21.28
4129-211	1-1/2X1	10	60	035	21.28
4129-212	1-1/2X1-1/4	10	80	035	21.28
4129-247	2X1/2	10	0	035	46.09
4129-248	2X3/4	10	0	035	46.09
4129-249	2X1	10	0	035	46.09
4129-250	2X1-1/4	10	0	035	46.09
4129-251	2X1-1/2	10	0	035	46.09

* Outlet sized with bushing.

FEMALE ADAPTER with Gasket

Socket x NPSC

For Cold Water Service Only

4135-005OR	1/2	25	200	035	4.71
4135-007OR	3/4	25	300	035	6.68

CTS CPVC Hot & Cold Water Distribution System
EverTUFF® CPVC CTS Fittings, Valves & Pipe



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

FEMALE ADAPTER with Gasket (continued)

Socket x NPSC

4135-010OR	1	5	100	035	7.62
------------	---	---	-----	-----	------

GASKET SEALED BRASS THREAD

TRANSITION FEMALE ADAPTER

Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

4135-005BRG	1/2	25	150	035	40.21
4135-007BRG	3/4	25	150	035	44.28
4135-010BRG	1	15	90	035	132.09
4135-012BRG	1-1/4	15	60	035	250.97
4135-015BRG	1-1/2	10	40	035	327.12
4135-020BRG	2	8	32	035	480.95



GASKET SEALED BRASS THREAD

TRANSITION REDUCING FEMALE ADAPTER

Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

4135-101BRG	3/4X1/2	25	150	035	43.77
4135-130BRG	1X1/2	50	0	035	69.15



SPECIAL REINFORCED FEMALE ADAPTER

Socket x SR Fipt - Stainless Steel Collar

4135-005SR	1/2	25	200	035	6.96
4135-007SR	3/4	25	300	035	7.65
4135-010SR	1	5	100	035	9.71



SPECIAL REINFORCED REDUCING FEMALE ADAPTER

Socket x SR Fipt - Stainless Steel Collar

4135-131SR	1X3/4	25	150	035	15.28
------------	-------	----	-----	-----	-------



MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

4136-005	1/2	25	600	035	1.26
4136-007	3/4	25	300	035	2.15
4136-010	1	10	250	035	10.16
4136-012	1-1/4	25	200	035	15.74
4136-015	1-1/2	10	80	035	19.41
4136-020	2	10	80	035	32.00



REDUCING MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

4136-074	1/2X3/4	25	600	035	4.60
4136-101	3/4X1/2	25	600	035	4.93



MALE ADAPTER

Mipt x Spigot

For Cold Water Service Only

4161-005	1/2	50	700	035	3.91
----------	-----	----	-----	-----	------



REINFORCED MALE ADAPTER (Internal Stainless Steel Reinforced)

R Mipt x Socket - Stainless Steel Sleeve

4136-005R	1/2	25	300	035	8.93
4136-007R	3/4	25	300	035	9.93
4136-010R	1	10	120	035	14.79



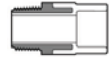
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

TRANSITION MALE ADAPTER w/BRASS THREAD

Brass Mipt x Socket

NSF Certified Lead Free

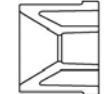
4136-005BR	1/2	60	360	035	40.21
4136-007BR	3/4	40	160	035	44.28
4136-010BR	1	10	60	035	132.09
4136-012BR	1-1/4	10	60	035	162.92
4136-015BR	1-1/2	10	40	035	215.06
4136-020BR	2	8	32	035	357.49



REDUCER BUSHING

Spigot x Socket

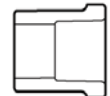
4137-101	3/4X1/2	25	600	035	1.51
4137-130	1X1/2	10	300	035	4.95
4137-131	1X3/4	10	400	035	4.95
4137-166	1-1/4X1/2	10	120	035	6.86
4137-167	1-1/4X3/4	10	300	035	6.42
4137-168	1-1/4X1	10	300	035	5.61
4137-209	1-1/2X1/2	25	100	035	8.07
4137-210	1-1/2X3/4	25	100	035	8.07
4137-211	1-1/2X1	10	120	035	7.92
4137-212	1-1/2X1-1/4	10	200	035	7.92
4137-247	2X1/2	10	60	035	19.16
4137-248	2X3/4	10	60	035	17.88
4137-249	2X1	10	60	035	17.88
4137-250	2X1-1/4	10	120	035	19.16
4137-251	2X1-1/2	10	120	035	17.88



TRANSITION BUSHING

IPS Spigot x CTS Socket

4140-005	1/2	10	600	035	6.40
4140-007	3/4	10	600	035	6.68
4140-010	1	10	400	035	7.38
4140-012	1-1/4	10	60	035	9.14
4140-015	1-1/2	10	60	035	11.52
4140-020	2	10	60	035	12.56



TRANSITION COUPLING

IPS Socket x CTS Socket

4141-007	3/4	25	300	035	4.36
4141-010	1	10	150	035	7.69



**CAP
Socket**

4147-005	1/2	25	600	035	1.09
4147-007	3/4	25	300	035	1.39
4147-010	1	10	400	035	5.07
4147-012	1-1/4	10	120	035	6.97
4147-015	1-1/2	10	120	035	10.72
4147-020	2	10	80	035	21.63

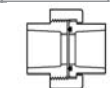


CTS Union

Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

4197-005	1/2	25	150	035	14.25
4197-007	3/4	10	60	035	21.69
4197-010	1	10	60	035	28.00





CTS CPVC Hot & Cold Water Distribution System EverTUFF® CPVC CTS Fittings, Valves & Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

1/4-Turn Angle Supply Stop

Socket x NPT



100 psi @ 180°F (82°C)

1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7722-005	1/2	50	400	217	16.43
7722-073	1/2X3/8	50	400	217	16.43

1/4-Turn Angle Supply Stop

SR FPT x NPT



100 psi @ 180°F (82°C)

1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7721-005SR	1/2	50	400	217	40.69
7721-073SR	1/2X3/8	50	400	217	40.69

CPVC CTS Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Socket with EPDM O-ring Seal

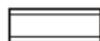
100 psi Maximum Internal Pressure @ 180°F (82°C)

1922-005	1/2	50	200	217	33.39
1922-007	3/4	25	0	217	39.47
1922-010	1	25	0	217	45.53
1922-012	1-1/4	20	0	217	70.68
1922-015	1-1/2	20	0	217	101.94
1922-020	2	8	0	217	130.59

For additional valve information, please refer to Spears® Technical Information part 2 This book.

CPVC CTS Pipe - SDR 11

10' Lengths, Price Per Foot



List Price Per Foot

CTS-005	1/2	500	0	034	.92
CTS-007	3/4	250	0	034	1.65
CTS-010	1	150	0	034	3.39
CTS-012	1-1/4	100	0	034	5.03
CTS-015	1-1/2	100	0	034	6.67
CTS-020	2	50	0	034	11.29

• Pipe sold in bag quantities only - no broken bags

• No return on Pipe

• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

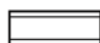
• See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:

CTS-005 Weight per Foot .090 lbs; per Bag Weight 45 lbs.
CTS-007 Weight per Foot .149 lbs; per Bag Weight 37.25 lbs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 35.85 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 35.3 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 48.9 lbs.
CTS-020 Weight per Foot .810 lbs; per Bag Weight 40.5 lbs.

CPVC CTS Pipe - SDR 11

20' Lengths, Price Per Foot



List Price Per Foot

CTS-005-20	1/2	1000	0	034	.92
CTS-007-20	3/4	500	0	034	1.65
CTS-010-20	1	300	0	034	3.39
CTS-012-20	1-1/4	200	0	034	5.03
CTS-015-20	1-1/2	200	0	034	6.67
CTS-020-20	2	100	0	034	11.29

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC CTS Pipe - SDR 11 (continued)

20' Lengths, Price Per Foot

• Pipe sold in bag quantities only - no broken bags

• No return on Pipe

• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

• See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:

CTS-005 Weight per Foot .090 lbs; per Bag Weight 90 lbs.
CTS-007 Weight per Foot .149 lbs; per Bag Weight 74.5 lbs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 71.7 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 70.6 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 97.8 lbs.
CTS-020 Weight per Foot .830 lbs; per Bag Weight 83 lbs.

CPVC CTS Coiled Pipe - SDR 11

100 ft. Coil, Price Per Foot



List Price Per Foot

CTS-005-100	1/2	100	0	034	1.08
CTS-007-100	3/4	100	0	034	1.96
CTS-010-100	1	100	0	034	3.86

• Pipe sold in coil quantities only - no broken coils

• No return on Coiled Pipe

• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

• See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS COILED PIPE WEIGHTS:

CTS-005-100 Weight per Foot .090 lbs; per Coil Weight 9 lbs.
CTS-007-100 Weight per Foot .149 lbs; per Coil Weight 14.9 lbs.
CTS-010-100 Weight per Foot .239 lbs; per Coil Weight 23.9 lbs.

WARNING:

Banded coils will expand when opened. Exercise caution to avoid injury during banding removal.

CTS TUBING STRAPS

Std Pk Bag of 25 For Anchoring CTS Pipe



Sold in Full Bag Quantity Only

556A	1/2	25	500	901	.94
556B	3/4	25	500	901	.94

CTS TUBE TALON with NAIL

Std Pk Bag Quantities as Specified. For Anchoring CTS Pipe



Sold in Full Bag Quantity Only

555A	1/2	100	1000	901	1.04
555B	3/4	100	1000	901	1.58
555C	1	50	500	901	4.44

EverTUFF® CTS One Step CPVC Solvent Cement



CTS5-005	1/4 Pint	24	0	701	9.01
CTS5-010	1/2 Pint	24	0	701	14.34
CTS5-020	Pint	12	0	701	23.23
CTS5-030	Quart	12	0	701	40.42

Cap Daubers



DHP-38	3/8" for 1/2 Pint	50	400	710	1.23
DHP-50	1/2" for 1/2 Pint	50	400	710	1.23
DHP-75	3/4" for 1/2 Pint	50	0	710	1.31

**CTS CPVC Hot & Cold Water Distribution System
EverTUFF® CPVC CTS Fittings, Valves & Pipe**



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Cap Daubers (continued)

DP-50	1/2" for Pint	50	0	710	1.23
DP-75	3/4" for Pint	50	0	710	1.31
DP-125	1-1/4" for Pint	50	0	710	1.58
DQ-50	1/2" for Quart	50	0	710	1.23
DQ-75	3/4" for Quart	50	0	710	1.23
DQ-125	1-1/4" for Quart	50	0	710	1.58

3/8" Diameter for pipe sizes to 3/4"
1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Can-Mate Daubers

**Adjustable Plastic Applicator with Telescoping Stem for
use with Standard 1/2 Pint, Pint and Quart Cans**



CM-50	1/2"	50	0	710	5.26
CM-75	3/4"	50	0	710	5.26
CM-150	1-1/4"	50	0	710	5.26

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Deburring Tool

Cone Type for pipe from 1/2" through 2"



DEB-2	1/2 to 2 Pipe	1	6	710	97.71
-------	----------------------	---	---	-----	-------



High Purity PVC System
Low-Extractable Piping For Ultra-Pure Water Systems

Spears® Low-Extractable SCHEDULE 80 PIPE

NOMINAL PIPE SIZE	PART NUMBER	AVG. OD	AVG. ID	MIN. WALL	MAX. W.P. PSI*	LBS/FT	LGTHS/ CARTONS
1/2"	LXT-005	.840	.528	.147	420	.202	22
3/4"	LXT-007	1.050	.724	.154	340	.273	22
1"	LXT-010	1.315	.935	.179	320	.402	18
1-1/4"	LXT-012	1.660	1.256	.191	260	.554	14
1-1/2"	LXT-015	1.900	1.476	.200	240	.673	11
2"	LXT-020	2.375	1.913	.218	200	.932	8
3"	LXT-030	3.500	2.864	.300	190	1.903	5
4"	LXT-040	4.500	3.786	.337	160	2.782	2
6"	LXT-060	6.625	5.709	.432	140	5.313	1

* PSI water, non-shock @ 73°F (23°C) with solvent welded connections.
Standard Length - 15 feet. All pipe is double-bagged and boxed on-line for high purity environments.

High Purity PVC System Low-Extractable Piping For Ultra-Pure Water Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Spears® Low-Extractable Schedule 80 Pipe 15' Lengths, Price Per Foot

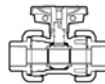


List Price Per Foot

LXT-005	1/2	300	0	064	4.81
LXT-007	3/4	255	0	064	6.52
LXT-010	1	150	0	064	9.60
LXT-012	1-1/4	120	0	064	13.28
LXT-015	1-1/2	105	0	064	16.07
LXT-020	2	75	0	064	22.29
LXT-030	3	45	0	064	45.47
LXT-040	4	30	0	064	66.47
LXT-060	6	15	0	064	154.11

See Spears® Low-Extractable Schedule 80 Pipe Chart for additional information.

Spears® True Union 2000 Industrial Ball Valves w/Handle Lockout & Safe-T-Block™

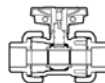


Design

EPDM O-ring

1829-005BL	1/2	1	18	066	93.55
1829-007BL	3/4	1	18	066	114.64
1829-010BL	1	1	12	066	145.44
1829-012BL	1-1/4	1	8	066	192.79
1829-015BL	1-1/2	1	8	066	252.12
1829-020BL	2	1	4	066	355.94
1822-030BL	3	1	0	066	658.63
1822-040BL	4	1	0	066	1113.46
1822-060BL	6	1	0	066	2031.16

Spears® True Union 2000 Industrial Ball Valves w/Handle Lockout & Safe-T-Block™



Design

FKM O-rings

1839-005BL	1/2	1	18	066	109.25
1839-007BL	3/4	1	18	066	129.23
1839-010BL	1	1	12	066	175.08
1839-012BL	1-1/4	1	8	066	244.26
1839-015BL	1-1/2	1	8	066	319.88
1839-020BL	2	1	4	066	418.69
1832-030BL	3	1	0	066	813.73
1832-040BL	4	1	0	066	1374.87
1832-060BL	6	1	0	066	2277.38

Spears® True Union 2000 Industrial T-Style Ball Valve



EPDM

Mainline Tee x Socket/Spigot

Safe-T-Block™ Design

182901-005BL	1/2	1	12	066	357.84
182901-007BL	3/4	1	8	066	391.01
182901-010BL	1	1	8	066	331.20
182901-012BL	1-1/4	1	0	066	369.44
182901-015BL	1-1/2	1	0	066	382.80
182901-020BL	2	1	0	066	408.95
182901-101BL	3/4X1/2	1	12	066	363.73
182901-130BL	1X1/2	1	8	066	377.36
182901-131BL	1X3/4	1	8	066	398.39
182901-166BL	1-1/4X1/2	1	8	066	403.68
182901-167BL	1-1/4X3/4	1	8	066	405.77
182901-168BL	1-1/4X1	1	8	066	465.12
182901-209BL	1-1/2X1/2	1	8	066	453.40
182901-210BL	1-1/2X3/4	1	8	066	405.77
182901-211BL	1-1/2X1	1	8	066	482.65
182901-247BL	2X1/2	1	8	066	517.75
182901-248BL	2X3/4	1	8	066	558.66
182901-249BL	2X1	1	8	066	587.96

Spears® True Union 2000 Industrial T-Style Ball Valve

(continued)

EPDM

Mainline Tee x Socket/Spigot

182901-251BL	2X1-1/2	1	8	066	609.54
182901-333BL	3X1/2	1	0	066	681.59
182901-335BL	3X1	1	0	066	848.65
182901-337BL	3X1-1/2	1	0	066	813.19
182901-338BL	3X2	1	0	066	892.20
182901-417BL	4X1	1	0	066	877.56
182901-419BL	4X1-1/2	1	0	066	977.03
182901-420BL	4X2	1	0	066	1164.22
182901-528BL	6X2	1	0	066	1520.66
182901-578BL	8X2	1	0	066	2243.64

Includes Plugged end with additional Socket and Threaded end connectors.

Spears® True Union 2000 Industrial T-Style Ball Valve



FKM

Mainline Tee x Socket/Spigot

Safe-T-Block™ Design

183901-005BL	1/2	1	12	066	374.69
183901-007BL	3/4	1	8	066	410.36
183901-010BL	1	1	8	066	427.41
183901-015BL	1-1/2	1	0	066	441.55
183901-020BL	2	1	4	066	502.77
183901-101BL	3/4X1/2	1	12	066	380.60
183901-130BL	1X1/2	1	8	066	394.23
183901-131BL	1X3/4	1	8	066	417.74
183901-166BL	1-1/4X1/2	1	8	066	420.55
183901-167BL	1-1/4X3/4	1	8	066	425.12
183901-168BL	1-1/4X1	1	8	066	494.15
183901-209BL	1-1/2X1/2	1	8	066	420.55
183901-210BL	1-1/2X3/4	1	8	066	425.12
183901-211BL	1-1/2X1	1	8	066	494.15
183901-247BL	2X1/2	1	8	066	534.64
183901-248BL	2X3/4	1	8	066	578.02
183901-249BL	2X1	1	8	066	617.00
183901-251BL	2X1-1/2	1	8	066	726.59
183901-333BL	3X1/2	1	0	066	698.44
183901-335BL	3X1	1	0	066	742.80
183901-337BL	3X1-1/2	1	0	066	849.44
183901-338BL	3X2	1	0	066	959.67
183901-417BL	4X1	1	0	066	906.60
183901-419BL	4X1-1/2	1	0	066	1013.25
183901-420BL	4X2	1	0	066	1231.74
183901-528BL	6X2	1	0	066	1588.17
183901-578BL	8X2	1	0	066	2311.13

Includes Plugged end with additional Socket and Threaded end connectors.

Spears® True Union 2000 Industrial Ball Check Valves



EPDM O-rings

4529-005BL	1/2	1	18	066	136.92
4529-007BL	3/4	1	18	066	165.42
4529-010BL	1	1	18	066	189.37
4529-012BL	1-1/4	1	12	066	335.40
4529-015BL	1-1/2	1	8	066	354.80
4529-020BL	2	1	8	066	593.23
4522-030BL	3	1	0	066	832.82
4522-040BL	4	1	0	066	1562.25

Spears® True Union 2000 Industrial Ball Check Valves



FKM O-rings

4539-005BL	1/2	1	18	066	151.74
4539-007BL	3/4	1	18	066	182.53



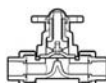
High Purity PVC System Low-Extractable Piping For Ultra-Pure Water Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Spears® True Union 2000 Industrial Ball Check Valves (continued) FKM O-rings

4539-010BL	1	1	18	066	205.56
4539-012BL	1-1/4	1	12	066	347.94
4539-015BL	1-1/2	1	8	066	376.66
4539-020BL	2	1	8	066	616.06
4532-030BL	3	1	0	066	887.04
4532-040BL	4	1	0	066	1645.98

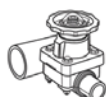
Spears® Diaphragm Valves EPDM O-ring Seals EPDM Backed PTFE Diaphragm



2729T-005BL	1/2	1	12	066	258.19
2729T-007BL	3/4	1	8	066	277.39
2729T-010BL	1	1	8	066	324.23
2729T-012BL	1-1/4	1	4	066	438.31
2729T-015BL	1-1/2	1	4	066	531.98
2729T-020BL	2	1	0	066	698.91

Note: Both socket and threaded end connectors are provided with valve sizes 1/2" - 2" Diaphragm valves. Valves carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F (23°C).

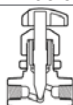
Spears® T-style "Zero Dead Leg" Diaphragm Valve



Mainline Tee x Spigot EPDM O-ring Seals EPDM Backed PTFE Diaphragm

2797TZD-005BL	1/2	1	8	066	344.91
2797TZD-007BL	3/4	1	8	066	368.28
2797TZD-010BL	1X1	1	8	066	533.54
2797TZD-015BL	1-1/2	1	4	066	806.49
2797TZD-020BL	2X2	1	0	066	921.56
2797TZD-130BL	1X1/2	1	8	066	346.95
2797TZD-131BL	1X3/4	1	8	066	369.15
2797TZD-247BL	2X1/2	1	8	066	373.69
2797TZD-249BL	2X1	1	12	066	558.61
2797TZD-251BL	2X1-1/2	1	4	066	798.52

Spears® Needle Valve Globe Pattern - FIPT



5591-002BL	1/4	1	18	066	124.88
5591-003BL	3/8	1	18	066	124.88

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

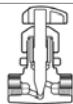
Spears® Needle Valve Globe Pattern - Soc



5592-002BL	1/4	1	18	066	124.88
5592-003BL	3/8	1	18	066	124.88
5592-005BL	1/2	1	18	066	129.95

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve Globe Pattern - SR FIPT



5591-005BLSR	1/2	1	18	066	132.57
--------------	-----	---	----	-----	--------

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve Angle Pattern - FIPT



5691-002BL	1/4	1	18	066	124.88
------------	-----	---	----	-----	--------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Spears® Needle Valve (continued) Angle Pattern - FIPT

5691-003BL	3/8	1	18	066	124.88
------------	-----	---	----	-----	--------

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve Angle Pattern - Soc



5692-002BL	1/4	1	18	066	124.88
5692-003BL	3/8	1	18	066	124.88
5692-005BL	1/2	1	18	066	132.57

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve Angle Pattern - SR FIPT



5691-005BLSR	1/2	1	18	066	132.57
--------------	-----	---	----	-----	--------

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Gauge Guards PTFE Diaphragm 1/4" Inlet Connection



G0004-002BL	No Gauge	1	18	623	141.86
G30V4-002BL	0-30 in-Hg	1	18	623	219.41
G0154-002BL	0-15 psi	1	18	623	207.37
G0304-002BL	0-30 psi	1	18	623	207.37
G0604-002BL	0-60 psi	1	18	623	207.37
G1004-002BL	0-100 psi	1	18	623	207.37
G1604-002BL	0-160 psi	1	18	623	207.37
G2004-002BL	0-200 psi	1	18	623	207.37
G3004-002BL	0-300 psi	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards PTFE Diaphragm 1/2" Inlet Connection



G0004-005BL	No Gauge	1	18	623	141.86
G30V4-005BL	0-30 in-Hg	1	18	623	219.41
G0154-005BL	0-15 psi	1	18	623	207.37
G0304-005BL	0-30 psi	1	18	623	207.37
G0604-005BL	0-60 psi	1	18	623	207.37
G1004-005BL	0-100 psi	1	18	623	207.37
G1604-005BL	0-160 psi	1	18	623	207.37
G2004-005BL	0-200 psi	1	18	623	207.37
G3004-005BL	0-300 psi	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards FKM Diaphragm 1/4" Inlet Connection



G0003-002BL	No Gauge	1	18	623	141.86
G30V3-002BL	0-30 in-Hg	1	18	623	219.41
G0153-002BL	0-15 psi	1	18	623	207.37
G0303-002BL	0-30 psi	1	18	623	207.37
G0603-002BL	0-60 psi	1	18	623	207.37
G1003-002BL	0-100 psi	1	18	623	207.37
G1603-002BL	0-160 psi	1	18	623	207.37
G2003-002BL	0-200 psi	1	18	623	207.37
G3003-002BL	0-300 psi	1	18	623	207.37

High Purity PVC System Low-Extractable Piping For Ultra-Pure Water Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Spears® Gauge Guards (continued)

FKM Diaphragm 1/4" Inlet Connection

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards

FKM Diaphragm 1/2" Inlet Connection



G0003-005BL	No Gauge	1	18	623	141.86
G30V3-005BL	0-30 in-Hg	1	18	623	219.41
G0153-005BL	0-15 psi	1	18	623	207.37
G0303-005BL	0-30 psi	1	18	623	207.37
G0603-005BL	0-60 psi	1	18	623	207.37
G1003-005BL	0-100 psi	1	18	623	207.37
G1603-005BL	0-160 psi	1	18	623	207.37
G2003-005BL	0-200 psi	1	18	623	207.37
G3003-005BL	0-300 psi	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards

EPDM Diaphragm 1/4" Inlet Connection



G0002-002BL	No Gauge	1	18	623	136.19
G30V2-002BL	0-30 in-Hg	1	18	623	210.63
G0152-002BL	0-15 psi	1	18	623	199.09
G0302-002BL	0-30 psi	1	18	623	199.09
G0602-002BL	0-60 psi	1	18	623	199.09
G1002-002BL	0-100 psi	1	18	623	199.09
G1602-002BL	0-160 psi	1	18	623	199.09
G2002-002BL	0-200 psi	1	18	623	199.09
G3002-002BL	0-300 psi	1	18	623	199.09

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards

EPDM Diaphragm 1/2" Inlet Connection



G0002-005BL	No Gauge	1	18	623	136.19
G30V2-005BL	0-30 in-Hg	1	18	623	210.63
G0152-005BL	0-15 psi	1	18	623	199.09
G0302-005BL	0-30 psi	1	18	623	199.09
G0602-005BL	0-60 psi	1	18	623	199.09
G1002-005BL	0-100 psi	1	18	623	199.09
G1602-005BL	0-160 psi	1	18	623	199.09
G2002-005BL	0-200 psi	1	18	623	199.09
G3002-005BL	0-300 psi	1	18	623	199.09

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

LX-5 Low Extractable One-Step Cement



LX5C-020	Pint	12	0	702	33.96
LX5C-030	Quart	12	0	702	54.77



Empty Can

MT-654	Pint	12	0	710	7.40
--------	------	----	---	-----	------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Empty Can (continued)

MT-651	Quart	12	0	710	8.36
MT-653	Quart	12	0	710	8.36

MT-651 & MT-654 cans have 1-3/4" Screw Neck size
MT-653 is a TT Paint Type can

Brush

For Pint and Quart cans



KD-110	4-1/2" Length	25	0	710	9.59
KD-112	5-1/2" length	25	0	710	9.59

Fits 1-3/4" Screw Cap

Roller



3020	3" length	20	0	710	16.03
------	-----------	----	---	-----	-------

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6"

Cap Dauber



DP-75	3/4" for Pint	50	0	710	1.31
DP-125	1-1/4" for Pint	50	0	710	1.58
DQ-125	1-1/4" for Quart	50	0	710	1.58

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Can-Mate Dauber



CM-75	3/4"	50	0	710	5.26
CM-150	1-1/4"	50	0	710	5.26

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

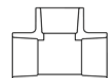
Deburring Tool

Cone Type for pipe from 1/2" through 2"



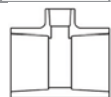
DEB-2	1/2 to 2 Pipe	1	6	710	97.71
-------	---------------	---	---	-----	-------

Tee Soc



801-005BL	1/2	25	0	065	7.27
801-007BL	3/4	15	120	065	8.88
801-010BL	1	15	0	065	13.09
801-012BL	1-1/4	10	0	065	20.40
801-015BL	1-1/2	10	0	065	30.63
801-020BL	2	10	0	065	48.63
801-030BL	3	5	0	065	140.51
801-040BL	4	5	0	065	234.93
801-060BL	6	4	0	065	352.40

Reducing Tee Soc



801-131BL	1X1X3/4	15	0	065	12.22
801-211BL	1-1/2X1-1/2X1	10	0	065	26.55
801-249BL	2X2X1	10	0	065	33.61
801-251BL	2X2X1-1/2	10	0	065	33.61
801-338BL	3X3X2	5	0	065	61.63
801-422BL	4X4X3	5	0	065	99.63
801-530BL	6X6X3	4	0	065	422.69



High Purity PVC System Low-Extractable Piping For Ultra-Pure Water Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Tee (continued)

Soc

801-532BL	6X6X4	5	0	065	422.69
-----------	-------	---	---	-----	--------

90° EII

Soc



806-005BL	1/2	20	160	065	4.51
806-007BL	3/4	20	160	065	5.39
806-010BL	1	10	80	065	10.68
806-012BL	1-1/4	10	0	065	17.05
806-015BL	1-1/2	10	0	065	25.23
806-020BL	2	25	0	065	42.62
806-030BL	3	5	0	065	109.29
806-040BL	4	5	0	065	201.75
806-060BL	6	4	0	065	302.62

90° Sweep EII

Soc



806-005SBL	1/2	25	100	065	6.43
806-007SBL	3/4	25	0	065	7.71
806-010SBL	1	25	0	065	15.26
806-012SBL	1-1/4	25	0	065	24.37
806-015SBL	1-1/2	25	0	065	36.02
806-020SBL	2	25	0	065	60.89

45° EII

Soc



817-005BL	1/2	20	240	065	7.21
817-007BL	3/4	10	120	065	9.86
817-010BL	1	15	120	065	11.83
817-012BL	1-1/4	10	0	065	20.57
817-015BL	1-1/2	10	0	065	22.81
817-020BL	2	10	0	065	36.02
817-030BL	3	5	0	065	135.52
817-040BL	4	5	0	065	197.68
817-060BL	6	5	0	065	296.53

Coupling

Soc



829-005BL	1/2	25	300	065	3.25
829-007BL	3/4	15	180	065	3.73
829-010BL	1	15	120	065	6.86
829-012BL	1-1/4	10	80	065	10.35
829-015BL	1-1/2	10	0	065	21.34
829-020BL	2	10	0	065	30.63
829-030BL	3	5	0	065	49.83
829-040BL	4	5	0	065	90.65
829-060BL	6	4	0	065	192.45

Reducer Coupling

Soc



829-101BL	3/4X1/2	50	0	065	8.66
829-131BL	1X3/4	25	200	065	12.62
829-168BL	1-1/4X1	25	0	065	25.63
829-211BL	1-1/2X1	25	0	065	26.88
829-212BL	1-1/2X1-1/4	25	0	065	33.21
829-249BL	2X1	10	0	065	30.32
829-251BL	2X1-1/2	10	0	065	30.32
829-338BL	3X2	8	0	065	74.39
829-420BL	4X2	4	0	065	141.83
829-422BL	4X3	4	0	065	136.49

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

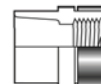
Reducer Coupling (continued)

Soc

829-532BL	6X4	4	0	065	523.09
-----------	-----	---	---	-----	--------

Special Reinforced Female Adapter

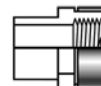
Soc x SR Fipt



835-005SRBL	1/2	25	300	065	6.74
835-007SRBL	3/4	25	200	065	8.26
835-010SRBL	1	25	0	065	13.28
835-012SRBL	1-1/4	10	80	065	17.15
835-015SRBL	1-1/2	10	80	065	21.45
835-020SRBL	2	10	0	065	40.67
835-030SRBL	3	5	0	065	54.99
835-040SRBL	4	5	0	065	88.25

Special Reinforced Reducing Spigot Female Adapter

Spig x SR Fipt



878-072SRBL	1/2X1/4	25	450	065	13.43
878-098SRBL	3/4X1/4	50	300	065	18.55
878-128SRBL	1X1/4	50	0	065	19.08

Male Adapter

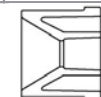
Mipt x Soc



836-005BL	1/2	25	300	065	8.25
836-007BL	3/4	25	200	065	9.12
836-010BL	1	10	80	065	15.80
836-012BL	1-1/4	10	80	065	18.47
836-015BL	1-1/2	10	80	065	26.55
836-020BL	2	10	0	065	38.37
836-030BL	3	5	0	065	60.54
836-040BL	4	5	0	065	86.11

Reducer Bushing Flush Style

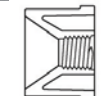
Spig x Soc



837-101BL	3/4X1/2	50	0	065	4.91
837-130BL	1X1/2	50	0	065	7.24
837-131BL	1X3/4	50	0	065	7.24
837-166BL	1-1/4X1/2	25	0	065	10.27
837-168BL	1-1/4X1	25	200	065	10.27
837-210BL	1-1/2X3/4	25	0	065	13.98
837-211BL	1-1/2X1	25	200	065	13.98
837-212BL	1-1/2X1-1/4	25	200	065	13.98
837-249BL	2X1	10	80	065	19.96
837-251BL	2X1-1/2	10	80	065	19.96
837-338BL	3X2	10	0	065	54.86
837-422BL	4X3	6	0	065	94.97
837-532BL	6X4	5	0	065	150.88

Reducer Bushing Flush Style

Spig x Fipt



838-072BL	1/2X1/4	50	400	065	6.28
838-073BL	1/2X3/8	50	600	065	6.28
838-098BL	3/4X1/4	50	0	065	4.15
838-101BL	3/4X1/2	50	0	065	4.15
838-129BL	1X3/8	50	400	065	6.54
838-130BL	1X1/2	50	0	065	6.54
838-131BL	1X3/4	50	0	065	6.54
838-210BL	1-1/2X3/4	25	200	065	17.17
838-211BL	1-1/2X1	25	200	065	17.17

High Purity PVC System Low-Extractable Piping For Ultra-Pure Water Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cap Soc



847-005BL	1/2	25	300	065	6.95
847-007BL	3/4	25	300	065	7.29
847-010BL	1	15	180	065	12.96
847-012BL	1-1/4	10	120	065	15.65
847-015BL	1-1/2	10	80	065	22.35
847-020BL	2	10	80	065	30.91
847-030BL	3	5	0	065	73.88
847-040BL	4	5	0	065	124.56
847-060BL	6	4	0	065	420.95

Union

Soc x Soc EPDM O-ring Seals



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

897-005BL	1/2	10	60	065	12.43
897-007BL	3/4	10	40	065	15.60
897-010BL	1	10	40	065	20.40
897-012BL	1-1/4	5	20	065	29.42
897-015BL	1-1/2	5	0	065	40.23
897-020BL	2	5	0	065	60.65
8097-030BL	3	5	0	065	102.73
8097-040BL	4	4	0	065	142.14

Union

Soc x Soc FKM O-ring Seals



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

857-005BL	1/2	10	60	065	15.26
857-007BL	3/4	10	40	065	18.62
857-010BL	1	10	40	065	25.81
857-012BL	1-1/4	5	20	065	34.83
857-015BL	1-1/2	5	0	065	48.63
857-020BL	2	5	0	065	73.85
8057-030BL	3	5	0	065	125.25
8057-040BL	4	4	0	065	173.37

Flange Soc Van Stone Style

Rated @ 150 psi Working Pressure @ 73°F (23°C)



854-005BL	1/2	25	0	065	21.40
854-007BL	3/4	25	0	065	22.91
854-010BL	1	15	0	065	25.51
854-012BL	1-1/4	15	0	065	26.29
854-015BL	1-1/2	20	0	065	26.84
854-020BL	2	10	0	065	35.67
854-030BL	3	10	0	065	60.92
854-040BL	4	5	0	065	77.05
854-060BL	6	4	0	065	172.61

PVC New Style Standard Tank Adapters with EPDM Gaskets

Soc



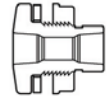
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170E-005BL	1/2	25	0	065	41.83
8170E-007BL	3/4	25	0	065	47.47
8170E-010BL	1	25	0	065	54.49
8170E-012BL	1-1/4	20	0	065	68.97
8170E-015BL	1-1/2	20	0	065	72.38
8170E-020BL	2	15	0	065	104.33
8170E-030BL	3	4	0	065	176.42
8170E-040BL	4	2	0	065	292.86

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC New Style Standard Tank Adapters with FKM Gaskets

Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170V-005BL	1/2	25	0	065	54.84
8170V-007BL	3/4	25	0	065	63.09
8170V-010BL	1	25	0	065	73.03
8170V-012BL	1-1/4	20	0	065	89.73
8170V-015BL	1-1/2	20	0	065	93.53
8170V-020BL	2	15	0	065	141.60
8170V-030BL	3	4	0	065	242.61
8170V-040BL	4	2	0	065	537.40

Wrench Sets

Body Wrench & Nut Wrench



TAW-005	1/2	1	25	299	21.89
TAW-007	3/4	1	25	299	22.32
TAW-010	1	1	25	299	23.21
TAW-012	1-1/4	1	20	299	26.18
TAW-015	1-1/2	1	20	299	28.40
TAW-020	2	1	10	299	32.35
TAW-030	3	1	10	299	39.44
TAW-040	4	1	10	299	42.26

Individual Body Wrench



TAW1-005	1/2	250	0	299	12.28
TAW1-007	3/4	220	0	299	12.52
TAW1-010	1	200	0	299	13.03
TAW1-012	1-1/4	300	0	299	14.76
TAW1-015	1-1/2	150	0	299	15.89
TAW1-020	2	100	0	299	17.25
TAW1-030	3	74	0	299	22.61
TAW1-040	4	35	0	299	23.26

Individual Nut Wrench



TAW2-005	1/2	200	0	299	12.28
TAW2-007	3/4	160	0	299	12.52
TAW2-010	1	110	0	299	13.03
TAW2-012	1-1/4	200	0	299	14.76
TAW2-015	1-1/2	120	0	299	15.89
TAW2-020	2	100	0	299	17.25
TAW2-030	3	40	0	299	22.61
TAW2-040	4	35	0	299	23.26

Standard Deck Mount Lab Fixture

Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow

LF1000-BLN	LXT, PTFE Seal	1	0	066	376.37
------------	----------------	---	---	-----	--------

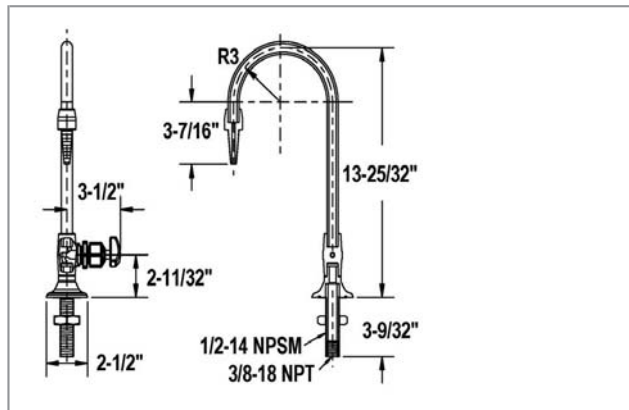


High Purity PVC System Low-Extractable Piping For Ultra-Pure Water Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Standard Deck Mount Lab Fixture (continued)

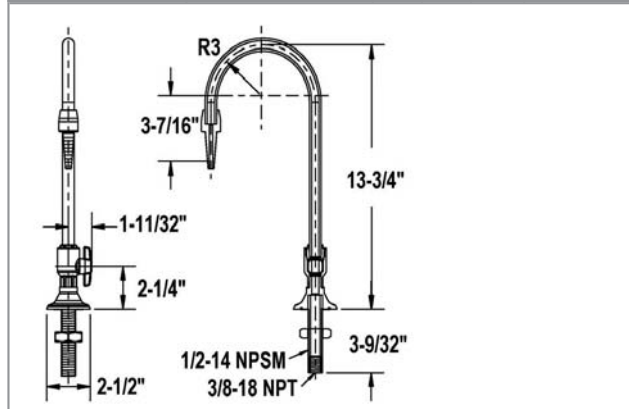
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow



Standard Deck Mount Lab Fixture

With Ball Valve-Direct Flow

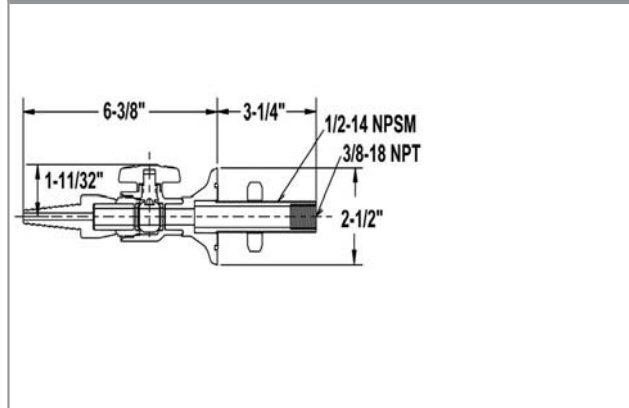
LF1002-BL	LXT, EPDM Seal	1	0	066	314.74
LF1003-BL	LXT, FKM Seal	1	0	066	349.72



Panel Mount Turret Lab Fixture

Base with Valve & Serrated Tip with Ball Valve-Direct Flow

LF3002-BL	PVC, EPDM Seal	1	0	066	309.60
LF3003-BL	PVC, FKM Seal	1	0	066	344.04

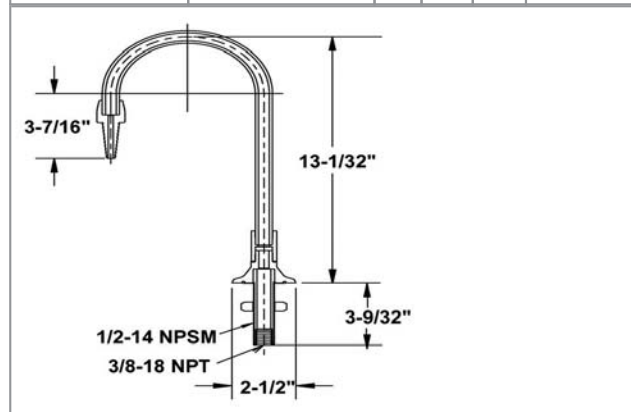


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Deck Mount Gooseneck

Base with Gooseneck & Serrated Tip - For use with Remote Valve

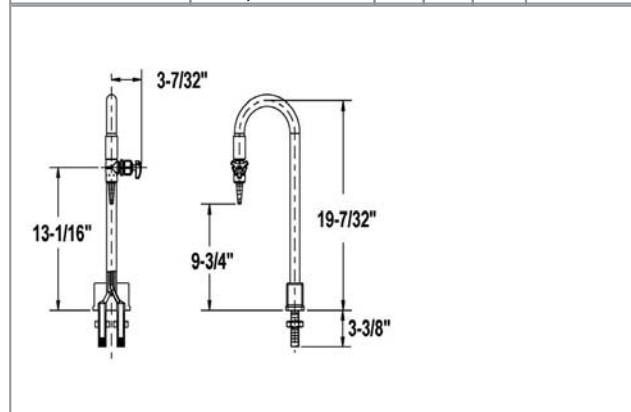
LF100-BL	LXT	1	0	066	258.28
----------	-----	---	---	-----	--------



Recirculating Deck Mount Lab Fixture

Base with Gooseneck, Valve & Serrated Tip with Needle Valve - Metered Flow

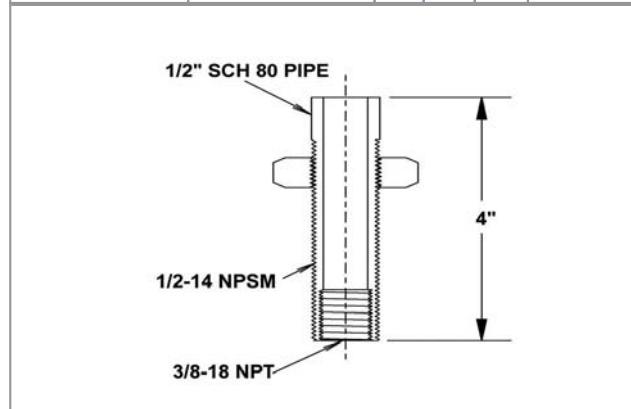
LF1000-BLN	LXT, PTFE Seal	1	0	066	784.05
------------	----------------	---	---	-----	--------



Fixture Connection Nipple

With Locknut (Included on all fixtures listed above)

LF500-BL	LXT	1	0	066	42.78
----------	-----	---	---	-----	-------



High Purity PVC System Low-Extractable Piping For Ultra-Pure Water Systems

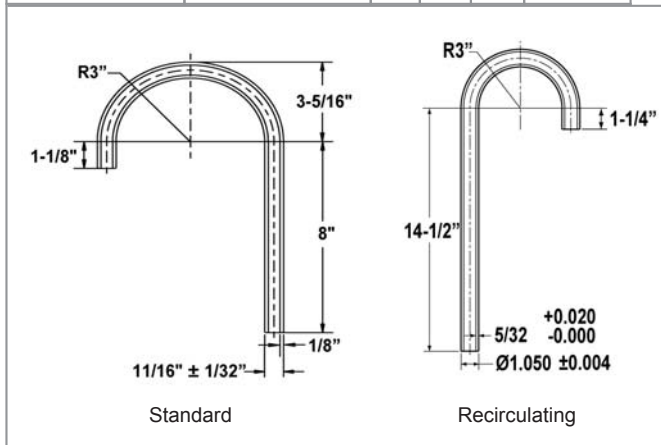


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

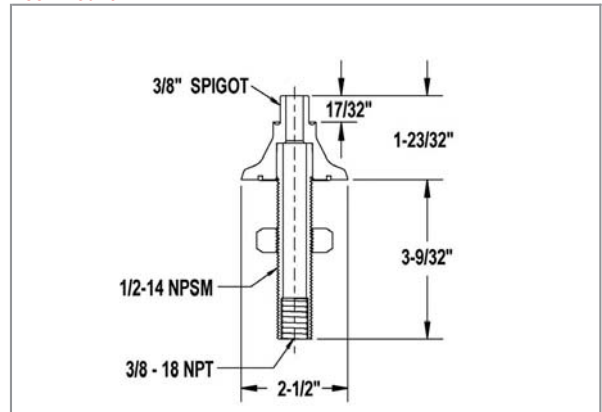
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Standard & Recirculating Gooseneck Only

LFGN-BL	LXT	1	0	066	36.36
LFRGN-BL	LXT	1	0	066	50.95

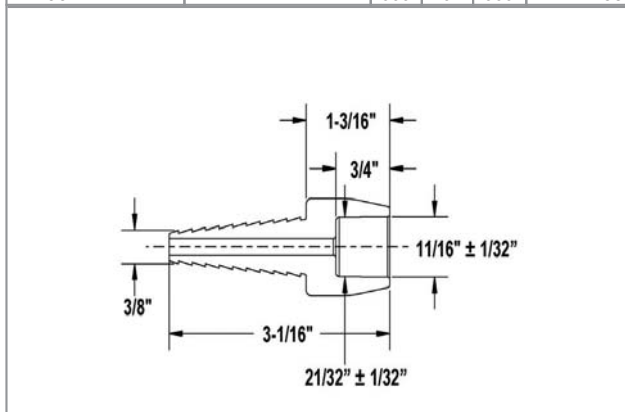


Base Only (continued) Deck Mount



Straight Serrated Tip Only

LF400-BL	LXT	600	0	066	7.69
----------	-----	-----	---	-----	------



Base Only Deck Mount

LFB-BL	LXT	1	0	066	5.38
--------	-----	---	---	-----	------



LabWaste™ CPVC Corrosive Waste Drainage System

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P093 Elastomer Transition Coupling - Glass/IPS Pipe

IPS Clamp Joint x IPS Clamp Joint

For connection to plain end Glass or any same-size IPS pipe systems. Shielded FKM (Fluorocarbon) w/gear clamps.

P093-015	1-1/2	20	0	171	816.21
P093-020	2	10	0	171	833.16
P093-030	3	10	0	171	846.53
P093-040	4	10	0	171	872.04
P093-060	6	5	0	171	892.53



P094 Elastomer Transition Coupling-Duriron

IPS Clamp Joint x Duriron Clamp Joint

For connection to Duriron plain end pipe. Shielded FKM (Fluorocarbon) w/gear clamps.

P094-015	1-1/2	20	0	171	666.21
P094-020	2	10	0	171	687.79
P094-030	3	10	0	171	713.48
P094-040	4	10	0	171	727.57



P095 Duriron Transition Fitting

Mechanical Joint x Pipe Size

For connection to Duriron system. Requires Duriron mechanical joint coupling.

P095-015C	1-1/2	30	0	169	51.67
P095-020C	2	16	0	169	65.39
P095-030C	3	9	0	169	109.12
P095-040C	4	5	0	169	150.81



P096 Grooved Coupling

Grv x Soc

P096-015C	1-1/2	10	60	169	25.89
P096-020C	2	10	80	169	34.83
P096-030C	3	10	0	169	68.25
P096-040C	4	5	0	169	116.13
P096-060C	6	5	0	169	166.14



P097 Duriron Transition Coupling

Spig x Caulk Joint

For connection to Duriron system. Requires packing and plastic lead. Warning: Do not use hot lead or oiled Oakum

P097-015C	1-1/2	25	0	169	51.67
P097-020C	2	15	0	169	65.39
P097-030C	3	6	0	169	109.12
P097-040C	4	6	0	169	150.81



P098 Glass Transition Coupling

Spig x Clamp

For connection to glass system. Requires use of clamp from glass system manufacturer.

P098-015C	1-1/2	50	0	169	38.76
P098-020C	2	30	0	169	52.31
P098-030C	3	20	0	169	81.82
P098-040C	4	12	0	169	105.58
P098-060C	6	12	0	169	183.32



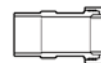
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P099 Transition Coupling

H x Compression

For connection to PP or PVDF systems. Requires Safety Retaining Groove Tool. Contact Spears®.

P099-015C	1-1/2	16	0	169	107.07
P099-020C	2	12	0	169	121.75
P099-030C	3	4	0	169	152.49
P099-040C	4	4	0	169	182.35
P099-060C	6	1	0	169	211.28
P099-080C	8	1	0	169	639.49



P100 Coupling

H x H

P100-015C	1-1/2	100	0	160	25.45
P100-020C	2	100	0	160	31.77
P100-030C	3	60	0	160	40.65
P100-040C	4	25	0	160	57.85
P100-060C	6	5	0	160	91.68
P100-080C	8	6	0	159	247.26
P100-100C	10	1	0	159	358.54
P100-120C	12	1	0	159	503.80
P100-140C	14	1	0	159	639.71



P101 Female Adapter

Fpt x H

P101-015C	1-1/2	100	0	160	20.02
P101-020C	2	100	0	160	27.27
P101-030C	3	30	0	160	45.01
P101-040C	4	6	0	160	86.52
P101-060C	6	10	0	160	144.94



P102 Increaser - Reducer

H x H

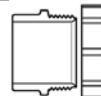
P102-251C	2X1-1/2	25	0	160	49.81
P102-337C	3X1-1/2	25	0	160	52.58
P102-338C	3X2	20	0	160	57.85
P102-420C	4X2	10	0	160	63.58
P102-422C	4X3	20	0	160	69.37
P102-530C	6X3	6	0	160	97.46
P102-532C	6X4	4	0	160	117.29
P102-582C	8X4	2	0	159	214.78
P102-585C	8X6	2	0	159	158.27
P102-624C	10X4	2	0	159	362.57
P102-626C	10X6	1	0	159	387.84
P102-628C	10X8	1	0	159	405.04
P102-666C	12X6	1	0	159	496.38
P102-668C	12X8	1	0	159	562.56
P102-670C	12X10	1	0	159	619.22



P103P Trap Adapter - Male

Spig x Slip with Plastic Nut

P103P-015C	1-1/2	50	0	160	21.17
P103P-020C	2	25	0	160	24.75



P104R Trap Adapter - Female

w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer H x Slip w/Plastic Nut

P104R-015C	1-1/2	50	0	160	23.21
------------	-------	----	---	-----	-------



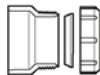
LabWaste™ CPVC Corrosive Waste Drainage System
LabWaste™ CPVC Corrosive Waste Drainage Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P104X Trap Adapter - Female

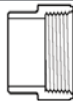
H x Slip w/Chrome Nut & Washer



P104X-015C	1-1/2	50	0	160	24.69
------------	-------	----	---	-----	-------

P105 Cleanout Adapter

Spig x Fpt



P105-015C	1-1/2	50	0	160	20.02
P105-020C	2	50	0	160	21.41
P105-030C	3	25	0	160	41.26
P105-040C	4	10	0	160	73.72
P105-060C	6	10	0	160	129.73
P105-080C	8	8	0	159	200.72

P105X Cleanout Adapter with Square Head Plug

Spig



P105X-015C	1-1/2	50	0	160	21.08
P105X-020C	2	50	0	160	24.85
P105X-030C	3	25	0	160	45.85
P105X-040C	4	10	0	160	78.88
P105X-060C	6	10	0	160	136.44
P105X-080C	8	6	0	159	371.45

P106 Square Head Cleanout Plug

Mpt



P106-015C	1-1/2	50	400	160	7.29
P106-020C	2	50	0	160	7.97
P106-030C	3	25	0	160	13.92
P106-040C	4	30	0	160	15.61
P106-060C	6	10	0	160	36.43
P106-080C	8	12	0	159	188.32

P107 Flush Bushing

Spig x H



P107-251C	2X1-1/2	50	0	160	27.14
P107-337C	3X1-1/2	30	0	160	28.69
P107-338C	3X2	30	0	160	31.28
P107-420C	4X2	30	0	160	69.41
P107-422C	4X3	30	0	160	71.03
P107-530C ¹	6X3	10	0	160	130.28
P107-532C	6X4	10	0	160	124.25
P107-582C	8X4	4	0	159	451.59
P107-585C	8X6	4	0	159	471.13
P107-624C ¹	10X4	4	0	159	877.52
P107-628C	10X8	4	0	159	690.39
P107-670C	12X10	2	0	159	860.76

¹Outlet-sized with Bushing

P109 Male Adapter

Mpt x H



P109-015C	1-1/2	50	0	160	19.80
P109-020C	2	50	0	160	23.97
P109-030C	3	25	0	160	39.41
P109-040C	4	25	0	160	82.16
P109-060C	6	7	0	160	220.89

P110 Counter Sunk Cleanout Plug

Mpt



P110-015C	1-1/2	25	150	160	12.14
-----------	-------	----	-----	-----	-------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P110 Counter Sunk Cleanout Plug (continued)

Mpt

P110-020C	2	25	150	160	13.19
P110-030C	3	50	0	160	13.63
P110-040C	4	25	0	160	15.34
P110-060C	6	10	0	160	33.25

P116 Cap Socket



P116-015C	1-1/2	20	240	160	19.80
P116-020C	2	15	180	160	23.69
P116-030C	3	10	0	160	40.93
P116-040C	4	5	0	160	83.44
P116-060C	6	5	0	160	137.42
P116-080C	8	3	0	159	238.55

P119 No-Hub Adapter

S x H



P119-015C	1-1/2	25	0	160	34.86
P119-020C	2	25	0	160	37.19
P119-030C	3	20	0	160	46.85
P119-040C	4	15	0	160	68.42
P119-060C	6	5	0	160	148.59

P123 Hub Adapter

H x S



For connection to Cast Iron system. Requires packing and plastic lead. Warning: Do not use hot lead or oiled Oakum

P123-020C	2	20	0	160	41.33
P123-030C	3	25	0	160	52.06

P130 Repair Coupling

H x H



P130-015C	1-1/2	25	200	160	26.56
P130-020C	2	25	0	160	15.72
P130-030C	3	10	0	160	52.06
P130-040C	4	5	0	160	87.35

P300 1/4 Bend (90° Ell)

H x H



P300-015C	1-1/2	100	0	160	32.58
P300-020C	2	50	0	160	40.48
P300-030C	3	25	0	160	68.73
P300-040C	4	10	0	160	109.37
P300-060C	6	4	0	160	283.02
P300-080C	8	2	0	159	394.48
P300-100C	10	1	0	159	911.72
P300-120C	12	1	0	159	1528.73

P300S 1/4 Bend w/Side Inlet (90° Ell)

All Hub



P300S-338C	3X3X2	10	0	160	151.17
------------	-------	----	---	-----	--------

P302 1/4 Bend, Street (90° Street Ell)

H x Spig



P302-015C	1-1/2	100	0	160	38.26
P302-020C	2	25	0	160	48.56
P302-030C	3	20	0	160	65.01



LabWaste™ CPVC Corrosive Waste Drainage System

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P302 1/4 Bend, Street (90° Street Ell) (continued)

H x Spig

P302-040C	4	10	0	160	103.28
P302-060C	6	4	0	160	250.60
P302-080C	8	2	0	159	389.94
P302-100C	10	1	0	159	908.25
P302-120C	12	1	0	159	1513.09

P303 1/4 Bend w/Low Heel Inlet

H x H x H

P303-338C	3X3X2	25	0	160	95.05
P303-420C	4X4X2	6	0	160	196.21

P304 1/4 Bend, Long Sweep (90° LS Ell)

H x H

P304-015C	1-1/2	50	0	160	33.71
P304-020C	2	25	0	160	45.96
P304-030C	3	10	0	160	78.62
P304-040C	4	5	0	160	113.00
P304-060C	6	5	0	160	363.26

P309 1/4 Bend Long Sweep, Street (90° LS Street Ell)

H x Spig

P309-015C	1-1/2	50	0	160	35.45
P309-020C	2	25	0	160	47.52
P309-030C	3	20	0	160	80.92
P309-040C	4	5	0	160	114.99
P309-060C	6	5	0	160	294.86

P319 1/6 Bend (60° Ell)

H x H

P319-015C	1-1/2	40	0	160	32.66
P319-020C	2	25	0	160	39.43
P319-030C	3	20	0	160	71.23
P319-040C	4	10	0	160	114.20
P319-060CF	6	1	4	160	320.99

P320 1/6 Bend, Street (60° Street Ell)

H x Spig

P320-015C	1-1/2	40	0	160	32.66
P320-020C	2	25	0	160	39.43
P320-030C	3	20	0	160	71.97
P320-040C	4	10	0	160	114.20

P321 1/8 Bend (45° Ell)

H x H

P321-015C	1-1/2	100	0	160	32.01
P321-020C	2	50	0	160	39.00
P321-030C	3	25	0	160	71.57
P321-040C	4	15	0	160	81.11
P321-060C	6	5	0	160	236.92
P321-080C	8	1	0	159	341.61
P321-100C	10	1	0	159	651.34
P321-120C	12	1	0	159	1180.06

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P323 1/8 Bend, Street (45° Street Ell)

H x Spig

P323-015C	1-1/2	100	0	160	24.25
P323-020C	2	50	0	160	27.54
P323-030C	3	25	0	160	61.04
P323-040C	4	10	0	160	62.64
P323-060C	6	5	0	160	225.06
P323-080C	8	1	0	159	259.23

P324 1/16 Bend (22-1/2° Ell)

H x H

P324-015C	1-1/2	50	0	160	32.66
P324-020C	2	25	0	160	38.94
P324-030C	3	20	0	160	70.40
P324-040C	4	15	0	160	86.72
P324-060C	6	3	0	160	234.68
P324-080C	8	2	0	159	254.73

P326 1/16 Bend, Street (22-1/2° Street Ell)

H x Spig

P326-015C	1-1/2	50	0	160	29.05
P326-020C	2	25	0	160	38.94
P326-030C	3	20	0	160	70.40
P326-040C	4	10	0	160	86.72
P326-060C	6	5	0	160	201.94
P326-080C	8	2	0	159	244.71

P327 Double 1/4 Bend (3 Way Ell)

All Hub

P327-015C	1-1/2	20	0	160	65.76
P327-020C	2	25	0	160	114.93
P327-030C	3	15	0	160	146.92
P327-040C	4	6	0	160	160.81
P327-241C	2X1-1/2X1-1/2	25	0	160	106.18

P331 Vent Ell

H x H

P331-015C	1-1/2	25	0	160	32.29
P331-020C	2	30	0	160	37.86
P331-030C	3	25	0	160	65.51
P331-040C	4	10	0	160	105.06
P331-060C	6	5	0	160	162.95

P333 Vent Ell, Street

H x Spig

P333-015C	1-1/2	25	0	160	34.54
P333-020C	2	20	0	160	40.88
P333-030C	3	25	0	160	72.79
P333-040C	4	10	0	160	116.73

P400 Sanitary Tee

All Hub

P400-015C	1-1/2	100	0	160	40.48
P400-020C	2	35	0	160	48.48
P400-030C	3	30	0	160	97.04
P400-040C	4	5	0	160	145.34
P400-060C	6	6	0	160	411.80
P400-080C	8	2	0	159	675.07

LabWaste™ CPVC Corrosive Waste Drainage System
LabWaste™ CPVC Corrosive Waste Drainage Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

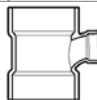
P400 Sanitary Tee (continued)

All Hub

P400-100C	10	1	0	159	1514.34
P400-120C	12	1	0	159	2134.00

P401 Sanitary Tee, Reducing

All Hub



P401-241C	2X1-1/2X1-1/2	25	0	160	48.40
P401-251C	2X2X1-1/2	50	0	160	48.40
P401-257C	2X1-1/2X2	25	0	160	50.59
P401-337C	3X3X1-1/2	10	0	160	84.22
P401-338C	3X3X2	10	0	160	90.55
P401-420C	4X4X2	10	0	160	129.86
P401-422C	4X4X3	10	0	160	135.68
P401-532C	6X4	4	0	160	339.24
P401-582C	8X4	2	0	159	1149.63

P403 Sanitary Tee, Street

S x H x H



P403-015C	1-1/2	20	0	160	47.62
P403-020C	2	25	0	160	57.73
P403-030C	3	30	0	160	115.23
P403-040C	4	10	0	160	173.01
P403-060C	6	6	0	160	472.74
P403-080C	8	2	0	159	772.07
P403-100C	10	1	0	159	1839.25
P403-120C	12	1	0	159	2632.60

P404 Sanitary Tee, Street, Reducing

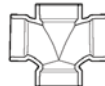
S x H x H



P404-241C	2X1-1/2X1-1/2	50	0	160	49.35
P404-251C	2X1-1/2	50	0	160	53.36
P404-337C	3X3X1-1/2	10	0	160	94.34
P404-338C	3X3X2	10	0	160	100.62

P428 Double Sanitary Tee

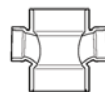
All Hub



P428-015C	1-1/2	25	0	160	60.99
P428-020C	2	25	0	160	71.91
P428-030C	3	8	0	160	96.18
P428-040C	4	6	0	160	128.36

P429 Double Sanitary Tee, Reducing

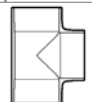
All Hub



P429-241C	2X1-1/2X1-1/2X1-1/2	25	0	160	80.24
P429-251C	2X2X1-1/2X1-1/2	25	0	160	80.33
P429-337C	3X3X1-1/2X1-1/2	6	0	160	124.78
P429-338C	3X3X2X2	10	0	160	135.17
P429-419C	4X4X1-1/2X1-1/2	7	0	160	133.66
P429-420C	4X4X2X2	7	0	160	135.56
P429-422C	4X4X3X3	8	0	160	149.66

P441 Vent Tee

All Hub

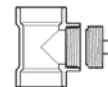


P441-020C	2	25	0	160	79.24
P441-030C	3	10	0	160	101.93
P441-040C	4	5	0	160	143.93
P441-060C	6	4	0	160	352.21
P441-080C	8	2	0	159	693.73

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P444X Cleanout Tee w/Plug

H x H x Fpt



P444X-015C	1-1/2	20	0	160	48.20
P444X-020C	2	10	0	160	53.25
P444X-030C	3	10	0	160	111.65
P444X-040C	4	10	0	160	152.05
P444X-060C	6	2	0	160	410.65

P445 Cleanout Tee

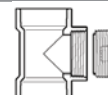
H x H x Fpt



P445-015C	1-1/2	20	0	160	40.89
P445-020C	2	25	0	160	45.28
P445-030C	3	10	0	160	97.74
P445-040C	4	10	0	160	136.44
P445-060C	6	3	0	160	428.82

P445X Cleanout Tee with Counter Sunk Plug

H x H



P445X-015C	1-1/2	20	0	160	48.20
P445X-020C	2	10	0	160	53.25
P445X-030C	3	10	0	160	111.65
P445X-040C	4	10	0	160	152.05
P445X-060C	6	3	0	160	459.69

P448 2-WAY Cleanout

All Hub



P448-030C	3	12	0	160	165.14
P448-040C	4	5	0	160	232.61

P500 Double Fixture Fitting

All Hub



P500-020C	2X2X2X2	10	0	160	94.08
P500-030C	3X3X3X3	10	0	160	193.97
P500-241C	2X1-1/2X1-1/2X1-1/2	20	0	160	85.08
P500-251C	2X2X1-1/2X1-1/2	20	0	160	87.29
P500-338C	3X2X3X3	10	0	160	176.53

P501 Combo Wye + 1/8 Bend (Long Turn Tee Wye)

All Hub



P501-015C	1-1/2	50	0	160	53.87
P501-020C	2	20	0	160	71.88
P501-030C	3	10	0	160	114.76
P501-040C	4	8	0	160	162.99

P502 Combination Wye + 1/8 Bend Reducing (Long Turn Tee Wye)

All Hub



P502-251C	2X2X1-1/2	20	0	160	64.71
P502-337C	3X3X1-1/2	15	0	160	95.45
P502-338C	3X3X2	10	0	160	103.40
P502-420C	4X4X2	5	0	160	143.17
P502-422C	4X4X3	5	0	160	150.22
P502-578C	8X8X2	1	0	159	368.08

P503 Combination Wye and 1/8 Bend (Two Piece)

All Hub



P503-060C	6	4	0	160	440.54
P503-080C	8	1	0	159	810.59



LabWaste™ CPVC Corrosive Waste Drainage System

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P503 Combination Wye and 1/8 Bend (Two Piece)

(continued)

All Hub

P503-100C	10	1	0	159	1055.32
-----------	----	---	---	-----	---------

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)

All Hub



P504-241C	2X1-1/2X1-1/2	5	0	160	83.82
P504-528C	6X2	5	0	160	298.13
P504-530C	6X3	5	0	160	333.45
P504-532C	6X4	5	0	160	346.29
P504-582C	8X4	2	0	159	536.11
P504-585C	8X6	1	0	159	544.18
P504-623C	10X3	1	0	159	661.94
P504-624C	10X4	1	0	159	711.43
P504-626C	10X6	1	0	159	745.97
P504-628C	10X8	1	0	159	832.23
P504-664C	12X4	1	0	159	1572.91
P504-668C	12X8	1	0	159	1381.96
P504-670C	12X10	1	0	159	1590.82

P507 Double Combination Wye and 1/8 Bend

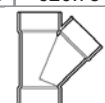
All Hub



P507-020C	2	10	0	160	142.11
P507-030C	3	10	0	160	244.23
P507-040C	4	5	0	160	462.81
P507-060C	6	2	0	160	1047.58
P507-338C	3X3X2X2	10	0	160	204.75
P507-422C	4X4X3X3	5	0	160	256.39
P507-530C	6X6X3X3	2	0	160	543.99
P507-532C	6X6X4X4	1	0	160	620.78

P600 45° Wye

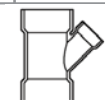
All Hub



P600-015C	1-1/2	50	0	160	41.26
P600-020C	2	25	0	160	57.88
P600-030C	3	25	0	160	103.16
P600-040C	4	8	0	160	150.37
P600-060C	6	4	0	160	381.74
P600-080C	8	1	0	159	415.51
P600-100C	10	1	0	159	654.03
P600-120C	12	1	0	159	1434.67

P601 45° Wye, Reducing

All Hub



P601-241C	2X1-1/2X1-1/2	25	0	160	58.62
P601-251C	2X2X1-1/2	25	0	160	57.88
P601-337C	3X3X1-1/2	15	0	160	88.82
P601-338C	3X3X2	12	0	160	96.17
P601-419C	4X4X1-1/2	10	0	160	130.59
P601-420C	4X4X2	10	0	160	138.41
P601-422C	4X4X3	10	0	160	144.34
P601-528C ¹	6X6X2	5	0	160	282.14
P601-530C	6X6X3	6	0	160	245.22
P601-532C	6X6X4	5	0	160	247.89
P601-580C	8X8X3	2	0	159	282.18
P601-582C	8X8X4	1	0	159	288.77
P601-585C	8X8X6	1	0	159	321.38
P601-624C ¹	10X10X4	1	0	159	709.37
P601-626C	10X10X6	1	0	159	570.92
P601-628C	10X10X8	1	0	159	593.76
P601-661C ¹	12X12X2	1	0	159	1740.49

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P601 45° Wye, Reducing (continued)

All Hub

P601-663C ¹	12X12X3	1	0	159	1755.57
P601-664C ¹	12X12X4	1	0	159	1759.68
P601-666C ¹	12X12X6	1	0	159	1765.59
P601-668C ¹	12X12X8	1	0	159	1874.68
P601-670C ¹	12X10	1	0	159	1827.94

¹Sized with Bushing

P611 Double Wye

All Hub



P611-015C	1-1/2	40	0	160	77.43
P611-020C	2	20	0	160	81.85
P611-030C	3	15	0	160	147.96
P611-040C	4	5	0	160	337.53
P611-060C	6	2	0	160	586.97

P612 Double Wye, Reducing

All Hub



P612-241C	2X1-1/2X1-1/2X1-1/2	10	0	160	120.64
P612-251C	2X2X1-1/2X1-1/2	10	0	160	122.81
P612-337C	3X3X1-1/2X1-1/2	10	0	160	136.92
P612-338C	3X3X2X2	15	0	160	151.13
P612-420C	4X4X2X2	5	0	160	292.67
P612-422C	4X4X3X3	5	0	160	299.00
P612-532C	6X6X4X4	5	0	160	505.99

P335 Trap Elbow (for use with Traps only)

H x S



P335-030C	3	30	0	160	81.58
P335-040C	4	25	0	160	189.40

P700 Return Bend

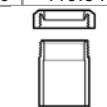
H x H



P700-015C	1-1/2	20	0	160	54.00
P700-020C	2	35	0	160	75.42
P700-030C	3	8	0	160	112.20
P700-040C	4	6	0	160	213.74
P700-060C	6	2	0	160	309.94
P700-080C	8	1	0	159	419.34

P704P Tail Piece Adapter

Spig x Slip w/Plastic Nut



P704P-015C	1-1/2	25	0	160	21.17
------------	-------	----	---	-----	-------

P705 S-Trap

H x H



P705-015C	1-1/2	25	0	160	84.72
P705-020C	2	25	0	160	118.22
P705-030C	3	10	0	160	215.37
P705-040C	4	5	0	160	389.69

P705R Running Trap

H x H



P705R-015C	1-1/2	25	0	160	84.72
P705R-020C	2	25	0	160	118.22
P705R-030C	3	10	0	160	215.37
P705R-040C	4	5	0	160	389.27

LabWaste™ CPVC Corrosive Waste Drainage System
LabWaste™ CPVC Corrosive Waste Drainage Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

P706X P-Trap
H x H



P706X-015C	1-1/2	25	0	160	63.53
P706X-020C	2	20	0	160	88.66
P706X-030C	3	10	0	160	160.93
P706X-040C	4	4	0	160	286.06
P706X-060C	6	2	0	160	849.08
P706X-080C	8	1	0	159	1003.98
P706X-100C	10	1	0	159	1599.89
P706X-120C	12	2	0	159	1797.72

P707X P-Trap w/Cleanout
H x H



P707X-015C	1-1/2	10	0	160	71.09
------------	-------	----	---	-----	-------

P708P P-Trap w/Plastic Nut (Union Connection)
H x H



P708P-015C	1-1/2	25	0	160	55.32
P708P-020C	2	25	0	160	95.82

P711P L.A Pattern P-Trap w/Plastic Nut (Union Connection w/Slip Joint) Slip x H w/Plastic Nut



P711P-015C	1-1/2	25	0	160	120.93
------------	-------	----	---	-----	--------

P712 Jar Trap
Spig x H



P712-015C	1-1/2	1	0	169	109.33
-----------	-------	---	---	-----	--------

P712P Jar Trap w/Tail Piece Adapter
Slip x H



P712P-015C	1-1/2	1	0	169	130.49
------------	-------	---	---	-----	--------

P720 Drum Trap
H x H



P720-015C	1-1/2	4	0	160	265.62
P720-020C	2	4	0	160	420.74
P720-030C	3	4	0	160	582.91
P720-040C	4	4	0	160	668.98

854 Flange, Van Stone Style
Soc



854-015C	1-1/2	20	0	090	40.95
854-020C	2	10	0	090	49.59
854-030C	3	10	0	090	107.56
854-040C	4	5	0	090	145.25
854-060C	6	5	0	090	247.51
854-080C	8	2	0	090	744.72
854-100C	10	2	0	091	1792.81
854-120C	12	2	0	091	2690.18
854-140C	14	1	0	091	3031.38
854-160C	16	1	0	091	3789.24

Waste Assembly Sink Outlet



LWWA-1	1-1/2	10	0	169	96.48
--------	-------	----	---	-----	-------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

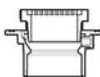
LabWaste™ Air Admittance Valve Spigot



Maximum 6 DFU (Drainage Fixture Units)

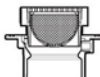
AAV-015C	1-1/2	1	0	286	58.32
----------	-------	---	---	-----	-------

LW1500 Floor Drain with CPVC Adjustable Top w/5" Round Grate



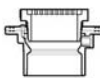
LW1500-015C	1-1/2X5	4	0	169	389.75
LW1500-020C	2X5	4	0	169	389.75
LW1500-030C	3X5	4	0	169	389.75
LW1500-040C	4X5	4	0	169	389.75

LW1520 Floor Drain with CPVC Adjustable Top w/5" Round Grate & Strainer



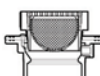
LW1520-015C	1-1/2X5	3	0	169	445.64
LW1520-020C	2X5	3	0	169	445.64
LW1520-030C	3X5	3	0	169	445.64
LW1520-040C	4X5	3	0	169	445.64

LW150M Floor Drain with CPVC Adjustable Top w/5" Round Grate & Membrane Collar



LW150M-015C	1-1/2X5	4	0	169	432.41
LW150M-020C	2X5	4	0	169	432.41
LW150M-030C	3X5	4	0	169	432.41
LW150M-040C	4X5	4	0	169	432.41

LW152M Floor Drain with CPVC Adjustable Top w/5" Round Grate, Strainer & Membrane Collar



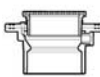
LW152M-015C	1-1/2X5	4	0	169	486.81
LW152M-020C	2X5	4	0	169	486.81
LW152M-030C	3X5	4	0	169	486.81
LW152M-040C	4X5	4	0	169	486.81

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



LW1500-015S	1-1/2X5	4	0	169	411.80
LW1600-015S	1-1/2X6	4	0	169	430.93
LW1700-015S	1-1/2X7	4	0	169	458.88
LW1800-015S	1-1/2X8	4	0	169	598.59
LW1500-020S	2X5	4	0	169	411.80
LW1600-020S	2X6	4	0	169	430.93
LW1700-020S	2X7	4	0	169	458.88
LW1800-020S	2X8	4	0	169	598.59
LW1500-030S	3X5	4	0	169	411.80
LW1600-030S	3X6	4	0	169	430.93
LW1700-030S	3X7	2	0	169	458.88
LW1800-030S	3X8	4	0	169	598.59
LW1500-040S	4X5	4	0	169	411.80
LW1600-040S	4X6	4	0	169	430.93
LW1700-040S	4X7	4	0	169	458.88
LW1800-040S	4X8	4	0	169	598.59

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



LW150M-015S	1-1/2X5	4	0	169	454.45
LW160M-015S	1-1/2X6	4	0	169	473.57
LW170M-015S	1-1/2X7	4	0	169	501.53



LabWaste™ CPVC Corrosive Waste Drainage System

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar (continued)

LW180M-015S	1-1/2X8	4	0	169	641.24
LW150M-020S	2X5	1	5	169	454.45
LW160M-020S	2X6	4	0	169	473.57
LW170M-020S	2X7	4	0	169	501.53
LW180M-020S	2X8	4	0	169	641.24
LW150M-030S	3X5	4	0	169	454.45
LW160M-030S	3X6	4	0	169	473.57
LW170M-030S	3X7	4	0	169	501.53
LW180M-030S	3X8	2	0	169	641.24
LW150M-040S	4X5	4	0	169	454.45
LW160M-040S	4X6	4	0	169	473.57
LW170M-040S	4X7	4	0	169	501.53
LW180M-040S	4X8	4	0	169	641.24

LW1510 Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



LW1510-015S	1-1/2X5	4	0	169	441.22
LW1510-020S	2X5	6	0	169	441.22
LW1510-030S	3X5	4	0	169	441.22
LW1510-040S	4X5	4	0	169	441.22

LW151M Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



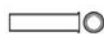
LW151M-015S	1-1/2X5	4	0	169	470.65
LW151M-020S	2X5	4	0	169	470.65
LW151M-030S	3X5	4	0	169	470.65
LW151M-040S	4X5	4	0	169	470.65

LWTP CPVC Tail Piece May be cut to desired length



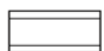
LWTP-015060	1-1/2X6	10	0	169	40.32
LWTP-015120	1-1/2X12	20	0	169	60.48
LWTP-015140	1-1/2X14	20	0	169	74.95

LWTPN CPVC Tail Piece with Nut May be cut to desired length



LWTPN-015060	1-1/2X6	10	0	169	50.88
LWTPN-015120	1-1/2X12	20	0	169	71.04
LWTPN-015140	1-1/2X14	20	0	169	81.38

LabWaste™ CPVC Pipe 10' Lengths, Price Per Foot



List Price Per Foot, may be cut to desired length

LW-015	1-1/2	10	0	161	7.26
LW-020	2	10	0	161	9.82
LW-030	3	10	0	161	17.76
LW-040	4	10	0	161	25.21
LW-060	6	10	0	161	45.51
LW-080	8	10	0	157	87.92
LW-100	10	10	0	157	142.35
LW-120	12	10	0	157	188.06
LW-140	14	10	0	158	229.34
LW-160	16	10	0	158	299.31

20' length available upon request

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

LW-5 LabWaste™ One-Step CPVC Cement



LW5-020	Pint	12	0	704	45.51
LW5-030	Quart	12	0	704	60.67
LW5-040	Gallon	6	0	704	246.82
LW5-050	5 Gallon	1	0	704	1234.15

AVERAGE NUMBER OF JOINTS Per Quart of Solvent Cement

PIPE DIAMETER	NUMBER OF JOINTS
1/2"	300
3/4"	200
1"	125
1-1/2"	90
2"	60
3"	40
4"	30
6"	10
8"	5
10"	2-3
12"	1-2

These figures are based on laboratory tests. Due to many field variations, these should be used as a **general guide** only.

Empty Cans



MT-654*	Pint	12	0	710	7.40
MT-651*	Quart	12	0	710	8.36
MT-653**	Quart	12	0	710	8.36
MT-647	Gallon	6	0	710	19.65
MT-648	Gallon	6	0	710	24.58

MT-647, MT-651 & MT-654 have 1-3/4" Screw Neck
MT-648 has 2-7/8" Screw Neck
MT-653 is Paint-Type Can

Brush

For Pint and Quart Cans



KD-110	4-1/2" Length	25	0	710	9.59
KD-112	5-1/2" length	25	0	710	9.59

1" Brush w/1-3/4" Screw Cap, for pipe size 3/4" - 2"

Cap Swab



5020	4" Length	24	0	710	14.89
------	-----------	----	---	-----	-------

Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8"

Large Mouth Can Swab



4020	4" Length	24	0	710	21.96
------	-----------	----	---	-----	-------

Fits 2-7/8" Neck Gallon Can MT-648

Swab with Heavy Handle



4520	4" length	12	0	710	18.59
------	-----------	----	---	-----	-------

For Pipe Sizes 6" & Larger

Roller



3020	3" length	20	0	710	16.03
------	-----------	----	---	-----	-------

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6"

LabWaste™ CPVC Corrosive Waste Drainage System
LabWaste™ CPVC Corrosive Waste Drainage Systems



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Large Roller



7020	7" length	20	0	710	19.97
Fits 2-78" Neck Gallon Can MT-648					

Roller with Heavy Handle



Replaceable Cover

5520	4" length	12	0	710	15.17
6520	6" length	12	0	710	18.59
For Pipe Sizes 6" & Larger					

Cap Dauber



DP-75	3/4" for Pint	50	0	710	1.31
DP-125	1-1/4" for Pint	50	0	710	1.58
DQ-125	1-1/4" for Quart	50	0	710	1.58
DP Fits Pint Cans					
DQ Fits Quart Cans					

Can-Mate Dauber



CM-75	3/4"	50	0	710	5.26
CM-150	1-1/4"	50	0	710	5.26
3/4" Diameter for pipe size to 1-1/2"					
1-1/4" Diameter for pipe size 1-1/2" to 3"					



LabWaste™ CPVC Corrosive Waste Drainage System LabWaste™ Standard CPVC & HDPE Neutralization Tanks

Acid Neutralization/Dilution Tanks for Use With LabWaste™ CPVC Systems

Neutralization or dilution tanks are required by codes for the purpose of neutralizing corrosive wastes. Corrosive liquids, spent acids or other harmful chemicals that destroy or damage a drain, sewer, soil or waste pipe, or create noxious or toxic fumes or interfere with sewage treatment processes are prohibited from discharge into the plumbing system without being neutralized or treated. Spears® offers a standard selection of HDPE tanks in 5 gallon to 3000 gallon capacities and CPVC tanks in 5 gallon to 55 gallon capacities with connection and vent options listed below, plus convenient 1- gallon Dilution Tank designed for under-sink installation. Tanks can also be produced in virtually any custom size, shape, or connection configuration. Contact Spears® Technical Services with desired specifications for custom quotation.

Standard HDPE Round Tanks Technical Information Construction: HDPE – High Density Polyethylene

Tank Capacity US Gallons	Approx Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx Weight (lbs)	Standard Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting ³	Optional ⁴ Vent Connection Size (in.)	Approx. Centerline Height (in.) ⁵		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	3	1	11 x 14	3/16	10	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
15	7	2	18 x 15	3/16	20	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
30	19	6	18 x 29	3/16	35	3	Mipt	P101	2 or 3	23	19	25
55	35	12	22 x 36	3/16	50	4	Mipt	P101	3 or 4	27	23	31
100	77	26	28 x 42	1/4	85	4	Mipt	P101	3 or 4	35	31	37
150	105	35	31 x 48	1/4	100	4	Mipt	P101	3 or 4	38	34	42
175	135	45	30 x 60	1/4	125	4	Mipt	P101	3 or 4	51	47	54
200	137	46	36 x 48	1/4	125	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
275	186	62	42 x 48	1/4	160	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
300	230	76	36 x 74	5/16	175	4 or 6	Mipt/Flange	P101/854	4 or 6	61	56	65
350	243	81	48 x 48	5/16	200	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
500	395	132	52 x 60	3/8	225	4 or 6	Mipt/Flange	P101/854	4 or 6	51	47	54
550	447	149	48 x 72	3/8	275	4 or 6	Mipt/Flange	P101/854	4 or 6	64	60	67
650	548	183	48 x 84	3/8	375	4 or 6	Mipt/Flange	P101/854	4 or 6	75	71	76
1200	1052	351	69 x 84	3/8	600	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
2000 ¹	1559	521	84 x 84	1/2	850	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
3000 ¹	2203	735	95 x 97	1/2	1350	4 or 6	Mipt/Flange	P101/854	4 or 6	87	83	91

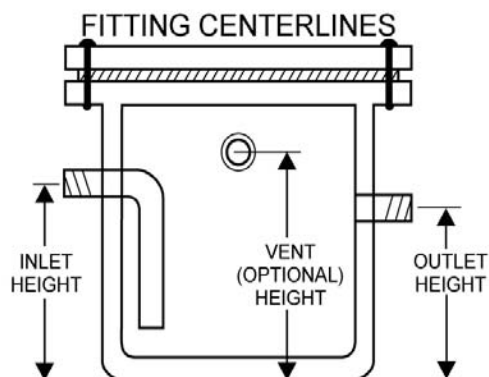
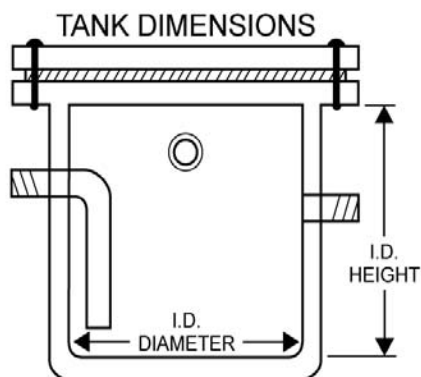
Standard CPVC Round Tanks Technical Information Construction: Chlorinated Polyvinyl Chloride (CPVC)

Tank Capacity US Gallons	Approx Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx Weight (lbs)	Standard ² Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting ³	Optional ⁴ Vent Connection Size (in.)	Approx. Centerline Height (in.) ⁵		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	5	3	12-3/8 x 14-11/16	3/16	20	1-1/2 or 2	Soc	direct	1-1/2 or 2	11	8	12
15	15	7	17-11/16 x 17-1/4	3/16	35	1-1/2 or 2	Soc	direct	1-1/2 or 2	11	8	12
30	30	18	17-5/8 x 33	3/16	54	3	Soc	direct	2 or 3	23	18	25
55	55	35	23-1/2 x 38-1/2	1/4	70	4	Soc	direct	3 or 4	27	23	31

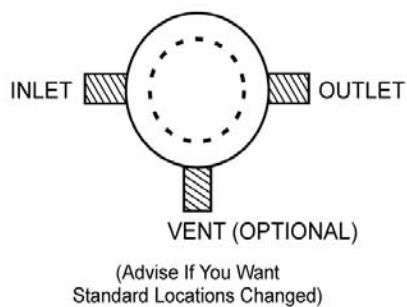
Important Notes

- ¹ Larger HDPE tanks may include exterior steel banding or fiberglass reinforcement for additional strength. Special ordered optional inspection manhole ports are recommended for larger tanks (includes cover with neoprene gasket, stainless steel nuts, bolts, and washers).
- ² All tanks can be special ordered with Mipt, Flanged (150#), and Fipt connections or varying combinations other than standard connections specified. Inlets or vents may also be custom ordered for installation in covers instead of tank sides.
- ³ For transitions from Mipt HDPE tank connections to **LabWaste™** piping use part numbers P101-xxxC, Female Adapter. CPVC tank sockets can be cemented directly to **LabWaste™** piping. For transitions from ALL flanged connections to **LabWaste™** piping use part numbers 854-xxxC, Flange (xxx = size code).
- ⁴ Venting is required by codes but may be accomplished either at the tank or in-line.
- ⁵ Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault with use of a protective traffic cover as deemed appropriate. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fittings centerline since tank heights can vary.

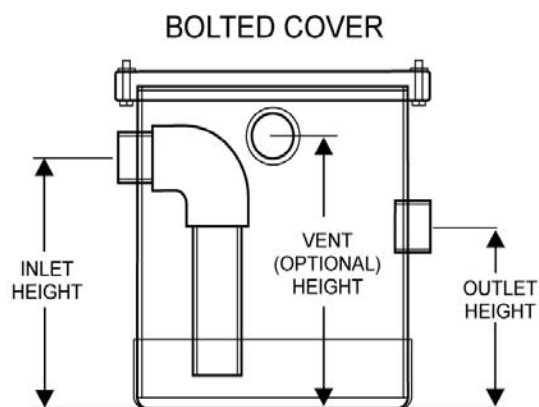
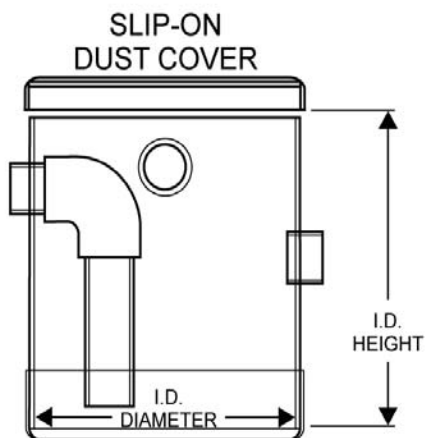
HDPE Tanks



TOP VIEW STANDARD FITTING LOCATIONS



CPVC Tanks





LabWaste™ CPVC Corrosive Waste Drainage System
LabWaste™ Standard HDPE Round Neutralization Tanks

PRICE SCHEDULE

LabWaste™ Standard HDPE Round Neutralization Tanks

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	HDPE Tank Part No./ Price	Disc Code
5	1-1/2	Mipt	T20051414B 779.49	169
5	2	Mipt	T20052424B 779.49	169
15	1-1/2	Mipt	T20151414B 1,206.00	169
15	2	Mipt	T20152424B 1,206.00	169
30	3	Mipt	T20303434B 1,676.64	169
55	4	Mipt	T20554444B 2,132.57	169
100	4	Mipt	T21004444B 2,926.78	169
150	4	Mipt	T21504444B 3,897.46	169
175	4	Mipt	T21754444B 5,147.59	169
200	4	Mipt	T22004444B 5,515.27	169
275	4	Mipt	T22754444B 6,618.33	169
275	6	Flange	T22756363B 6,618.33	169
300	4	Mipt	T23004444B 6,986.01	169
300	6	Flange	T23006363B 6,986.01	169
350	4	Mipt	T23504444B 7,574.31	169
350	6	Flange	T23506363B 7,574.31	169
500	4	Mipt	T25004444B 10,295.19	169
500	6	Flange	T25006363B 10,295.19	169

550	4	Mipt	T25504444B 11,324.71	169
550	6	Flange	T25506363B 11,324.71	169
650	4	Mipt	T26504444B 12,942.51	169
650	6	Flange	T26506363B 12,942.51	169
1200	4	Mipt	T212C4444B 20,584.46	169
1200	6	Flange	T212C6363B 20,584.46	169
2000	4	Mipt	T220C4444B 32,350.38	169
2000	6	Flange	T220C6363B 32,350.38	169
3000	4	Mipt	T230C4444B 45,592.92	169
3000	6	Flange	T230C6363B 45,592.92	169

**Optional Vent Outlet
(recommended)
for HDPE Tank**

Vent Size (in.)	Vent Connection	Add-on to Part No. / and to Price	Disc Code
1-1/2	Mipt	14 147.07	169
2	Mipt	24 147.07	169
3	Mipt	34 220.62	169
4	Mipt	44 294.15	169
6	Flange	63 514.76	169

Example: T20051414B14



LabWaste™ Standard CPVC Round Neutralization Tanks

Additional Inlet/Outlet Sizes, Combinations & Custom Configurations Available

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part No./Price		Disc Code
			Dust (slip) Cover	Bolted Cover	
5	1-1/2	Soc	T30051212A	T30051212B	169
			1,394.75	3,205.14	
5	2	Soc	T30052222A	T30052222B	169
			1,394.75	3,205.14	
15	1-1/2	Soc	T30151212A	T30151212B	169
			1,926.04	4,455.49	
15	2	Soc	T30152222A	T30152222B	169
			1,926.04	4,455.49	
30	3	Soc	T30303232A	T30303232B	169
			2,575.76	5,004.89	
55	4	Soc	T30554242A	T30554242B	169
			4,974.78	8,237.62	

Optional Vent Outlet (recommended) for CPVC Tank

Vent Size (in.)	Vent Connection	Add-on to Part No. / and to Price	Disc Code
1-1/2	Soc	12	169
		147.07	
2	Soc	22	169
		147.07	
3	Soc	32	169
		220.62	
4	Soc	42	169
		294.15	

Example: T30051212A12

Neutralization Tank Sizing Table

The following recommendation from the American Society of Plumbing Engineers (ASPE) may be used as a guideline for sizing tanks according to the number of lab sinks.

Number of Lab Sinks	Tank Size, Gal (L)
2	5 (18.9)
4	15 (56.8)
8	30 (113.6)
16	55 (208.2)
22	75 (283.9)
27	90 (340.7)
30	108 (408.8)
40	150 (567.8)
50	175 (662.4)
60	200 (757.0)
75	275 (1040.9)
110	360 (1362.6)
150	500 (1898.5)
175	550 (2081.8)
200	650 (2460.3)
300	1200 (4542)
500	2000 (7570)
600	3000 (11355)

Note: For commercial and industrial laboratories, the number of lab sinks should be multiplied by a 0.5 use factor. (ASPE Data Book Vol. 3, Page 42, 2001).



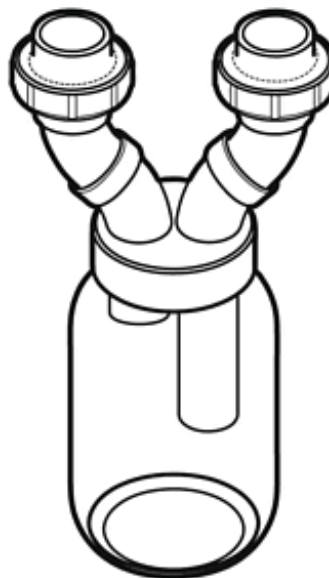
LabWaste™ CPVC Corrosive Waste Drainage System LabWaste™ Dilution Tanks

LabWaste™ 1-Gallon CPVC Dilution Tanks

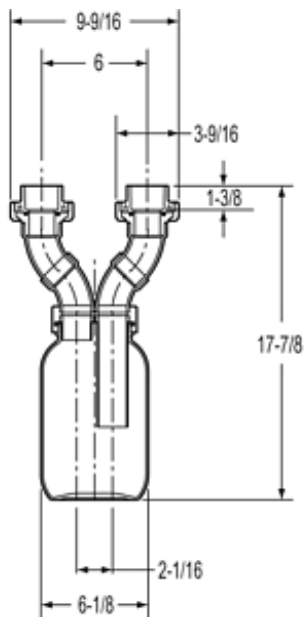
Provides chemical dilution from water rinse during use. Designed for under-sink installations. CPVC construction with Glass or PP Jar type tank.

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part Glass Jar Tank No./Price	Disc Code
1	1-1/2	Socket Union	T3001G1515	169
			404.45	

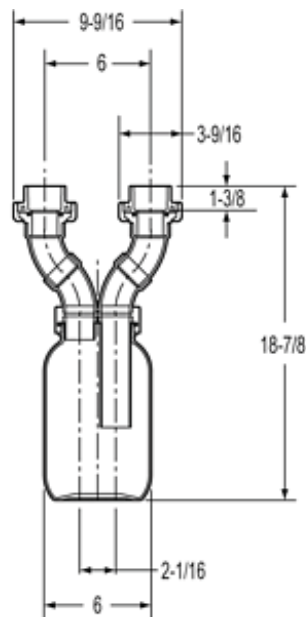
Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part Polypropylene Jar Tank No./Price	Disc Code
1	1-1/2	Socket Union	T3001P1515	169
			291.20	



Dimensions



Glass



Polypropylene

LabWaste™ 1-Gallon CPVC Dilution Traps

Provides chemical dilution from water rinse during use. Designed for under-sink installations as a trap. CPVC construction with Glass or PP Jar type tank.

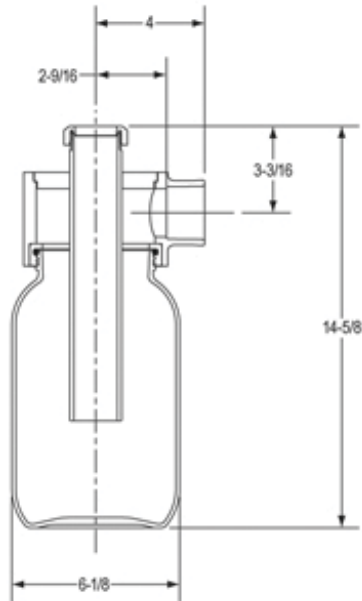
Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet	Outlet	CPVC Tank Part Glass Jar Tank No./Price	Disc Code
1	1-1/2	Slip	Socket	T4001G1612 404.45	169

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet	Outlet	CPVC Tank Part Polypropylene Jar Tank No./Price	Disc Code
1	1-1/2	Slip	Socket	T4001P1612 291.20	169

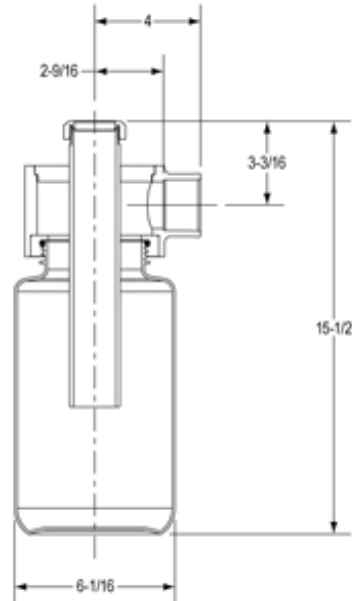
Note: Slip connections are for sink drain tailpiece.



Dimensions



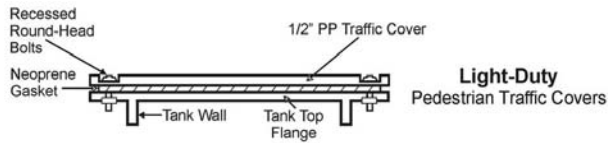
Glass



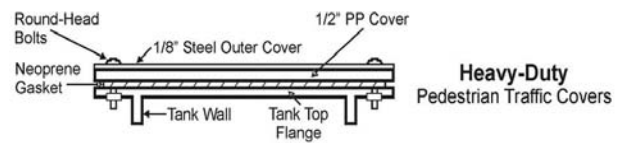
Polypropylene



LabWaste™ CPVC Corrosive Waste Drainage System LabWaste™ Optional Covers



**Light-Duty
Pedestrian Traffic Covers**



**Heavy-Duty
Pedestrian Traffic Covers**

Pedestrian Traffic Covers

Traffic Covers are priced and ordered separately with tank order in lieu of standard tank cover. Constructed from 1/2" white PP with recessed bolts and anchoring nuts. Covers are designed for light pedestrian traffic and flush floor installation.

Heavy-Duty Pedestrian Traffic Covers

Traffic Covers are priced and ordered separately with tank order in lieu of standard tank cover. Constructed with 1/8" steel, primer coated, over 1/2" white PP with round head slotted bolts and anchoring nuts. Heavy-Duty Traffic Covers are designed for heavy pedestrian traffic and flush floor installation.

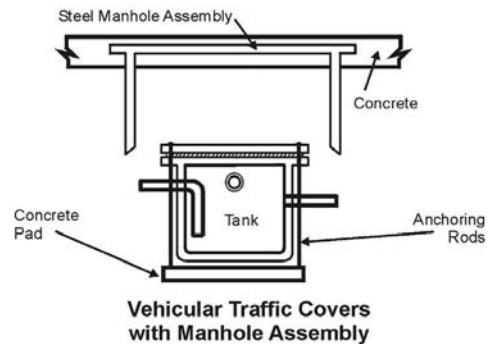
Part Number	Tank Size Range	List Price Each	Disc Code
PTC-5	5-gal thru 55-gal	735.38	169
PTC-100	100-gal thru 300-gal	882.44	169
PTC-350	350-gal thru 650-gal	1,250.13	169
PTC-1200	1200-gal thru 3000-gal	2,206.12	169

Part Number	Tank Size Range	List Price Each	Disc Code
HPTC-5	5-gal thru 55-gal	1,470.74	169
HPTC-100	100-gal thru 300-gal	1,911.95	169
HPTC-350	350-gal thru 650-gal	2,500.25	169
HPTC-1200	1200-gal thru 3000-gal	4,412.22	169

Vehicular Traffic Covers

Vehicular Traffic Covers are priced and ordered separately with tank. Covers are constructed from minimum 3/8" Diamond Plate steel supported by an external steel frame. Standard tank covers are used on tanks located below these steel manhole assemblies. Requires concrete pad below tank. Check with factory for frame height (may be extended in the field).

Part Number	Cover Size	Tank Application	Approx. Wt.(lbs.)	List Price Each	Disc Code
VTC18R	18" round	Fits 5-gallon units	100	735.38	169
VTC24S	24" square	Fits 5-gallon units	100	1,029.52	169
VTC30R	30" round	Fits 15 & 30-gallon units	150	1,456.02	169
VTC30S	30" square			1,456.02	169
VTC36R	36" round	Fits 55-gallon units	200	2,059.04	169
VTC36S	36" square			2,059.04	169
VTC42R	42" round	Fits 100, 150 & 175-gallon units	300	2,941.46	169
VTC42S	42" square			2,941.46	169
VTC48R	48" round	Fits 200 & 300-gallon units	400	3,676.85	169
VTC48S	48" square			3,676.85	169
VTC54R	54" round	Fits 275-gallon units	500	5,882.96	169
VTC54S	54" square			5,882.96	169
VTC60R	60" round	Fits 350, 550 & 650-gallon units	750	6,618.33	169
VTC60S	60" square			6,618.33	169





Optional Inspection Manhole Ports & Tank Extensions

Manhole Assemblies are priced and ordered separately with tank order in lieu of standard tank cover. Assemblies include matching covers, Neoprene gaskets and stainless steel nuts, bolts, and washers; fabricated into the standard tank cover.

Part Number	Manhole Size	List Price Each	Disc Code
MH180	18	1,176.60	169
MH110	11	764.79	169
MH060	6	573.58	169
MH040	4	441.22	169

Tank Extensions

Tanks may be special ordered with extensions to increase the overall height of the tank. Extensions ranging from 1" to almost two (2) times the tank height are at a charge of double the list price for the basic tank. For example, a 55-gallon tank has a height of 36". Extended tank heights of 37" to 70" are twice the price of a standard 55-gallon tank. For higher extensions, contact Spears®. Special covers are needed for flush floor, in-ground installations. Standard covers are not designed for any traffic or load bearing.

Limestone Chips for Acid Neutralization Tanks

Most state and local codes require the addition of a neutralization medium in acid waste tanks with the addition of water for dilution prior to discharge into a sanitary sewer system. Limestone must be 1" to 3" in diameter with a calcium carbonate content of at least 90%. Spears® offers high grade Limestone Chips having a calcium carbonate content of approximately 95%. The use of Limestone Chips is generally one of the best and least expensive means of acid neutralization, but may be used in conjunction with more sophisticated chemical treatments if necessary.

How Much to Use: The following is a guideline for pounds of Limestone Chips to use for one (1) tank filling (charge). It is recommended that sufficient quantity be ordered for more than one filling.

Tank Size (gallons)	Approx. Pounds
5	50
15	100
30	200
55	500
100	1,000
150	1,750
175	1,900
200	2,500
275	3,200
300	3,200
350	4,000
500	5,000
550	7,500
650	9,000
1200	11,000
2000	16,000
3000	25,000

Maintenance: Tanks should be inspected routinely for accumulation of precipitated sludge and debris that must be cleaned out (usually scooped out) and for periodic addition of limestone and water if necessary. While once every one to three months may be sufficient, professional assistance should be sought to establish a proper schedule based on actual use. Note: Tank must be filled with water prior to carefully adding Limestone Chips to charge the system. Request instruction sheet.

Standard 50-lb. Bags Regular & Dolomitic Limestone

Limestone Chips are conveniently packaged in 50-lb. plastic bags but may be special ordered loose. Actual bag weight may vary by + 15%. Special dolomitic limestone is used for wastes predominantly composed of sulfuric acid (battery acid). Allow three to five weeks delivery.

Part Number	List Price Each				Disc Code
	1-4 bags	5-20 bags	21-39 bags	40 & up bags	
Regular Limestone					
RLC-50	73.54	66.19	58.82	44.11	169
Dolomitic Limestone					
DLC-50	147.07	132.36	117.66	88.25	169



Lab Specialty Products Lab Ball Valves & Needle Valves

Lab Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Valve & Adapters includes:

- 1 - Threaded 1/4" Valve
- 2 - O-ring Sealed 1/4" MPT x Mipt Adapters
- 2 - EPDM or FKM O-rings (AS568-013 size)
- 1 - End Connector Wrench
- 2 - O-ring Sealed 1/4" MPT x 3/8" I.D.
- Tubing Barb Adapters
- OR -
- 2 - O-ring Sealed 1/4" MPT x 1/4" I.D.
- Tubing Barb Adapters



Socket/Threaded Valve Only

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Valve & Adapters

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Valve & Adapters Threaded Ends

1/4X1/4T	1529-002A 25.75	1539-002A 26.92	1	25	218
1/4X3/8T	1529-002 25.75	1539-002 26.92	1	25	218

Valve only Threaded Ends

1/4	1521-002 20.58	1531-002 22.91	50	200	218
3/8	1521-003 28.93	1531-003 32.07	50	200	218

Valve only Socket Ends

1/4	1522-002 20.58	1532-002 23.28	50	200	218
3/8	1522-003 28.93	1532-003 32.07	50	200	218

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
------	------	-----	--------	---------	-----------

Valve & Adapters Threaded Ends

1/4X1/4T	1529-002CA 30.91	1539-002CA 31.51	1	25	219
1/4X3/8T	1529-002C 30.91	1539-002C 31.51	1	25	219

Valve only Threaded Ends

1/4	1521-002C 24.75	1531-002C 27.21	50	200	219
3/8	1521-003C 34.71	1531-003C 32.53	50	200	219

Valve only Socket Ends

1/4	1522-002C 24.75	1532-002C 29.45	50	200	219
3/8	1522-003C 34.71	1532-003C 38.53	50	200	219

Needle Valves



Pressure Rating @ 73°F (23°C), Water

PVC or CPVC 235 psi

PP 150 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

PP = 180°F (82°C)

Solid PTFE Stem Seals

No Elastomer or Lubricants used

Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002 71.27	5592-002 71.27	---	1	18	218
3/8	5591-003 71.27	5592-003 71.27	5591-003SR 65.01	1	18	218
1/2	5591-005 79.11	5592-005 79.11	5591-005SR 81.23	1	18	218

Angle Pattern

1/4	5691-002 71.27	5692-002 71.27	---	1	18	218
3/8	5691-003 71.27	5692-003 71.27	---	1	18	218
1/2	5691-005 79.11	5692-005 79.11	5691-005SR 81.23	1	18	218

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002C 83.94	5592-002C 83.94	---	1	18	219
3/8	5591-003C 83.94	5592-003C 83.94	5591-003CSR 83.75	1	18	219
1/2	5591-005C 88.77	5592-005C 88.77	5591-005CSR 91.04	1	18	219

Angle Pattern

1/4	5691-002C 83.94	5692-002C 83.94	---	1	18	219
3/8	5691-003C 83.94	5692-003C 83.94	---	1	18	219
1/2	5691-005C 88.77	5692-005C 88.77	5691-005CSR 91.04	1	18	219

**Lab Specialty Products
Needle Valves**



PP Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
------	----------	--------	-------------	--------	---------	-----------

Globe Pattern

1/4	5591-002P 78.54	---	---	1	18	219
3/8	5591-003P 78.54	---	---	1	18	219
1/2	---	---	5591-005PSR 86.85	1	18	219

Angle Pattern

1/4	5691-002P 78.54	---	---	1	18	219
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219



Lab Specialty Products Gauge Guards



Connections use Spears® Patented Special Reinforced (SR)
Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water
on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002 103.83	G0004-005 103.83	1	18	624
0-30 in-Hg	G30V4-002 175.28	G30V4-005 175.28	1	18	624
0-15 psi	G0154-002 165.69	G0154-005 165.69	1	18	624
0-30 psi	G0304-002 165.69	G0304-005 165.69	1	18	624
0-60 psi	G0604-002 165.69	G0604-005 165.69	1	18	624
0-100 psi	G1004-002 165.69	G1004-005 165.69	1	18	624
0-160 psi	G1604-002 165.69	G1604-005 165.69	1	18	624
0-200 psi	G2004-002 165.69	G2004-005 165.69	1	18	624
0-300 psi	G3004-002 165.69	G3004-005 165.69	1	18	624

FKM Diaphragm

No Gauge	G0003-002 103.83	G0003-005 103.83	1	18	624
0-30 in-Hg	G30V3-002 175.28	G30V3-005 175.28	1	18	624
0-15 psi	G0153-002 165.69	G0153-005 165.69	1	18	624
0-30 psi	G0303-002 165.69	G0303-005 165.69	1	18	624
0-60 psi	G0603-002 165.69	G0603-005 165.69	1	18	624
0-100 psi	G1003-002 165.69	G1003-005 165.69	1	18	624
0-160 psi	G1603-002 165.69	G1603-005 165.69	1	18	624
0-200 psi	G2003-002 165.69	G2003-005 165.69	1	18	624
0-300 psi	G3003-002 165.69	G3003-005 165.69	1	18	624

EPDM Diaphragm

No Gauge	G0002-002 99.63	G0002-005 99.63	1	18	624
0-30 in-Hg	G30V2-002 168.24	G30V2-005 168.24	1	18	624
0-15 psi	G0152-002 159.12	G0152-005 159.12	1	18	624
0-30 psi	G0302-002 159.12	G0302-005 159.12	1	18	624

PVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-60 psi	G0602-002 159.12	G0602-005 159.12	1	18	624
0-100 psi	G1002-002 159.12	G1002-005 159.12	1	18	624
0-160 psi	G1602-002 159.12	G1602-005 159.12	1	18	624
0-200 psi	G2002-002 159.12	G2002-005 159.12	1	18	624
0-300 psi	G3002-002 159.12	G3002-005 159.12	1	18	624

CPVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002C 134.98	G0004-005C 134.98	1	18	625
0-30 in-Hg	G30V4-002C 227.88	G30V4-005C 227.88	1	18	625
0-15 psi	G0154-002C 215.43	G0154-005C 215.43	1	18	625
0-30 psi	G0304-002C 215.43	G0304-005C 215.43	1	18	625
0-60 psi	G0604-002C 215.43	G0604-005C 215.43	1	18	625
0-100 psi	G1004-002C 215.43	G1004-005C 215.43	1	18	625
0-160 psi	G1604-002C 215.43	G1604-005C 215.43	1	18	625
0-200 psi	G2004-002C 215.43	G2004-005C 215.43	1	18	625
0-300 psi	G3004-002C 215.43	G3004-005C 215.43	1	18	625

FKM Diaphragm

No Gauge	G0003-002C 134.98	G0003-005C 134.98	1	18	625
0-30 in-Hg	G30V3-002C 227.88	G30V3-005C 227.88	1	18	625
0-15 psi	G0153-002C 215.43	G0153-005C 215.43	1	18	625
0-30 psi	G0303-002C 215.43	G0303-005C 215.43	1	18	625
0-60 psi	G0603-002C 215.43	G0603-005C 215.43	1	18	625
0-100 psi	G1003-002C 215.43	G1003-005C 215.43	1	18	625

**Lab Specialty Products
Gauge Guards**



CPVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
FKM Diaphragm					
0-160 psi	G1603-002C 215.43	G1603-005C 215.43	1	18	625
0-200 psi	G2003-002C 215.43	G2003-005C 215.43	1	18	625
0-300 psi	G3003-002C 215.43	G3003-005C 215.43	1	18	625

EPDM Diaphragm

No Gauge	G0002-002C 129.60	G0002-005C 129.60	1	18	625
0-30 in-Hg	G30V2-002C 218.74	G30V2-005C 218.74	1	18	625
0-15 psi	G0152-002C 206.91	G0152-005C 206.91	1	18	625
0-30 psi	G0302-002C 206.91	G0302-005C 206.91	1	18	625
0-60 psi	G0602-002C 206.91	G0602-005C 206.91	1	18	625
0-100 psi	G1002-002C 206.91	G1002-005C 206.91	1	18	625
0-160 psi	G1602-002C 206.91	G1602-005C 206.91	1	18	625
0-200 psi	G2002-002C 206.91	G2002-005C 206.91	1	18	625
0-300 psi	G3002-002C 206.91	G3002-005C 206.91	1	18	625

PP GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
------	-----------------------	-----------------------	--------	---------	-----------

PTFE Diaphragm

No Gauge	G0004-002P 121.51	G0004-005P 121.51	1	18	626
0-30 in-Hg	G30V4-002P 186.67	G30V4-005P 186.67	1	18	626
0-15 psi	G0154-002P 177.54	G0154-005P 177.54	1	18	626
0-30 psi	G0304-002P 177.54	G0304-005P 177.54	1	18	626
0-60 psi	G0604-002P 177.54	G0604-005P 177.54	1	18	626
0-100 psi	G1004-002P 177.54	G1004-005P 177.54	1	18	626
0-160 psi	G1604-002P 177.54	G1604-005P 177.54	1	18	626
0-200 psi	G2004-002P 177.54	G2004-005P 177.54	1	18	626
0-300 psi	G3004-002P 177.54	G3004-005P 177.54	1	18	626

FKM Diaphragm

No Gauge	G0003-002P 121.51	G0003-005P 121.51	1	18	626
0-30 in-Hg	G30V3-002P 186.67	G30V3-005P 186.67	1	18	626
0-15 psi	G0153-002P 177.54	G0153-005P 177.54	1	18	626
0-30 psi	G0303-002P 177.54	G0303-005P 177.54	1	18	626
0-60 psi	G0603-002P 177.54	G0603-005P 177.54	1	18	626
0-100 psi	G1003-002P 177.54	G1003-005P 177.54	1	18	626
0-160 psi	G1603-002P 177.54	G1603-005P 177.54	1	18	626
0-200 psi	G2003-002P 177.54	G2003-005P 177.54	1	18	626
0-300 psi	G3003-002P 177.54	G3003-005P 177.54	1	18	626

EPDM Diaphragm

No Gauge	G0002-002P 116.71	G0002-005P 116.71	1	18	626
0-30 in-Hg	G30V2-002P 179.18	G30V2-005P 179.18	1	18	626
0-15 psi	G0152-002P 170.51	G0152-005P 170.51	1	18	626

PP GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-30 psi	G0302-002P 170.51	G0302-005P 170.51	1	18	626
0-60 psi	G0602-002P 170.51	G0602-005P 170.51	1	18	626
0-100 psi	G1002-002P 170.51	G1002-005P 170.51	1	18	626
0-160 psi	G1602-002P 170.51	G1602-005P 170.51	1	18	626
0-200 psi	G2002-002P 170.51	G2002-005P 170.51	1	18	626
0-300 psi	G3002-002P 170.51	G3002-005P 170.51	1	18	626



Lab Specialty Products Lab Fixtures

100% Corrosion Resistance - No Metal Parts

Spears® Lab Fixtures have *no metal parts*; this provides full resistance to internal or environmental corrosion. These fixtures are compatible with all laboratory service lines. Lab Fixtures are produced from PVC (gray) and CPVC (for hot water), or special Low-Extractable PVC for high purity applications, and are available in a variety of types and configurations.

- **Deck Mount** – base configuration for horizontal surface mounting.
- **Panel Mount** – base configuration for vertical surface mounting.
- **Standard Gooseneck Units** – select all-plastic needle valve unit (no elastomer seals) for metered flow or ball valve unit (choice of EPDM or FKM seals) for direct flow. Unit includes valve, gooseneck with serrated tip, and base with nut for mounting. Select Deck or Panel Mount style.
- **Standard Turret Units** – direct flow ball valve (choice of EPDM or FKM seals) with serrated tip and base with connecting nipple and nut for mounting. Select Deck or Panel Mount style.
- **Remote Valve Units (No Valve)** – same as standard units less valve for use with remotely located valve.
- **Recirculating Units** – Special design provides continuous water motion without dead-leg areas of contamination and potential bacteria build-up. Internal supply tube fully circulates water through the entire fixture when connected to circulating water supply. Unit features gooseneck with terminally mounted all-plastic needle valve and serrated tip (no elastomer seals) for metered flow. Base is Deck Mount only with inlet and outlet connecting nipples with mounting nuts.

NPT - American National Standard Tapered Pipe Thread • NPSM - American National Standard Straight Thread For Free Fitting Mechanical Joints

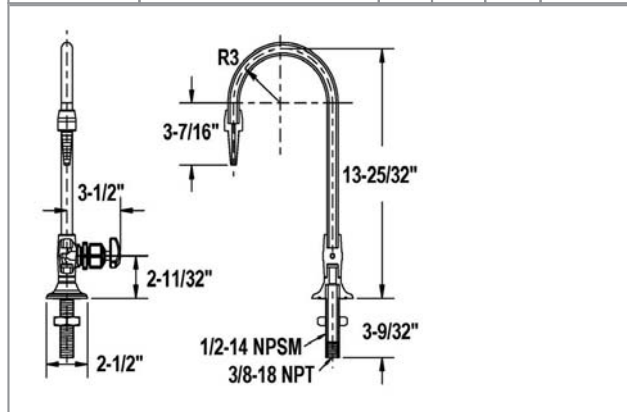
For information on Spears® Low Extractable PVC see publication LXT-4

Standard Gooseneck Units - Deck Mount Lab Fixture -

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow

LF1000-N	PVC, PTFE Seal	1	0	218	189.25
LF1000-CN	CPVC, PTFE Seal	1	0	219	236.28
LF1000-BLN	LXT, PTFE Seal	1	0	066	376.37



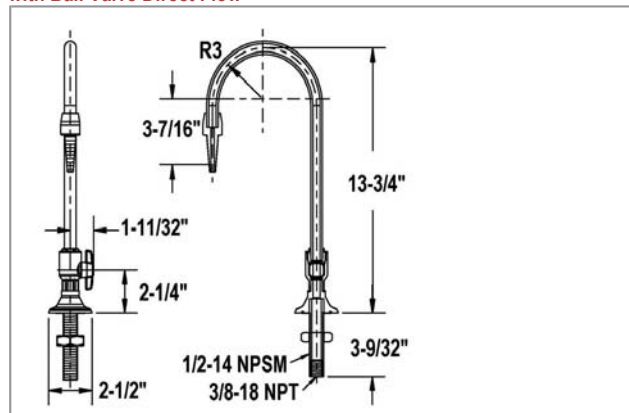
with Ball Valve Direct Flow

LF1002	PVC, EPDM Seal	1	0	218	158.08
LF1003	PVC, FKM Seal	1	0	218	175.64
LF1002-C	CPVC, EPDM Seal	1	0	219	197.60
LF1003-C	CPVC, FKM Seal	1	0	219	219.55
LF1002-BL	LXT, EPDM Seal	1	0	066	314.74
LF1003-BL	LXT, FKM Seal	1	0	066	349.72

Standard Gooseneck Units - Deck Mount Lab Fixture - (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

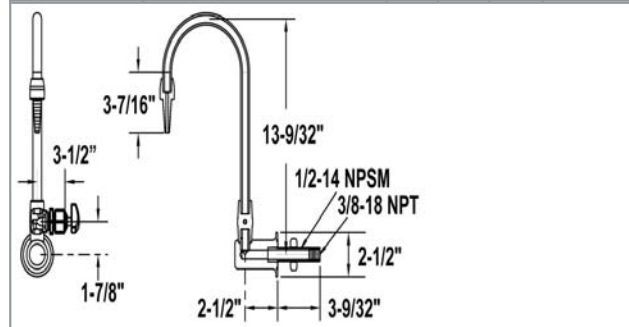
with Ball Valve Direct Flow



Standard Gooseneck Units - Panel Mount Lab Fixture -

Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow

LF2000-N	PVC, PTFE Seal	1	0	218	275.81
LF2000-CN	CPVC, PTFE Seal	1	0	219	344.75



Standard Gooseneck Units - Panel Mount Lab Fixture -

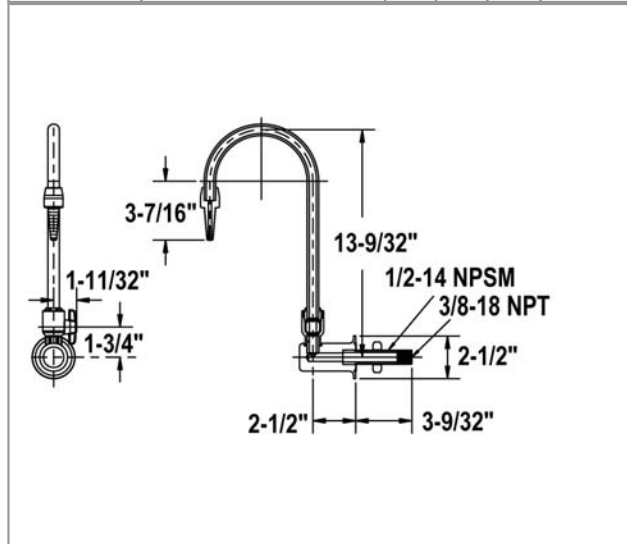
with Ball Valve-Direct Flow

LF2002	PVC, EPDM Seal	3	0	218	237.77
--------	----------------	---	---	-----	--------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

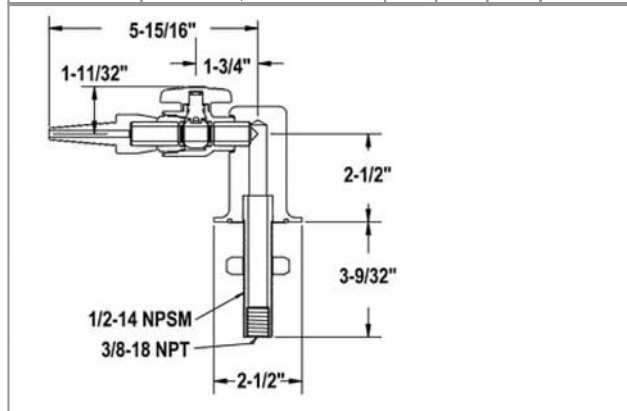
Standard Gooseneck Units - Panel Mount Lab Fixture - (continued)
with Ball Valve-Direct Flow

LF2003	PVC, FKM Seal	3	0	218	264.20
LF2002-C	CPVC, EPDM Seal	1	0	219	297.23
LF2003-C	CPVC, FKM Seal	1	0	219	330.23



Standard Turret Units - Deck Mount Turret Lab Fixtures Base -
with Valve & Serrated Tip with Ball Valve-Direct Flow

LF4002	PVC, EPDM Seal	1	0	218	200.62
LF4003	PVC, FKM Seal	1	0	218	222.91
LF4002-C	PVC, EPDM Seal	1	0	219	250.77
LF4003-C	PVC, FKM Seal	1	0	219	278.64

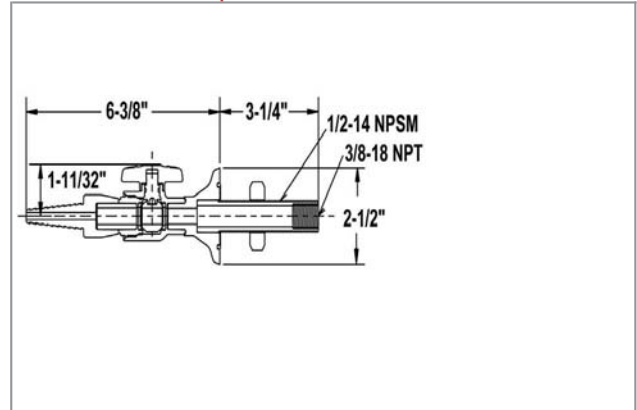


Standard Turret Units - Panel Mount Turret Lab Fixture Base -
with Valve & Serrated Tip with Ball Valve-Direct Flow

LF3002	PVC, EPDM Seal	1	0	218	155.49
LF3003	PVC, FKM Seal	1	0	218	172.79
LF3002-C	PVC, EPDM Seal	1	0	219	194.39
LF3003-C	PVC, FKM Seal	1	0	219	215.99
LF3002-BL	PVC, EPDM Seal	1	0	066	309.60
LF3003-BL	PVC, FKM Seal	1	0	066	344.04

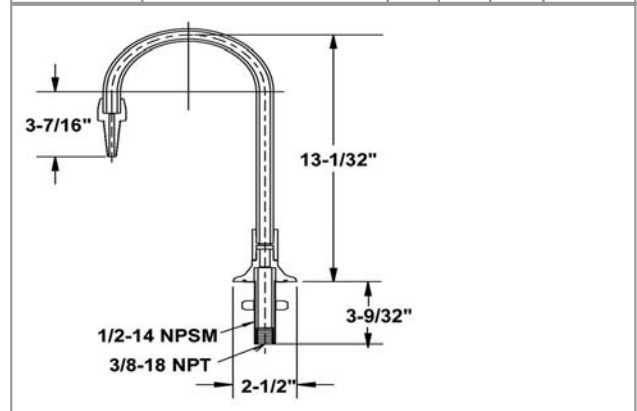
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Standard Turret Units - Panel Mount Turret Lab Fixture Base - (continued)
with Valve & Serrated Tip with Ball Valve-Direct Flow



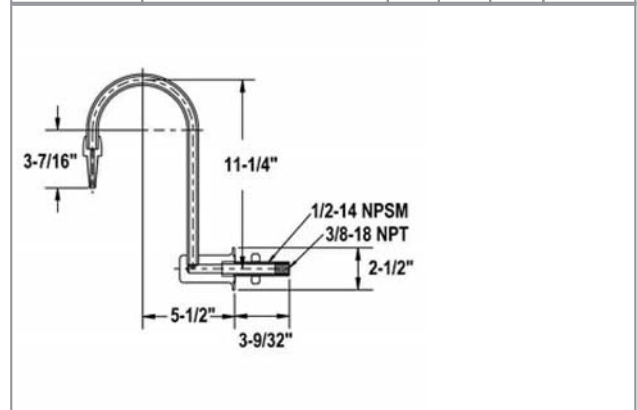
Remote Valve Units (No Valve) - Deck Mount Gooseneck -
Base with Gooseneck & Serrated Tip

LF100	PVC	1	0	218	129.73
LF100-C	CPVC	1	0	219	162.17
LF100-BL	LXT	1	0	066	258.28



Remote Valve Units (No Valve) - Panel Mount Gooseneck -
Base with Gooseneck & Serrated Tip

LF104	PVC	1	0	218	160.24
LF104-C	CPVC	1	0	219	200.31





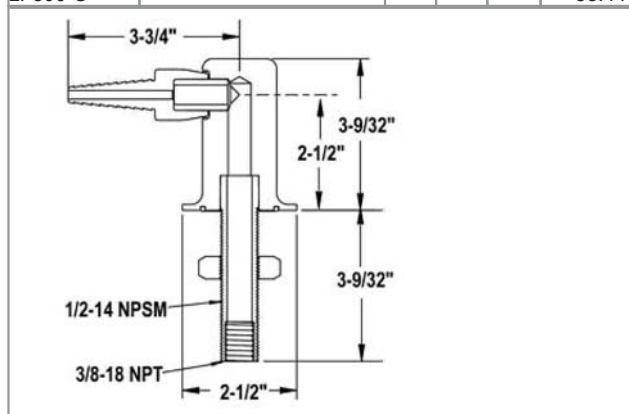
Lab Specialty Products Lab Fixtures

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Remote Valve Units (No Valve) - Deck Mount Turret -

Base with Serrated Tip

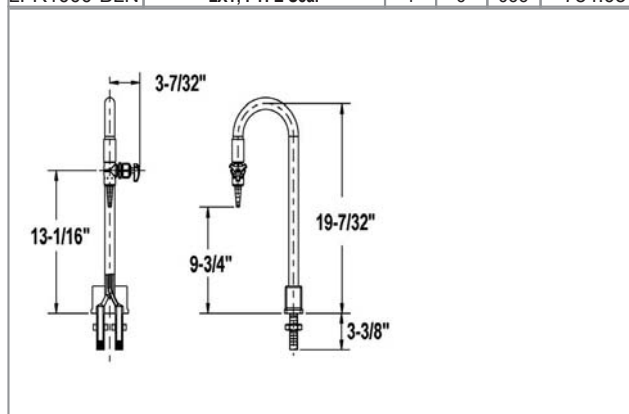
LF300	PVC	1	0	218	42.75
LF300-C	CPVC	1	0	219	53.44



Recirculating Units - Recirculating Deck Mount Lab Fixture -

Base with Gooseneck, Valve & Serrated Tip with Needle Valve

LFR1000-N	PVC, PTFE Seal	1	0	218	329.36
LFR1000-CN	CPVC, PTFE Seal	1	0	219	492.24
LFR1000-BLN	LXT, PTFE Seal	1	0	066	784.05



Accessory/ Replacement - Fixture Connection Nipple -

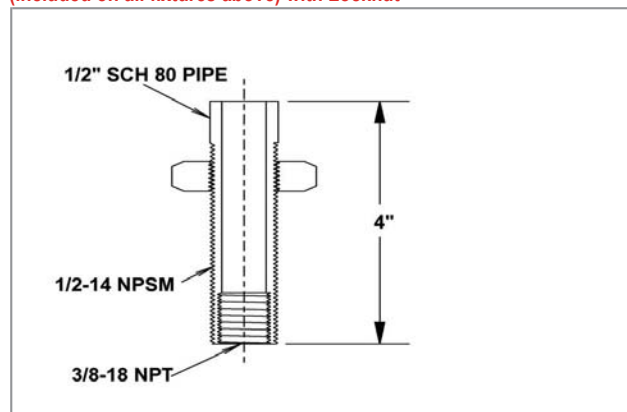
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LF500	PVC	1	0	218	21.46
LF500-C	CPVC	1	0	219	26.84
LF500-BL	LXT	1	0	066	42.78

(included on all fixtures above) with Locknut

Accessory/ Replacement - Fixture Connection Nipple - (continued)

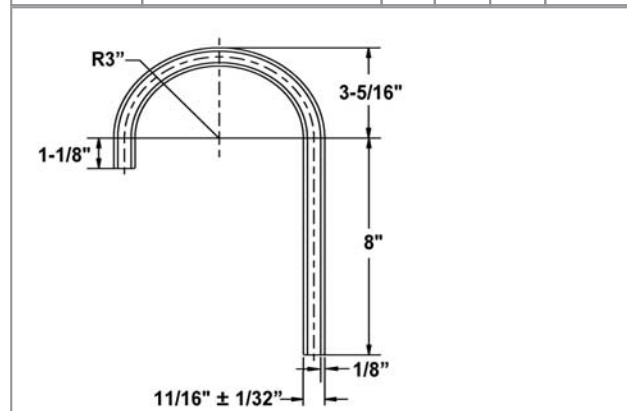
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

(included on all fixtures above) with Locknut



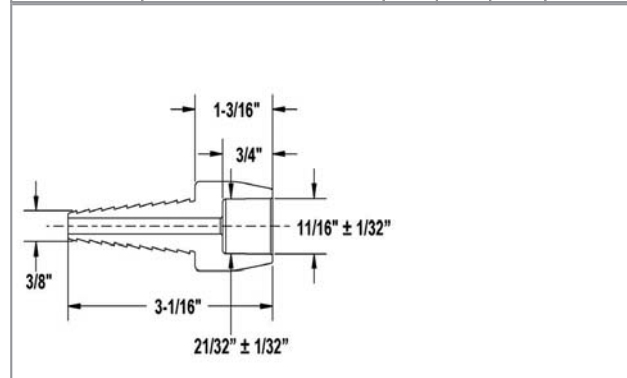
Accessory/ Replacement - Gooseneck (3/8")

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LFGN	PVC	1	0	218	18.24
LFGN-C	CPVC	1	0	219	22.83
LFGN-BL	LXT	1	0	066	36.36



Accessory/ Replacement - Straight Serrated Tip

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LF400	PVC	600	0	218	3.86
LF400-C	CPVC	600	0	219	4.85
LF400-BL	LXT	600	0	066	7.69



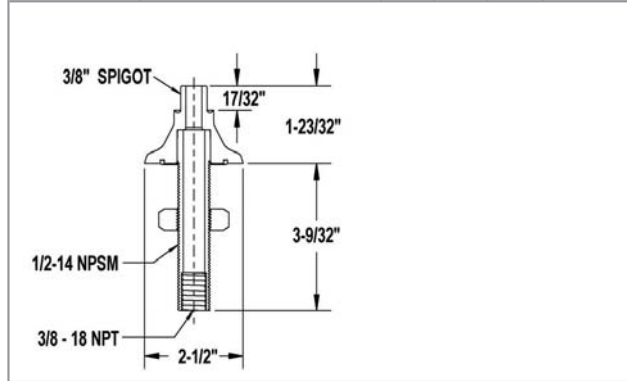


Accessory/ Replacement - Base

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Deck Mount

LFB	PVC	1	0	218	7.87
LFB-C	CPVC	1	0	219	9.40
LFB-BL	LXT	1	0	066	5.38





Fume & Air Duct PVC & CPVC Duct & Fabricated Duct Fittings

Seamless Round Duct & Duct Fittings

Spears® Fabricated Duct Fittings are formed from extruded Seamless Round Duct to provide the high corrosion resistance of thermoplastics in PVC and higher temperature handling in CPVC materials for aggressive corrosive fume exhaust and drain applications.

- Excellent Chemical Resistance to a wide range of corrosive fumes, gasses and fluids.
- Large interior diameters for optimum flow characteristics.
- Light weight provides easier handling, installation, and fabrication for lower overall installed cost.

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Round Seamless Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O/R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	PVC lbs. Per Ft.	CPVC lbs. Per Ft.
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.275	2.555
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	2.982	3.349
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	3.733	4.192
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.440	4.986
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	4.884	5.485
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	5.586	6.273
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	6.750	7.580
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	8.144	9.146
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	11.163	12.536

O/R = Out of Round at time of production

Cold Rolled Fabricated Duct

Round duct above 24" nominal size is cold rolled from extruded PVC or CPVC sheet material. The seam is thermal fused utilizing a computerized welding machine. The sheet edges are heated and pressed together pneumatically achieving 100% weld strength using no filler rod. Wall thickness is 3/16" for sizes up to 32" diameter. Above 32" diameter, 1/4" material will be used, unless otherwise specified. Cold rolled duct is produced in 4' lengths. Large duct fittings can be fabricated to order. Contact Spears® with requirements for additional information.

SMACNA FLANGE SPECIFICATIONS

Nominal Duct Size	Flange Outside Dia.	Flange Thickness	Bolt Circle Dia.	Bolt Hole Dia.	No. Of Bolts
6	10"	1/4"	8-1/2"	5/16"	8
7	11"	1/4"	9-1/2"	5/16"	8
8	12"	1/4"	10-1/2"	5/16"	10
9	13"	1/4"	11-1/2"	5/16"	10
10	14"	1/4"	12-1/2"	5/16"	12
11	15"	1/4"	13-1/2"	5/16"	12
12	16"	1/4"	14-3/8"	5/16"	16
14	18"	1/4"	16-1/2"	5/16"	16
16	20"	1/4"	18-1/2"	5/16"	18
18	22"	1/4"	20-1/2"	5/16"	20
20	24"	1/4"	22-1/2"	5/16"	22
24	28"	1/4"	26-1/2"	5/16"	24

Fume & Air Duct

PVC & CPVC Round Seamless Duct & PVC & CPVC Cold Rolled Fabricated Duct



PVC & CPVC Round Seamless Duct

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

10 ft.PVC Duct - Plain End

Price Per Foot

PD-430-060-10	6	10	0	748	13.00
PD-430-080-10	8	10	0	748	16.37
PD-430-100-10	10	10	0	748	20.51
PD-430-120-10	12	10	0	748	24.39
PD-430-140-10	14	10	0	948	88.12
PD-430-160-10	16	10	0	948	100.68
PD-430-180-10	18	10	0	948	148.98
PD-430-200-10	20	10	0	948	187.03
PD-430-240-10	24	10	0	948	237.45

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft. PVC Duct - Plain End

Price Per Foot

PD-430-060	6	20	0	748	13.00
PD-430-080	8	20	0	748	16.37
PD-430-100	10	20	0	748	20.51
PD-430-120	12	20	0	748	24.39
PD-430-140	14	20	0	948	88.12
PD-430-160	16	20	0	948	100.68
PD-430-180	18	20	0	948	148.98
PD-430-200	20	20	0	948	187.03
PD-430-240	24	20	0	948	237.45

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

10 ft.CPVC Duct - Plain End

Price Per Foot

PD-430-060C-10	6	10	0	749	26.09
PD-430-080C-10	8	10	0	749	34.22
PD-430-100C-10	10	10	0	749	42.83
PD-430-120C-10	12	10	0	749	50.93
PD-430-140C-10	14	10	0	949	329.74
PD-430-160C-10	16	10	0	949	399.11

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft.CPVC Duct - Plain End

Price Per Foot

PD-430-060C	6	20	0	749	26.09
PD-430-080C	8	20	0	749	34.22
PD-430-100C	10	20	0	749	42.83
PD-430-120C	12	20	0	749	50.93
PD-430-140C	14	20	0	949	329.74
PD-430-160C	16	20	0	949	399.11
PD-430-180C	18	20	0	949	458.73
PD-430-200C	20	20	0	949	628.86
PD-430-240C	24	20	0	949	742.95

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

PVC & CPVC Cold Rolled Fabricated Duct

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

4' PVC Cold Rolled Duct - Plain End

Price Per Foot

PD-430-260	26X4	4	0	434	434.63
PD-430-280	28X4	4	0	434	517.75
PD-430-300	30X4	4	0	434	635.16
PD-430-320	32X4	4	0	434	684.18
PD-430-360	36X4	4	0	434	774.33
PD-430-380	38X4	4	0	434	840.62
PD-430-400	40X4	4	0	434	861.79
PD-430-420	42X4	4	0	434	1457.89
PD-430-460	46X4	4	0	434	1070.85
PD-430-480	48X4	4	0	434	1150.28

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

4' CPVC Cold Rolled Duct - Plain End

Price Per Foot

PD-430-260C	26X4	4	0	435	1299.24
PD-430-280C	28X4	4	0	435	1495.12
PD-430-300C	30X4	4	0	435	1659.65
PD-430-320C	32X4	4	0	435	1713.17
PD-430-360C	36X4	4	0	435	1831.13

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

4' CPVC Cold Rolled Duct - Plain End (continued)

Price Per Foot

PD-430-380C	38X4	4	0	435	2026.00
PD-430-400C	40X4	4	0	435	2122.95
PD-430-420C	42X4	4	0	435	2226.37
PD-430-460C	46X4	4	0	435	2504.78
PD-430-480C	48X4	4	0	435	2886.56

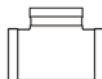
- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and



Fume & Air Duct PVC & CPVC Duct Fittings

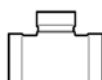
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC TEE Belled Socket



4301-060	6	1	4	430	195.44
4301-080	8	1	0	430	248.74
4301-100	10	1	0	430	313.76
4301-120	12	1	0	430	345.68
4301-140	14	1	0	430	402.09
4301-160	16	1	0	430	518.00
4301-180	18	1	0	430	681.71
4301-200	20	1	0	430	1001.78
4301-240	24	1	0	430	1338.91

PVC REDUCING TEE Belled Socket



4301-532	6X4	1	4	430	217.64
4301-582	8X4	1	2	430	226.61
4301-585	8X6	1	0	430	240.18
4301-624	10X4	1	2	430	255.11
4301-626	10X6	1	0	430	266.86
4301-628	10X8	1	0	430	328.80
4301-664	12X4	1	2	430	306.21
4301-666	12X6	1	0	430	345.67
4301-668	12X8	1	0	430	368.42
4301-670	12X10	1	0	430	427.12
4301-694	14X4	1	0	430	344.56
4301-696	14X6	1	0	430	373.25
4301-698	14X8	1	0	430	398.89
4301-700	14X10	1	0	430	438.93
4301-702	14X12	1	0	430	515.43
4301-754	16X4	1	0	430	381.26
4301-756	16X6	1	0	430	405.20
4301-758	16X8	1	0	430	457.99
4301-760	16X10	1	0	430	510.48
4301-762	16X12	1	0	430	547.31
4301-764	16X14	1	0	430	619.26
4301-784	18X4	1	0	430	425.42
4301-786	18X6	1	0	430	446.36
4301-788	18X8	1	0	430	506.54
4301-790	18X10	1	0	430	553.36
4301-792	18X12	1	0	430	621.04
4301-794	18X14	1	0	430	677.44
4301-796	18X16	1	0	430	784.84
4301-814	20X4	1	0	430	480.28
4301-816	20X6	1	0	430	494.20
4301-818	20X8	1	0	430	559.35
4301-820	20X10	1	0	430	587.44
4301-822	20X12	1	0	430	675.23
4301-824	20X14	1	0	430	744.53
4301-826	20X16	1	0	430	871.72
4301-828	20X18	1	0	430	1042.61
4301-904	24X4	1	0	430	504.17
4301-906	24X6	1	0	430	526.11
4301-908	24X8	1	0	430	604.68
4301-910	24X10	1	0	430	687.16
4301-912	24X12	1	0	430	800.71
4301-914	24X14	1	0	430	884.81
4301-916	24X16	1	0	430	976.71
4301-918	24X18	1	0	430	1163.41
4301-920	24X20	1	0	430	1335.48

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC 90° ELBOW Belled Socket



General Purpose 2-piece Construction

4306-060	6	1	2	430	154.41
4306-080	8	1	2	430	174.00
4306-100	10	1	0	430	209.96
4306-120	12	1	0	430	236.77
4306-140	14	1	0	430	279.15
4306-160	16	1	0	430	360.64
4306-180	18	1	0	430	501.91
4306-200	20	1	0	430	763.47
4306-240	24	1	0	430	920.99

PVC 90° ELBOW 5-Piece Belled Socket



SMACNA Compliant 5-Piece Construction

43065-060	6	1	0	430	348.95
43065-080	8	1	0	430	367.83
43065-100	10	1	0	430	422.18
43065-120	12	1	0	430	487.32
43065-140	14	1	0	430	572.49
43065-160	16	1	0	430	644.68
43065-180	18	1	0	431	876.29
43065-200	20	1	0	430	952.05
43065-240	24	1	0	431	1693.76

PVC 45° ELBOW Belled Socket



General Purpose 1-piece Construction

4317-060	6	1	4	430	108.18
4317-080	8	1	6	430	134.86
4317-100	10	1	2	430	146.18
4317-120	12	1	2	430	181.07
4317-140	14	1	0	430	213.91
4317-160	16	1	0	430	259.23
4317-180	18	1	0	430	378.37
4317-200	20	1	0	430	519.06
4317-240	24	1	0	430	675.51

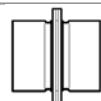
PVC 45° ELBOW 3-Piece Belled Socket



SMACNA Compliant 3-Piece Construction

43173-060	6	1	0	430	127.09
43173-080	8	1	0	430	167.40
43173-100	10	1	0	430	195.73
43173-120	12	1	0	430	215.77
43173-140	14	1	0	430	264.52
43173-160	16	1	0	430	395.63
43173-180	18	1	0	430	548.58
43173-200	20	1	0	430	885.88
43173-240	24	1	0	430	1148.37

PVC BLAST GATE Belled End



43BG-060	6	1	0	430	258.55
43BG-080	8	1	2	430	293.91
43BG-100	10	1	0	430	311.52
43BG-120	12	1	2	430	390.34
43BG-140	14	1	0	430	518.13
43BG-160	16	1	0	430	575.77

Fume & Air Duct PVC & CPVC Duct Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC BLAST GATE (continued)

Belled End

43BG-180	18	1	0	430	679.24
43BG-200	20	1	0	430	770.89
43BG-240	24	1	2	430	1050.39

PVC BUTTERFLY DAMPER

Belled Socket



43BD-060	6	1	2	430	253.23
43BD-080	8	1	2	430	261.00
43BD-100	10	1	0	430	298.97
43BD-120	12	1	0	430	320.38
43BD-140	14	1	2	430	428.96
43BD-160	16	1	0	430	478.03
43BD-180	18	1	0	430	648.80
43BD-200	20	1	0	430	764.57
43BD-240	24	1	0	430	988.14

PVC CROSS

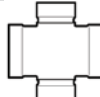
Belled Socket



4320-060	6	1	0	430	342.65
4320-080	8	1	0	430	471.57
4320-100	10	1	0	430	562.41
4320-120	12	1	0	430	610.04
4320-140	14	1	0	430	755.08
4320-160	16	1	0	430	863.81
4320-180	18	1	0	430	1101.48
4320-200	20	1	0	430	1345.92
4320-240	24	1	0	430	1772.94

PVC REDUCING CROSS

Belled Socket



4320-532	6X4	1	3	430	326.08
4320-582	8X4	1	0	430	403.63
4320-585	8X6	1	0	430	427.18
4320-624	10X4	1	0	430	445.39
4320-626	10X6	1	0	430	499.44
4320-628	10X8	1	0	430	526.84
4320-664	12X4	1	0	430	434.61
4320-666	12X6	1	0	430	475.74
4320-668	12X8	1	0	430	535.12
4320-670	12X10	1	0	430	569.61
4320-694	14X4	1	0	430	469.28
4320-696	14X6	1	0	430	539.87
4320-698	14X8	1	0	430	603.91
4320-700	14X10	1	0	430	656.12
4320-702	14X12	1	0	430	728.13
4320-754	16X4	1	0	430	607.36
4320-756	16X6	1	0	430	670.03
4320-758	16X8	1	0	430	720.99
4320-760	16X10	1	0	430	756.97
4320-762	16X12	1	0	430	790.67
4320-764	16X14	1	0	430	829.96
4320-784	18X4	1	0	430	688.06
4320-786	18X6	1	0	430	779.58
4320-788	18X8	1	0	430	823.31
4320-790	18X10	1	0	430	877.88
4320-792	18X12	1	0	430	932.33
4320-794	18X14	1	0	430	1010.23
4320-796	18X16	1	0	430	1055.69
4320-814	20X4	1	0	430	805.77
4320-816	20X6	1	0	430	892.74
4320-818	20X8	1	0	430	957.83
4320-820	20X10	1	0	430	1007.82

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC REDUCING CROSS (continued)

Belled Socket

4320-822	20X12	1	0	430	1072.34
4320-824	20X14	1	0	430	1144.23
4320-826	20X16	1	0	430	1209.94
4320-828	20X18	1	0	430	1303.33
4320-904	24X4	1	0	430	886.73
4320-906	24X6	1	0	430	903.81
4320-908	24X8	1	0	430	998.81
4320-910	24X10	1	0	430	1101.76
4320-912	24X12	1	0	430	1215.39
4320-914	24X14	1	0	430	1328.07
4320-916	24X16	1	0	430	1423.28
4320-918	24X18	1	0	430	1573.12
4320-920	24X20	1	0	430	1673.15

PVC COUPLING

Belled Socket



4329-060	6	1	4	430	41.82
4329-080	8	1	4	430	49.12
4329-100	10	1	2	430	57.87
4329-120	12	1	4	430	65.37
4329-140	14	1	2	430	71.69
4329-160	16	1	2	430	88.52
4329-180	18	1	2	430	129.31
4329-200	20	1	2	430	199.81
4329-240	24	1	0	430	270.51

PVC REDUCER COUPLING

Belled Socket



4329-532	6X4	1	4	430	54.63
4329-582	8X4	1	5	430	168.92
4329-585	8X6	1	8	430	71.63
4329-624	10X4	1	2	430	315.72
4329-626	10X6	1	2	430	196.28
4329-628	10X8	1	4	430	92.04
4329-664	12X4	1	2	430	351.65
4329-666	12X6	1	2	430	339.61
4329-668	12X8	1	2	430	245.75
4329-670	12X10	1	4	430	107.13
4329-694	14X4	1	0	430	873.45
4329-696	14X6	1	0	430	632.81
4329-698	14X8	1	0	430	372.07
4329-700	14X10	1	0	430	307.37
4329-702	14X12	1	4	430	175.85
4329-754	16X4	1	0	430	1055.04
4329-756	16X6	1	0	430	854.63
4329-758	16X8	1	0	430	616.41
4329-760	16X10	1	0	430	428.77
4329-762	16X12	1	0	430	365.37
4329-764	16X14	1	0	430	198.73
4329-784	18X4	1	0	430	1318.09
4329-786	18X6	1	0	430	1076.65
4329-788	18X8	1	0	430	922.83
4329-790	18X10	1	0	430	630.28
4329-792	18X12	1	0	430	541.80
4329-794	18X14	1	0	430	457.41
4329-796	18X16	1	0	430	228.25
4329-814	20X4	1	0	430	1575.16
4329-816	20X6	1	0	430	1348.47
4329-818	20X8	1	0	430	1099.32
4329-820	20X10	1	0	430	988.61
4329-822	20X12	1	0	430	863.45
4329-824	20X14	1	0	430	647.56
4329-826	20X16	1	0	430	630.86



Fume & Air Duct PVC & CPVC Duct Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC REDUCER COUPLING (continued)

Belled Socket

4329-828	20X18	1	0	430	402.61
4329-904	24X4	1	0	430	2011.81
4329-906	24X6	1	0	430	1799.31
4329-908	24X8	1	0	430	1564.77
4329-910	24X10	1	0	430	1335.45
4329-912	24X12	1	0	430	1126.77
4329-914	24X14	1	0	430	991.54
4329-916	24X16	1	0	430	812.80
4329-918	24X18	1	0	430	746.55
4329-920	24X20	1	0	430	732.43

PVC SLEEVE COUPLING

Socket (No Stop)

4329S-060	6	1	5	430	34.57
4329S-080	8	1	8	430	45.46
4329S-100	10	1	4	430	51.21
4329S-120	12	1	4	430	55.95
4329S-140	14	1	4	430	71.77
4329S-160	16	1	0	430	79.41
4329S-180	18	1	2	430	104.97
4329S-200	20	1	2	430	131.77
4329S-240	24	1	2	430	152.81

PVC FLAT CAP

Belled Socket

4347-060	6	1	10	430	85.94
4347-080	8	1	5	430	87.47
4347-100	10	1	5	430	94.33
4347-120	12	1	4	430	103.16
4347-140	14	1	4	430	166.32
4347-160	16	1	2	430	181.24
4347-180	18	1	4	430	197.48
4347-200	20	1	5	430	294.34
4347-240	24	1	4	430	300.91

PVC RAIN CAP

Belled Socket Style A

4347-060A	6	1	4	430	654.49
4347-080A	8	1	0	430	657.58
4347-100A	10	1	0	430	684.87
4347-120A	12	1	0	430	709.16
4347-140A	14	1	0	430	776.63
4347-160A	16	1	0	430	847.71
4347-180A	18	1	0	430	1131.03
4347-200A	20	1	0	430	1203.56
4347-240A	24	1	0	430	1363.67

PVC RAIN CAP

Belled Socket Style B

4347-060B	6	1	0	430	618.17
4347-080B	8	1	0	430	699.53
4347-100B	10	1	0	430	756.36
4347-120B	12	1	8	430	823.57
4347-140B	14	1	0	430	925.79
4347-160B	16	1	0	430	1123.08
4347-180B	18	1	0	430	1357.80
4347-200B	20	1	0	430	1557.86
4347-240B	24	1	0	430	1803.25

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC DUCT FLANGE

Belled Socket One Piece

SMACNA Bolt Pattern

4351S-060	6	1	5	430	89.06
4351S-080	8	1	2	430	113.20
4351S-100	10	1	2	430	120.96
4351S-120	12	1	2	430	141.12
4351S-140	14	1	0	430	154.79
4351S-160	16	1	0	430	199.67
4351S-180	18	1	3	430	297.61
4351S-200	20	1	0	430	365.05
4351S-240	24	1	0	430	392.96

See SMACNA Flange Specifications at the front of this catalog.
Also available in ANSI Class 150 Bolt Pattern.

PVC BLIND DUCT FLANGE

One Piece

Class 150 Bolt Pattern

4353-060	6	1	36	430	86.16
4353-080	8	1	52	430	108.08
4353-100	10	1	18	430	119.23
4353-120	12	1	50	430	143.32
4353-140	14	1	50	430	182.39
4353-160	16	1	50	430	207.37
4353-180	18	1	50	430	252.56
4353-200	20	1	57	430	352.25
4353-240	24	1	0	430	379.19

PVC BLIND DUCT FLANGE

One Piece

SMACNA Bolt Pattern

4353S-060	6	0	0	430	91.68
4353S-080	8	1	10	430	114.98
4353S-100	10	1	52	430	126.83
4353S-120	12	1	52	430	152.47
4353S-140	14	1	52	430	194.04
4353S-160	16	1	50	430	220.60
4353S-180	18	1	50	430	273.36
4353S-200	20	1	50	430	374.72
4353S-240	24	1	0	430	403.38

See SMACNA Flange Specifications at the front of this catalog.

PVC WYE

Belled Socket

4375-060	6	1	2	430	269.26
4375-080	8	1	0	430	324.63
4375-100	10	1	0	430	402.40
4375-120	12	1	0	430	536.22
4375-140	14	1	0	430	620.92
4375-160	16	1	0	430	1550.58
4375-180	18	1	0	430	2007.47
4375-200	20	1	0	430	2772.00
4375-240	24	1	0	430	3303.08

PVC REDUCING WYE

Belled Socket

4375-532	6X4	1	2	430	262.41
4375-582	8X4	1	2	430	286.95
4375-585	8X6	1	0	430	301.05
4375-624	10X4	1	0	430	326.49
4375-626	10X6	1	0	430	350.00

Fume & Air Duct PVC & CPVC Duct Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

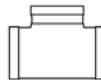
PVC REDUCING WYE (continued)

Belled Socket

4375-628	10X8	1	0	430	383.87
4375-664	12X4	1	0	430	357.27
4375-666	12X6	1	0	430	375.95
4375-668	12X8	1	0	430	426.53
4375-670	12X10	1	0	430	477.57
4375-694	14X4	1	0	430	417.56
4375-696	14X6	1	0	430	446.82
4375-698	14X8	1	0	430	478.85
4375-700	14X10	1	0	430	546.82
4375-702	14X12	1	0	430	613.18
4375-754	16X4	1	0	430	495.47
4375-756	16X6	1	0	430	530.00
4375-758	16X8	1	0	430	549.11
4375-760	16X10	1	0	430	580.81
4375-762	16X12	1	0	430	634.52
4375-764	16X14	1	0	430	721.45
4375-784	18X4	1	0	430	582.82
4375-786	18X6	1	0	430	607.93
4375-788	18X8	1	0	430	661.99
4375-790	18X10	1	0	430	694.73
4375-792	18X12	1	0	430	731.80
4375-794	18X14	1	0	430	831.25
4375-796	18X16	1	0	430	973.41
4375-814	20X4	1	0	430	656.27
4375-816	20X6	1	0	430	698.42
4375-818	20X8	1	0	430	741.72
4375-820	20X10	1	0	430	784.27
4375-822	20X12	1	0	430	833.02
4375-824	20X14	1	0	430	885.91
4375-826	20X16	1	0	430	1058.38
4375-828	20X18	1	0	430	1217.75
4375-904	24X4	1	0	430	788.36
4375-906	24X6	1	0	430	832.94
4375-908	24X8	1	0	430	911.36
4375-910	24X10	1	0	430	1006.84
4375-912	24X12	1	0	430	1072.54
4375-914	24X14	1	0	430	1174.48
4375-916	24X16	1	0	430	1224.60
4375-918	24X18	1	0	430	1389.19
4375-920	24X20	1	0	430	1570.23

CPVC TEE

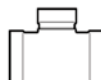
Belled Socket



4301-060C	6	1	4	432	360.15
4301-080C	8	1	0	432	478.45
4301-100C	10	1	0	432	669.47
4301-120C	12	1	0	432	809.41
4301-140C	14	1	0	432	950.03
4301-160C	16	1	0	432	1177.17
4301-180C	18	1	0	432	1401.20
4301-200C	20	1	0	432	1941.87
4301-240C	24	1	0	432	2772.78

CPVC REDUCING TEE

Belled Socket



4301-532C	6X4	1	4	432	309.52
4301-582C	8X4	1	2	432	356.71
4301-585C	8X6	1	0	432	413.52
4301-624C	10X4	1	2	432	446.33
4301-626C	10X6	1	0	432	510.95
4301-628C	10X8	1	0	432	560.99
4301-664C	12X4	1	2	432	514.34
4301-666C	12X6	1	0	432	549.19

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC REDUCING TEE (continued)

Belled Socket

4301-668C	12X8	1	0	432	669.08
4301-670C	12X10	1	0	432	784.43
4301-694C	14X4	1	0	432	651.06
4301-696C	14X6	1	0	432	685.04
4301-698C	14X8	1	0	432	763.65
4301-700C	14X10	1	0	432	887.67
4301-702C	14X12	1	0	432	921.61
4301-754C	16X4	1	0	432	716.19
4301-756C	16X6	1	0	432	753.87
4301-758C	16X8	1	0	432	837.64
4301-760C	16X10	1	0	432	974.03
4301-762C	16X12	1	0	432	1040.11
4301-764C	16X14	1	0	432	1197.68
4301-784C	18X4	1	0	432	905.43
4301-786C	18X6	1	0	432	973.61
4301-788C	18X8	1	0	432	1034.41
4301-790C	18X10	1	0	432	1112.28
4301-792C	18X12	1	0	432	1183.27
4301-794C	18X14	1	0	432	1333.15
4301-796C	18X16	1	0	432	1380.98
4301-814C	20X4	1	0	432	1085.99
4301-816C	20X6	1	0	432	1132.58
4301-818C	20X8	1	0	432	1272.57
4301-820C	20X10	1	0	432	1328.35
4301-822C	20X12	1	0	432	1413.14
4301-824C	20X14	1	0	432	1519.52
4301-826C	20X16	1	0	432	1693.93
4301-828C	20X18	1	0	432	1938.11
4301-904C	24X4	1	0	432	1256.68
4301-906C	24X6	1	0	432	1445.33
4301-908C	24X8	1	0	432	1537.57
4301-910C	24X10	1	0	432	1618.53
4301-912C	24X12	1	0	432	1759.26
4301-914C	24X14	1	0	432	1891.67
4301-916C	24X16	1	0	432	2012.42
4301-918C	24X18	1	0	432	2356.34
4301-920C	24X20	1	0	432	2688.01

CPVC 90° ELBOW

Belled Socket



General Purpose 2-piece Construction

4306-060C	6	1	2	432	254.42
4306-080C	8	1	2	432	341.00
4306-100C	10	1	0	432	463.78
4306-120C	12	1	0	432	554.60
4306-140C	14	1	0	432	697.02
4306-160C	16	1	0	432	854.78
4306-180C	18	1	0	432	1076.97
4306-200C	20	1	0	432	1523.86
4306-240C	24	1	0	432	2038.44

CPVC 90° ELBOWS 5-Piece

Belled Socket



SMACNA Compliant 5-Piece Construction

43065-060C	6	1	2	432	405.72
43065-080C	8	1	0	432	591.20
43065-100C	10	1	0	432	727.93
43065-120C	12	1	0	432	1773.69
43065-140C	14	1	0	432	1908.01
43065-160C	16	1	0	432	2810.71
43065-180C	18	1	0	432	3469.44
43065-200C	20	1	0	432	3914.52
43065-240C	24	1	0	432	6107.87



Fume & Air Duct PVC & CPVC Duct Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC 45° ELBOW

Belled Socket



General Purpose 1-piece Construction

4317-060C	6	1	4	432	194.45
4317-080C	8	1	6	432	260.16
4317-100C	10	1	2	432	351.56
4317-120C	12	1	2	432	425.17
4317-140C	14	1	0	432	524.20
4317-160C	16	1	0	432	603.62
4317-180C	18	1	0	432	813.52
4317-200C	20	1	0	432	1097.86
4317-240C	24	1	0	432	1543.68

CPVC 45° ELBOW 3-Piece

Belled Socket

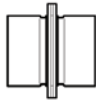


SMACNA Compliant 3-Piece Construction

43173-060C	6	1	0	432	261.41
43173-080C	8	1	0	432	421.43
43173-100C	10	1	0	432	739.92
43173-120C	12	1	0	432	1022.26
43173-140C	14	1	0	432	1076.86
43173-160C	16	1	0	432	1551.86
43173-180C	18	1	0	432	1641.59
43173-200C	20	1	0	432	2112.76
43173-240C	24	1	0	432	3109.99

CPVC BLAST GATE

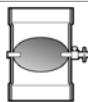
Belled End



43BG-060C	6	1	0	432	579.59
43BG-080C	8	1	2	432	710.85
43BG-100C	10	1	0	432	877.18
43BG-120C	12	1	0	432	1003.48
43BG-140C	14	1	0	432	1255.25
43BG-160C	16	1	0	432	1481.27
43BG-180C	18	1	0	432	1881.20
43BG-200C	20	1	0	432	2276.20
43BG-240C	24	1	0	432	3072.85

CPVC BUTTERFLY DAMPER

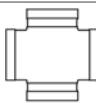
Belled Socket



43BD-060C	6	1	2	432	398.73
43BD-080C	8	1	4	432	435.55
43BD-100C	10	1	0	432	562.32
43BD-120C	12	1	4	432	682.36
43BD-140C	14	1	0	432	817.14
43BD-160C	16	1	0	432	949.45
43BD-180C	18	1	0	432	1212.74
43BD-200C	20	1	0	432	1467.73
43BD-240C	24	1	0	432	1990.68

CPVC CROSS

Belled Socket



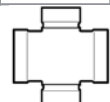
4320-060C	6	1	0	432	713.06
4320-080C	8	1	0	432	947.33
4320-100C	10	1	0	432	1325.55
4320-120C	12	1	0	432	1602.64
4320-140C	14	1	0	432	1881.06
4320-160C	16	1	0	432	2330.81
4320-180C	18	1	0	432	2774.37
4320-200C	20	1	0	432	3844.93

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC CROSS (continued)

Belled Socket

4320-240C	24	1	0	432	5490.07
-----------	----	---	---	-----	---------



CPVC REDUCING CROSS

Belled Socket

4320-532C	6X4	1	3	432	631.96
4320-582C	8X4	1	0	432	783.74
4320-585C	8X6	1	0	432	827.03
4320-624C	10X4	1	0	432	883.72
4320-626C	10X6	1	0	432	1011.69
4320-628C	10X8	1	0	432	1110.74
4320-664C	12X4	1	0	432	1018.40
4320-666C	12X6	1	0	432	1087.40
4320-668C	12X8	1	0	432	1324.80
4320-670C	12X10	1	0	432	1553.17
4320-694C	14X4	1	0	432	1289.11
4320-696C	14X6	1	0	432	1356.42
4320-698C	14X8	1	0	432	1512.03
4320-700C	14X10	1	0	432	1757.59
4320-702C	14X12	1	0	432	1824.79
4320-754C	16X4	1	0	432	1418.04
4320-756C	16X6	1	0	432	1492.68
4320-758C	16X8	1	0	432	1658.56
4320-760C	16X10	1	0	432	1928.57
4320-762C	16X12	1	0	432	2059.37
4320-764C	16X14	1	0	432	2371.42
4320-784C	18X4	1	0	432	1792.80
4320-786C	18X6	1	0	432	1927.72
4320-788C	18X8	1	0	432	2048.15
4320-790C	18X10	1	0	432	2202.31
4320-792C	18X12	1	0	432	2342.88
4320-794C	18X14	1	0	432	2639.63
4320-796C	18X16	1	0	432	2734.35
4320-814C	20X4	1	0	432	2150.27
4320-816C	20X6	1	0	432	2242.52
4320-818C	20X8	1	0	432	2519.69
4320-820C	20X10	1	0	432	2630.14
4320-822C	20X12	1	0	432	2798.02
4320-824C	20X14	1	0	432	3008.60
4320-826C	20X16	1	0	432	3354.00
4320-828C	20X18	1	0	432	3837.44
4320-904C	24X4	1	0	432	2488.23
4320-906C	24X6	1	0	432	2861.77
4320-908C	24X8	1	0	432	3044.40
4320-910C	24X10	1	0	432	3204.63
4320-912C	24X12	1	0	432	3483.33
4320-914C	24X14	1	0	432	3745.48
4320-916C	24X16	1	0	432	3984.57
4320-918C	24X18	1	0	432	4665.54
4320-920C	24X20	1	0	432	5322.25



CPVC COUPLING

Belled Socket

4329-060C	6	1	4	432	89.34
4329-080C	8	1	8	432	113.92
4329-100C	10	1	2	432	150.05
4329-120C	12	1	3	432	167.13
4329-140C	14	1	2	432	206.78
4329-160C	16	1	0	432	225.63
4329-180C	18	1	0	432	282.06
4329-200C	20	1	0	432	354.61
4329-240C	24	1	2	432	436.20

Fume & Air Duct PVC & CPVC Duct Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC REDUCER COUPLING

Belled Socket



4329-532C	6X4	1	4	432	174.40
4329-582C	8X4	1	8	432	429.45
4329-585C	8X6	1	8	432	168.94
4329-624C	10X4	1	2	432	591.59
4329-626C	10X6	1	2	432	438.02
4329-628C	10X8	1	4	432	224.09
4329-664C	12X4	1	2	432	836.02
4329-666C	12X6	1	2	432	662.23
4329-668C	12X8	1	2	432	575.65
4329-670C	12X10	1	0	432	306.56
4329-694C	14X4	1	0	432	1073.81
4329-696C	14X6	1	0	432	859.06
4329-698C	14X8	1	0	432	730.22
4329-700C	14X10	1	0	432	748.28
4329-702C	14X12	1	0	432	419.64
4329-754C	16X4	1	0	432	1398.69
4329-756C	16X6	1	0	432	1113.62
4329-758C	16X8	1	0	432	943.75
4329-760C	16X10	1	0	432	896.24
4329-762C	16X12	1	0	432	872.14
4329-764C	16X14	1	0	432	539.16
4329-784C	18X4	1	0	432	1691.65
4329-786C	18X6	1	0	432	1358.77
4329-788C	18X8	1	0	432	1151.48
4329-790C	18X10	1	0	432	1090.41
4329-792C	18X12	1	0	432	1050.51
4329-794C	18X14	1	0	432	1021.39
4329-796C	18X16	1	0	432	633.68
4329-814C	20X4	1	0	432	2205.26
4329-816C	20X6	1	0	432	1778.45
4329-818C	20X8	1	0	432	1515.09
4329-820C	20X10	1	0	432	1429.32
4329-822C	20X12	1	0	432	1370.56
4329-824C	20X14	1	0	432	1293.01
4329-826C	20X16	1	0	432	1269.95
4329-828C	20X18	1	0	432	925.63
4329-904C	24X4	1	0	432	2833.35
4329-906C	24X6	1	0	432	2282.32
4329-908C	24X8	1	0	432	1968.77
4329-910C	24X10	1	0	432	1841.96
4329-912C	24X12	1	0	432	1772.81
4329-914C	24X14	1	0	432	1672.46
4329-916C	24X16	1	0	432	1580.76
4329-918C	24X18	1	0	432	1526.20
4329-920C	24X20	1	0	432	1469.36

CPVC SLEEVE COUPLING

Socket (No Stop)



4329S-060C	6	1	5	432	95.66
4329S-080C	8	1	0	432	122.84
4329S-100C	10	1	0	432	161.93
4329S-120C	12	1	3	432	180.45
4329S-140C	14	1	2	432	223.28
4329S-160C	16	1	2	432	243.82
4329S-180C	18	1	2	432	304.73
4329S-200C	20	1	0	432	383.84
4329S-240C	24	1	0	432	471.27

CPVC FLAT CAP

Belled Socket



4347-060C	6	1	0	432	164.84
-----------	---	---	---	-----	--------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC FLAT CAP (continued)

Belled Socket

4347-080C	8	1	5	432	196.39
4347-100C	10	1	4	432	228.97
4347-120C	12	1	5	432	261.46
4347-140C	14	1	4	432	294.17
4347-160C	16	1	2	432	338.01
4347-180C	18	1	5	432	426.78
4347-200C	20	1	5	432	612.77
4347-240C	24	1	5	432	653.85

CPVC RAIN CAP

Belled Socket Style A



4347-060AC	6	1	2	432	778.84
4347-080AC	8	1	0	432	1065.66
4347-100AC	10	1	0	432	1238.94
4347-120AC	12	1	0	432	1498.81
4347-140AC	14	1	0	432	2022.99
4347-160AC	16	1	0	432	2308.48
4347-180AC	18	1	0	432	2660.46
4347-200AC	20	1	0	432	3884.20
4347-240AC	24	1	0	432	4582.34

CPVC RAIN CAP

Belled Socket Style B



4347-060BC	6	1	0	432	697.25
4347-080BC	8	1	0	432	1033.97
4347-100BC	10	1	0	432	1253.53
4347-120BC	12	1	0	432	1506.33
4347-140BC	14	1	0	432	2030.46
4347-160BC	16	1	0	432	2312.04
4347-180BC	18	1	0	432	2834.09
4347-200BC	20	1	0	432	4168.22
4347-240BC	24	1	0	432	4539.20

CPVC DUCT FLANGE

Belled Socket One Piece



SMACNA Bolt Pattern

4351S-060C	6	1	0	432	203.36
4351S-080C	8	1	2	432	235.38
4351S-100C	10	1	0	432	290.58
4351S-120C	12	1	2	432	309.06
4351S-140C	14	1	0	432	358.39
4351S-160C	16	1	0	432	417.05
4351S-180C	18	1	0	432	557.87
4351S-200C	20	1	0	432	677.37
4351S-240C	24	1	0	432	954.24

See SMACNA Flange Specifications at the end of this catalog.
Also available in ANSI Class 150 Bolt Pattern.

CPVC BLIND DUCT FLANGE

One Piece



Class 150 Bolt Pattern

4353-060C	6	1	36	432	204.69
4353-080C	8	1	36	432	235.20
4353-100C	10	1	18	432	283.69
4353-120C	12	1	4	432	311.93
4353-140C	14	1	6	432	370.51
4353-160C	16	1	0	432	407.99
4353-180C	18	1	0	432	580.07
4353-200C	20	1	14	432	718.74
4353-240C	24	1	0	432	958.88



Fume & Air Duct PVC & CPVC Duct Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC BLIND DUCT FLANGE

One Piece



SMACNA Bolt Pattern

4353S-060C	6	1	52	432	217.77
4353S-080C	8	1	52	432	250.21
4353S-100C	10	1	52	432	301.80
4353S-120C	12	1	52	432	331.82
4353S-140C	14	1	52	432	394.17
4353S-160C	16	1	50	432	438.43
4353S-180C	18	1	50	432	617.13
4353S-200C	20	1	50	432	764.60
4353S-240C	24	1	57	432	1019.46

See SMACNA Flange Specifications at the end of this catalog.

CPVC WYE

Belled Socket



4375-060C	6	1	2	432	401.52
4375-080C	8	1	0	432	530.89
4375-100C	10	1	0	432	800.27
4375-120C	12	1	0	432	1014.26
4375-140C	14	1	0	432	2667.16
4375-160C	16	1	0	432	4382.06
4375-180C	18	1	0	432	5221.37
4375-200C	20	1	0	432	7571.46
4375-240C	24	1	0	432	9881.69

CPVC REDUCING WYE

Belled Socket



4375-532C	6X4	1	2	432	405.54
4375-582C	8X4	1	2	432	490.65
4375-585C	8X6	1	0	432	494.04
4375-624C	10X4	1	0	432	586.49
4375-626C	10X6	1	0	432	598.46
4375-628C	10X8	1	0	432	710.47
4375-664C	12X4	1	0	432	670.74
4375-666C	12X6	1	0	432	690.45
4375-668C	12X8	1	0	432	806.37
4375-670C	12X10	1	0	432	1368.73
4375-694C	14X4	1	0	432	736.63
4375-696C	14X6	1	0	432	746.25
4375-698C	14X8	1	0	432	910.05
4375-700C	14X10	1	0	432	1060.51
4375-702C	14X12	1	0	432	1171.47
4375-754C	16X4	1	0	432	779.34
4375-756C	16X6	1	0	432	784.55
4375-758C	16X8	1	0	432	956.75
4375-760C	16X10	1	0	432	1139.04
4375-762C	16X12	1	0	432	1257.05
4375-764C	16X14	1	0	432	1378.12
4375-784C	18X4	1	0	432	844.53
4375-786C	18X6	1	0	432	856.66
4375-788C	18X8	1	0	432	1007.84
4375-790C	18X10	1	0	432	1244.24
4375-792C	18X12	1	0	432	1382.71
4375-794C	18X14	1	0	432	1657.34
4375-796C	18X16	1	0	432	1872.68
4375-814C	20X4	1	0	432	1543.13
4375-816C	20X6	1	0	432	1612.85
4375-818C	20X8	1	0	432	1749.76
4375-820C	20X10	1	0	432	1818.47
4375-822C	20X12	1	0	432	2271.45
4375-824C	20X14	1	0	432	2354.17
4375-826C	20X16	1	0	432	2542.56

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC REDUCING WYE (continued)

Belled Socket

4375-828C	20X18	1	0	432	2731.40
4375-904C	24X4	1	0	432	1733.51
4375-906C	24X6	1	0	432	1832.82
4375-908C	24X8	1	0	432	2102.01
4375-910C	24X10	1	0	432	2385.38
4375-912C	24X12	1	0	432	2566.85
4375-914C	24X14	1	0	432	2693.75
4375-916C	24X16	1	0	432	2827.23
4375-918C	24X18	1	0	432	3150.64
4375-920C	24X20	1	0	432	3513.84

Double Containment Double Containment



DOUBLE CONTAINMENT SYSTEM DESIGN

Spears® Double Containment (DC) Fittings are constructed from standard fittings that are to be assembled on the jobsite. Spears® DC fittings work with standard pipe for both Carrier and Containment lines. Carrier fittings are equipped with special extender couplings for connection to carrier pipe. Simple, slip-on centralizer brackets used on the carrier pipe support this assembly inside the containment pipe. This design allows the carrier fitting to "float" within the containment fitting, allowing ease of movement for installation while reducing problems associated with thermal expansion and contraction during operation. This simplified approach to double containment makes installation very easy. However, successful installation requires proper design and planning of system layout, a basic understanding of how Spears® double containment fitting design works, and specific attention to a proper sequence of general assembly. See *Double Containment Design & Installation Guide* for additional details on design, installation and different configuration applications. DC fitting sizes are listed through 12", but additional sizes are available on request.

CONFIGURATIONS

DC Pipe: Spears® DC Fittings can be used with any standard pipe of the corresponding size and schedule. As a result, pipe is not listed in this Price Schedule.

DC Fittings: Each configuration includes all components to form an internal Carrier Fitting with applicable Extender-Couplings and an external Containment fitting. Each DC Fitting configuration is specified as Carrier Material & Schedule x Containment Material & Schedule. Refer to example below (additional information is found in specific fitting sections).

Example

A Double Containment 90° Ell having a 1/2" Schedule 40 Carrier and 2" Schedule 40 Containment pipe would be listed as follows:

Product Name _____

Configuration Description _____

DC 90° Ell
PVC Sch 40 x PVC Sch 40

Part Number	Size	Disc Code	Price Each
DC06-A005-A020	1/2X2	470	32.78

Carrier Elbow
Containment Elbow
Extender Couplings

Centralizer Brackets should be ordered separately for Carrier pipe support in runs of Containment pipe.

Valve Boxes: Like DC Fittings, Valve Boxes include all necessary components for connection to the designated Carrier x Containment system. Valve Boxes include the applicable True Union Industrial Ball Valve, Ball Check Valve, or Diaphragm Valve, with designated elastomer seals. Refer to example below (additional information is found in specific Valve Box sections).

Example

A Valve Box with True Union 2000 Industrial Ball Valve having a 1/2" valve with Schedule 40 Carrier and 2" Schedule 40 Containment pipe would be listed as follows:

Product Name _____

Configuration Description _____

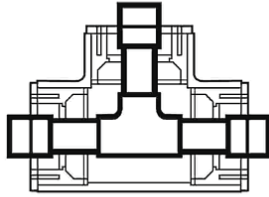
Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Disc Code
1/2X2	VBA20-A005-A020 280.17	VBA30-A005-A020 285.10	470

Carrier Valve
Containment Valve Box
Extender Couplings



Double Containment Tees



DC Tees are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. Certain combinations use larger Containment tees that are bushed to specified size.

Important Note: Some Tees are shipped with the Carrier Tee branch extender separated from the Carrier Tee assembly to facilitate assembly. The Carrier Tee branch extension must be cemented in place after the run Carrier Tee assembly is completed. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

¹ Configuration uses larger size Containment Tee with Outlets Bushed down

DC Tee PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-A005-A020	1/2X2	1	8	470	43.32
DC01-A007-A030	3/4X3	1	10	470	60.33
DC01-A010-A030	1X3	1	10	470	62.47
DC01-A015-A040	1-1/2X4	1	4	470	82.12
DC01-A020-A040 ¹	2X4	1	4	470	294.54
DC01-A030-A060	3X6	1	2	470	680.28
DC01-A040-A080	4X8	1	2	470	414.36
DC01-A060-A100	6X10	1	0	470	1028.82
DC01-A080-A120	8X12	1	0	470	1573.28

DC Tee

PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-A005-G020	1/2X2	1	8	470	114.81
DC01-A007-G030	3/4X3	1	10	470	367.00
DC01-A010-G030	1X3	1	10	470	369.15
DC01-A015-G040	1-1/2X4	1	4	470	637.35
DC01-A020-G040 ¹	2X4	1	4	470	1130.42
DC01-A030-G060	3X6	1	2	470	1428.14
DC01-A040-G080	4X8	1	2	470	2115.85

DC Tee PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-B005-A020	1/2X2	1	9	470	69.09
DC01-B007-A030	3/4X3	1	10	470	91.73
DC01-B010-A030	1X3	1	10	470	94.83
DC01-B015-A040	1-1/2X4	1	4	470	143.63
DC01-B020-A040 ¹	2X4	1	2	470	356.12
DC01-B030-A060	3X6	1	2	470	819.77
DC01-B040-A080	4X8	1	2	470	970.95
DC01-B060-A100	6X10	1	0	470	1537.65
DC01-B080-A120	8X12	1	0	470	2456.25

DC Tee PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-B005-G020	1/2X2	1	9	470	140.47
DC01-B007-G030	3/4X3	1	10	470	399.45
DC01-B010-G030	1X3	1	10	470	402.07
DC01-B015-G040	1-1/2X4	1	4	470	704.07
DC01-B020-G040	2X4	1	2	470	2702.39
DC01-B030-G060	3X6	1	2	470	1088.83
DC01-B040-G080	4X8	1	2	470	2265.19

DC Tee PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-B005-B020	1/2X2	1	10	470	106.39
DC01-B007-B030	3/4X3	1	10	470	128.26
DC01-B010-B030	1X3	1	5	470	131.27
DC01-B015-B040	1-1/2X4	1	4	470	177.72

DC Tee PVC Sch 80 x PVC Sch 80 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-B020-B040 ¹	2X4	1	0	470	663.87
DC01-B030-B060 ¹	3X6	1	2	470	991.53
DC01-B040-B080	4X8	1	0	470	1227.55
DC01-B060-B100	6X10	1	0	470	1517.74
DC01-B080-B120	8X12	1	0	470	3502.40

DC Tee CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-A020	1/2X2	1	10	470	75.14
DC01-C007-A030	3/4X3	1	5	470	98.85
DC01-C010-A030	1X3	1	10	470	111.26
DC01-C015-A040	1-1/2X4	1	4	470	184.97
DC01-C020-A040 ¹	2X4	1	3	470	411.23
DC01-C030-A060	3X6	1	2	470	950.32
DC01-C040-A080	4X8	1	0	470	757.61
DC01-C060-A100	6X10	1	0	470	1766.48
DC01-C080-A120	8X12	1	0	470	2781.34

DC Tee CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-B020	1/2X2	1	9	470	112.35
DC01-C007-B030	3/4X3	1	5	470	135.31
DC01-C010-B030	1X3	1	5	470	147.83
DC01-C015-B040	1-1/2X4	1	4	470	213.83
DC01-C020-B040 ¹	2X4	1	4	470	742.23
DC01-C030-B060	3X6	1	2	470	1353.71
DC01-C040-B080	4X8	1	0	470	987.58
DC01-C060-B100	6X10	1	0	470	2825.52
DC01-C080-B120	8X12	1	0	470	3440.76

DC Tee CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-C020	1/2X2	1	10	470	117.85
DC01-C007-C030	3/4X3	1	10	470	199.16
DC01-C010-C030	1X3	1	5	470	211.68
DC01-C015-C040	1-1/2X4	1	5	470	308.63
DC01-C020-C040 ¹	2X4	1	0	470	513.23
DC01-C030-C060	3X6	1	2	470	1081.06
DC01-C040-C080	4X8	1	2	470	1663.62
DC01-C060-C100	6X10	1	0	470	2908.24
DC01-C080-C120	8X12	1	0	470	5253.18

DC Tee CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-G020	1/2X2	1	9	470	146.06
DC01-C007-G030	3/4X3	1	5	470	405.52
DC01-C010-G030	1X3	1	10	470	418.04
DC01-C015-G040	1-1/2X4	1	6	470	787.84

**Double Containment
Tees**

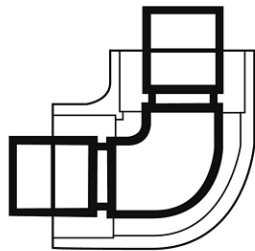


DC Tee CPVC Sch 80 x PVC Sch 40 Clear
(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C020-G040 ¹	2X4	1	6	470	2741.34
DC01-C030-G060 ¹	3X6	1	2	470	1787.00
DC01-C040-G080	4X8	1	2	470	2383.74



Double Containment 90° Ells



DC 90° Ells are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC 90° Ell PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-A005-A020	1/2X2	1	25	470	34.51
DC06-A007-A030	3/4X3	1	10	470	44.98
DC06-A010-A030	1X3	1	10	470	46.48
DC06-A015-A040	1-1/2X4	1	5	470	59.67
DC06-A020-A040	2X4	1	5	470	75.93
DC06-A030-A060	3X6	2	0	470	152.33
DC06-A040-A080	4X8	1	2	470	295.95
DC06-A060-A100	6X10	1	0	470	968.87
DC06-A080-A120	8X12	1	0	470	1420.85

DC 90° Ell

PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-A005-G020	1/2X2	1	25	470	92.07
DC06-A007-G030	3/4X3	1	10	470	254.03
DC06-A010-G030	1X3	1	4	470	255.61
DC06-A015-G040	1-1/2X4	1	5	470	433.89
DC06-A020-G040	2X4	1	8	470	450.16
DC06-A030-G060	3X6	1	2	470	791.11
DC06-A040-G080	4X8	1	2	470	1384.05

DC 90° Ell PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-B005-A020	1/2X2	1	25	470	48.26
DC06-B007-A030	3/4X3	1	10	470	63.59
DC06-B010-A030	1X3	1	10	470	66.59
DC06-B015-A040	1-1/2X4	1	5	470	92.63
DC06-B020-A040	2X4	1	5	470	109.58
DC06-B030-A060	3X6	1	2	470	236.12
DC06-B040-A080	4X8	1	2	470	398.84
DC06-B060-A100	6X10	1	0	470	1173.99
DC06-B080-A120	8X12	1	0	470	1754.57

DC 90° Ell

PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-B005-G020	1/2X2	1	25	470	105.44
DC06-B007-G030	3/4X3	1	10	470	272.60
DC06-B010-G030	1X3	1	10	470	275.59
DC06-B015-G040	1-1/2X4	1	8	470	465.54
DC06-B020-G040	2X4	1	4	470	469.59
DC06-B030-G060	3X6	1	4	470	234.93
DC06-B040-G080	4X8	1	2	470	1486.96

DC 90° Ell PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-B005-B020	1/2X2	1	20	470	56.20
DC06-B007-B030	3/4X3	1	10	470	80.58
DC06-B010-B030	1X3	1	10	470	83.61
DC06-B015-B040	1-1/2X4	1	5	470	113.36

DC 90° Ell PVC Sch 80 x PVC Sch 80

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-B020-B040	2X4	1	4	470	117.55
DC06-B030-B060	3X6	2	0	470	290.48
DC06-B040-B080	4X8	1	2	470	563.22
DC06-B060-B100	6X10	1	0	470	2055.33
DC06-B080-B120	8X12	1	0	470	2874.16

DC 90° Ell CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-A020	1/2X2	1	8	470	51.81
DC06-C007-A030	3/4X3	1	5	470	68.27
DC06-C010-A030	1X3	1	5	470	79.43
DC06-C015-A040	1-1/2X4	1	8	470	129.05
DC06-C020-A040	2X4	1	5	470	155.74
DC06-C030-A060	3X6	1	5	470	302.64
DC06-C040-A080	4X8	1	2	470	582.09
DC06-C060-A100	6X10	1	0	470	1545.61
DC06-C080-A120	8X12	1	0	470	2965.48

DC 90° Ell CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-B020	1/2X2	1	25	470	59.76
DC06-C007-B030	3/4X3	1	5	470	85.27
DC06-C010-B030	1X3	1	5	470	109.64
DC06-C015-B040	1-1/2X4	1	4	470	151.11
DC06-C020-B040	2X4	1	4	470	177.79
DC06-C030-B060	3X6	1	0	470	396.81
DC06-C040-B080	4X8	1	2	470	746.47
DC06-C060-B100	6X10	1	0	470	2426.91
DC06-C080-B120	8X12	1	0	470	4085.25

DC 90° Ell

CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-C020	1/2X2	1	25	470	83.61
DC06-C007-C030	3/4X3	1	10	470	147.61
DC06-C010-C030	1X3	1	5	470	158.36
DC06-C015-C040	1-1/2X4	1	5	470	279.35
DC06-C020-C040	2X4	1	4	470	298.11
DC06-C030-C060	3X6	1	2	470	519.85
DC06-C040-C080	4X8	1	2	470	1199.99
DC06-C060-C100	6X10	1	0	470	2972.03
DC06-C080-C120	8X12	1	0	470	4904.56

DC 90° Ell

CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-G020	1/2X2	1	23	470	109.38
DC06-C007-G030	3/4X3	1	4	470	277.68
DC06-C010-G030	1X3	1	5	470	288.42
DC06-C015-G040	1-1/2X4	1	8	470	503.29

**Double Containment
90° Ells**

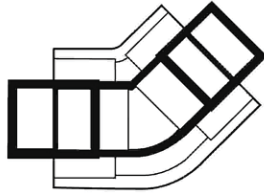


DC 90° Ell
CPVC Sch 80 x PVC Sch 40 Clear
(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C020-G040	2X4	1	8	470	529.86
DC06-C030-G060	3X6	1	5	470	981.41
DC06-C040-G080	4X8	1	2	470	1673.05



Double Containment 45° Ells



DC 45° Ells are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC 45° Ell PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-A005-A020	1/2X2	1	25	470	35.52
DC17-A007-A030	3/4X3	1	5	470	50.17
DC17-A010-A030	1X3	1	5	470	51.38
DC17-A015-A040	1-1/2X4	1	5	470	68.27
DC17-A020-A040	2X4	1	4	470	84.16
DC17-A030-A060	3X6	2	0	470	157.27
DC17-A040-A080	4X8	1	3	470	292.29
DC17-A060-A100	6X10	1	0	470	696.24
DC17-A080-A120	8X12	1	0	470	1145.46

DC 45° Ell

PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-A005-G020	1/2X2	1	25	470	111.24
DC17-A007-G030	3/4X3	1	8	470	321.71
DC17-A010-G030	1X3	1	5	470	322.84
DC17-A015-G040	1-1/2X4	1	5	470	569.01
DC17-A020-G040	2X4	1	4	470	571.93
DC17-A030-G060	3X6	1	2	470	1013.56
DC17-A040-G080	4X8	1	3	470	1222.25

DC 45° Ell PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-B005-A020	1/2X2	1	25	470	51.12
DC17-B007-A030	3/4X3	1	8	470	73.05
DC17-B010-A030	1X3	1	10	470	78.25
DC17-B015-A040	1-1/2X4	1	5	470	110.60
DC17-B020-A040	2X4	1	5	470	132.21
DC17-B030-A060	3X6	1	7	470	277.18
DC17-B040-A080	4X8	1	2	470	468.49
DC17-B060-A100	6X10	1	0	470	932.77
DC17-B080-A120	8X12	1	0	470	1445.42

DC 45° Ell

PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-B005-G020	1/2X2	1	10	470	119.18
DC17-B007-G030	3/4X3	1	8	470	344.60
DC17-B010-G030	1X3	1	5	470	351.22
DC17-B015-G040	1-1/2X4	1	5	470	600.13
DC17-B020-G040	2X4	1	5	470	619.98
DC17-B030-G060	3X6	1	4	470	1133.36
DC17-B040-G080	4X8	1	3	470	1873.04

DC 45° Ell PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-B005-B020	1/2X2	1	10	470	75.16
DC17-B007-B030	3/4X3	1	8	470	125.94
DC17-B010-B030	1X3	1	5	470	136.42
DC17-B015-B040	1-1/2X4	1	5	470	205.97

DC 45° Ell PVC Sch 80 x PVC Sch 80

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-B020-B040	2X4	1	5	470	214.20
DC17-B030-B060	3X6	1	2	470	357.23
DC17-B040-B080	4X8	1	2	470	623.89
DC17-B060-B100	6X10	1	0	470	1530.56
DC17-B080-B120	8X12	1	0	470	2116.07

DC 45° Ell CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-A020	1/2X2	1	25	470	53.76
DC17-C007-A030	3/4X3	1	8	470	75.84
DC17-C010-A030	1X3	1	10	470	88.37
DC17-C015-A040	1-1/2X4	1	5	470	141.31
DC17-C020-A040	2X4	1	5	470	165.85
DC17-C030-A060	3X6	1	5	470	271.63
DC17-C040-A080	4X8	1	3	470	542.15
DC17-C060-A100	6X10	1	0	470	1367.03
DC17-C080-A120	8X12	1	0	470	2740.09

DC 45° Ell CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-B020	1/2X2	1	25	470	77.08
DC17-C007-B030	3/4X3	1	5	470	128.72
DC17-C010-B030	1X3	1	5	470	140.84
DC17-C015-B040	1-1/2X4	1	4	470	160.58
DC17-C020-B040	2X4	1	5	470	185.32
DC17-C030-B060	3X6	1	5	470	382.32
DC17-C040-B080	4X8	1	2	470	697.06
DC17-C060-B100	6X10	1	0	470	1962.17
DC17-C080-B120	8X12	1	0	470	3410.74

DC 45° Ell

CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-C020	1/2X2	1	10	470	87.66
DC17-C007-C030	3/4X3	1	8	470	158.40
DC17-C010-C030	1X3	1	10	470	170.92
DC17-C015-C040	1-1/2X4	1	5	470	246.99
DC17-C020-C040	2X4	1	5	470	271.73
DC17-C030-C060	3X6	1	2	470	617.20
DC17-C040-C080	4X8	1	2	470	1234.23
DC17-C060-C100	6X10	1	0	470	3738.62
DC17-C080-C120	8X12	1	0	470	5136.51

DC 45° Ell

CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-G020	1/2X2	1	10	470	120.99
DC17-C007-G030	3/4X3	1	8	470	347.38
DC17-C010-G030	1X3	1	10	470	359.89
DC17-C015-G040	1-1/2X4	1	5	470	642.35

**Double Containment
45° Ells**

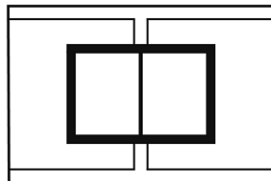


DC 45° Ell
CPVC Sch 80 x PVC Sch 40 Clear
(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C020-G040	2X4	1	5	470	653.83
DC17-C030-G060	3X6	1	5	470	1217.66
DC17-C040-G080	4X8	1	3	470	2060.25



Double Containment Couplings



DC Couplings are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration (no extenders required on Couplings). See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Coupling PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-A005-A020	1/2X2	1	25	470	2.74
DC29-A007-A030	3/4X3	1	10	470	8.56
DC29-A010-A030	1X3	1	10	470	9.00
DC29-A015-A040	1-1/2X4	1	6	470	13.02
DC29-A020-A040	2X4	1	10	470	13.82
DC29-A030-A060	3X6	1	4	470	44.37
DC29-A040-A080	4X8	1	6	470	79.49
DC29-A060-A100	6X10	1	2	470	234.56
DC29-A080-A120	8X12	1	0	470	462.79

DC Coupling PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-A005-G020	1/2X2	1	10	470	37.43
DC29-A007-G030	3/4X3	1	10	470	127.42
DC29-A010-G030	1X3	1	10	470	127.79
DC29-A015-G040	1-1/2X4	1	6	470	184.62
DC29-A020-G040	2X4	1	8	470	185.41
DC29-A030-G060	3X6	1	4	470	351.39
DC29-A040-G080	4X8	1	6	470	604.84

DC Coupling PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-B005-A020	1/2X2	1	25	470	8.28
DC29-B007-A030	3/4X3	1	10	470	16.16
DC29-B010-A030	1X3	1	5	470	16.28
DC29-B015-A040	1-1/2X4	1	6	470	25.17
DC29-B020-A040	2X4	1	5	470	26.18
DC29-B030-A060	3X6	1	4	470	77.88
DC29-B040-A080	4X8	1	6	470	119.94
DC29-B060-A100	6X10	1	2	470	309.94
DC29-B080-A120	8X12	1	4	470	546.88

DC Coupling PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-B005-G020	1/2X2	1	10	470	42.88
DC29-B007-G030	3/4X3	1	10	470	134.94
DC29-B010-G030	1X3	1	10	470	135.14
DC29-B015-G040	1-1/2X4	1	6	470	191.47
DC29-B020-G040	2X4	1	8	470	197.78
DC29-B030-G060	3X6	1	4	470	344.32
DC29-B040-G080	4X8	1	4	470	638.11

DC Coupling PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-B005-B020	1/2X2	1	10	470	20.62
DC29-B007-B030	3/4X3	1	5	470	49.59
DC29-B010-B030	1X3	1	5	470	49.80

DC Coupling PVC Sch 80 x PVC Sch 80

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-B015-B040	1-1/2X4	1	5	470	65.61
DC29-B020-B040	2X4	1	8	470	66.61
DC29-B030-B060	3X6	1	8	470	153.25
DC29-B040-B080	4X8	1	4	470	204.03
DC29-B060-B100	6X10	1	2	470	633.80
DC29-B080-B120	8X12	1	0	470	753.85

DC Coupling CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-A020	1/2X2	1	25	470	8.69
DC29-C007-A030	3/4X3	1	10	470	16.89
DC29-C010-A030	1X3	1	10	470	19.99
DC29-C015-A040	1-1/2X4	1	6	470	34.16
DC29-C020-A040	2X4	1	6	470	37.84
DC29-C030-A060	3X6	1	4	470	100.04
DC29-C040-A080	4X8	1	6	470	151.40
DC29-C060-A100	6X10	1	2	470	394.58
DC29-C080-A120	8X12	1	4	470	925.68

DC Coupling CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-B020	1/2X2	1	10	470	20.52
DC29-C007-B030	3/4X3	1	5	470	50.40
DC29-C010-B030	1X3	1	5	470	53.51
DC29-C015-B040	1-1/2X4	1	6	470	74.60
DC29-C020-B040	2X4	1	4	470	75.98
DC29-C030-B060	3X6	1	4	470	175.37
DC29-C040-B080	4X8	1	4	470	215.34
DC29-C060-B100	6X10	1	2	470	638.99
DC29-C080-B120	8X12	1	0	470	1132.53

DC Coupling CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-C020	1/2X2	1	10	470	32.68
DC29-C007-C030	3/4X3	1	5	470	72.57
DC29-C010-C030	1X3	1	10	470	75.63
DC29-C015-C040	1-1/2X4	1	5	470	106.07
DC29-C020-C040	2X4	1	8	470	109.73
DC29-C030-C060	3X6	1	4	470	260.06
DC29-C040-C080	4X8	1	4	470	614.33
DC29-C060-C100	6X10	1	2	470	864.21
DC29-C080-C120	8X12	1	0	470	1311.19

DC Coupling CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-G020	1/2X2	1	10	470	43.28
DC29-C007-G030	3/4X3	1	10	470	135.76

**Double Containment
Couplings**

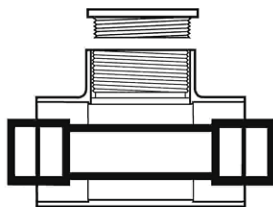


DC Coupling
CPVC Sch 80 x PVC Sch 40 Clear
(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C010-G030	1X3	1	10	470	138.85
DC29-C015-G040	1-1/2X4	1	6	470	205.78
DC29-C020-G040	2X4	1	6	470	209.43
DC29-C030-G060	3X6	1	10	470	393.28
DC29-C040-G080	4X8	1	6	470	676.74



Double Containment Access Tees



DC Access Tees are made from standard Spears® pressure fittings in designated material and Schedule selected. Included is an internal Carrier pipe section equipped with couplings and an external Containment Tee fitting equipped with a threaded Plug on the branch for access. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Access Tee PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-A005-A020	1/2X2	1	10	470	42.41
DCAT-A007-A030	3/4X3	1	5	470	70.63
DCAT-A010-A030	1X3	1	5	470	71.51
DCAT-A015-A040	1-1/2X4	1	3	470	100.55
DCAT-A020-A040	2X4	1	5	470	131.16
DCAT-A030-A060	3X6	1	4	470	361.41
DCAT-A040-A080	4X8	1	0	470	753.43
DCAT-A060-A100	6X10	1	0	470	1714.91
DCAT-A080-A120	8X12	1	0	470	2421.59

DC Access Tee PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-A005-G020	1/2X2	1	10	470	214.78
DCAT-A007-G030	3/4X3	1	10	470	570.43
DCAT-A010-G030	1X3	1	10	470	571.33
DCAT-A015-G040	1-1/2X4	1	6	470	939.09
DCAT-A020-G040	2X4	1	6	470	951.28
DCAT-A030-G060	3X6	1	4	470	1291.93
DCAT-A040-G080	4X8	1	0	470	2371.73

DC Access Tee PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B005-A020	1/2X2	1	10	470	53.53
DCAT-B007-A030	3/4X3	1	10	470	85.66
DCAT-B010-A030	1X3	1	6	470	86.09
DCAT-B015-A040	1-1/2X4	1	6	470	124.87
DCAT-B020-A040	2X4	1	6	470	137.48
DCAT-B030-A060	3X6	1	4	470	428.44
DCAT-B040-A080	4X8	1	2	470	834.27
DCAT-B060-A100	6X10	1	0	470	1878.81
DCAT-B080-A120	8X12	1	0	470	2680.34

DC Access Tee PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B005-G020	1/2X2	1	10	470	259.34
DCAT-B007-G030	3/4X3	1	10	470	585.48
DCAT-B010-G030	1X3	1	10	470	585.78
DCAT-B015-G040	1-1/2X4	1	3	470	962.09
DCAT-B020-G040	2X4	1	6	470	965.43
DCAT-B030-G060	3X6	1	4	470	1358.95
DCAT-B040-G080	4X8	1	2	470	2452.57

DC Access Tee PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B005-B020	1/2X2	1	5	470	88.87
DCAT-B007-B030	3/4X3	1	5	470	162.11
DCAT-B010-B030	1X3	1	5	470	162.64

DC Access Tee PVC Sch 80 x PVC Sch 80

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B015-B040	1-1/2X4	1	5	470	278.77
DCAT-B020-B040	2X4	1	5	470	291.37
DCAT-B030-B060	3X6	1	4	470	643.88
DCAT-B040-B080	4X8	1	2	470	1069.58
DCAT-B060-B100	6X10	1	0	470	2897.51
DCAT-B080-B120	8X12	1	0	470	3523.17

DC Access Tee CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C007-A030	3/4X3	1	5	470	87.29
DCAT-C010-A030	1X3	1	6	470	93.51
DCAT-C015-A040	1-1/2X4	1	6	470	142.84
DCAT-C020-A040	2X4	1	6	470	160.77
DCAT-C030-A060	3X6	1	4	470	459.55
DCAT-C040-A080	4X8	1	2	470	895.64
DCAT-C060-A100	6X10	1	0	470	2048.17
DCAT-C080-A120	8X12	1	0	470	2678.48

DC Access Tee CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C005-B020	1/2X2	1	10	470	89.66
DCAT-C007-B030	3/4X3	1	5	470	163.71
DCAT-C010-B030	1X3	1	5	470	169.93
DCAT-C015-B040	1-1/2X4	1	5	470	235.75
DCAT-C020-B040	2X4	1	5	470	314.66
DCAT-C030-B060	3X6	1	4	470	712.05
DCAT-C040-B080	4X8	1	2	470	1330.55
DCAT-C060-B100	6X10	1	0	470	2849.31
DCAT-C080-B120	8X12	1	0	470	4457.02

DC Access Tee CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C005-C020	1/2X2	1	10	470	149.91
DCAT-C007-C030	3/4X3	1	5	470	495.66
DCAT-C010-C030	1X3	1	6	470	500.42
DCAT-C015-C040	1-1/2X4	1	5	470	707.60
DCAT-C020-C040	2X4	1	5	470	714.94
DCAT-C030-C060	3X6	1	4	470	1530.16
DCAT-C040-C080	4X8	1	2	470	3886.15
DCAT-C060-C100	6X10	1	0	470	4155.95
DCAT-C080-C120	8X12	1	0	470	6333.11

DC Access Tee CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C005-G020	1/2X2	1	10	470	278.92
DCAT-C007-G030	3/4X3	1	5	470	587.09
DCAT-C010-G030	1X3	1	5	470	593.32

**Double Containment
Access Tees**

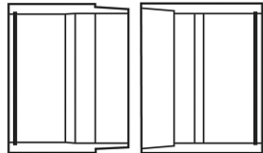


DC Access Tee
CPVC Sch 80 x PVC Sch 40 Clear
 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C015-G040	1-1/2X4	1	3	470	981.39
DCAT-C020-G040	2X4	1	6	470	988.74
DCAT-C030-G060	3X6	1	4	470	1413.88
DCAT-C040-G080	4X8	1	2	470	2525.98



Double Containment Closure Fittings



DC Closure Fittings are special split couplings for joining meeting runs of Containment piping, such as before the final Termination Fitting. Closure Fittings consist of a male component and a female component. An internal O-ring on each component serves as a "cement-wiper" during installation to assure a proper joint. A "One-step" type cement should be used to facilitate rapid assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Closure Fitting PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-A030	3	1	10	470	469.84
DCCF-A040	4	1	5	470	481.39
DCCF-A060	6	1	2	470	500.98
DCCF-A080	8	1	0	470	691.06
DCCF-A100	10	1	2	470	762.33
DCCF-A120	12	1	2	470	1204.21

DC Closure Fitting PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-B020	2	1	10	470	469.42
DCCF-B030	3	1	10	470	477.47
DCCF-B040	4	1	5	470	491.98
DCCF-B060	6	1	2	470	521.09
DCCF-B080	8	1	3	470	690.85
DCCF-B100	10	1	2	470	916.82
DCCF-B120	12	1	0	470	1469.69

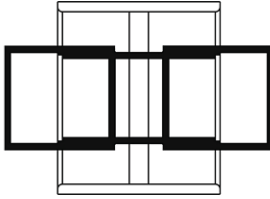
DC Closure Fitting CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-C020	2	1	10	470	476.56
DCCF-C030	3	1	10	470	496.43
DCCF-C040	4	1	5	470	518.13
DCCF-C060	6	1	2	470	631.55
DCCF-C080	8	1	3	470	849.59
DCCF-C100	10	1	2	470	1581.61
DCCF-C120	12	1	0	470	2509.35

DC Closure Fitting PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-G030	3	1	10	470	524.27
DCCF-G040	4	1	5	470	544.68
DCCF-G060	6	1	2	470	646.06
DCCF-G080	8	1	6	470	960.03

Double Containment Isolation Couplers



DC Isolation Couplers are used to isolate a containment section for improved location identification if a leak is detected. When cemented into place, a suitable seal is formed for isolation of the containment sections. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Isolation Coupler PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-A005-A020	1/2X2	1	5	470	34.66
DCDB-A007-A030	3/4X3	1	5	470	55.20
DCDB-A010-A030	1X3	1	5	470	55.48
DCDB-A015-A040	1-1/2X4	1	6	470	61.19
DCDB-A020-A040	2X4	1	4	470	65.41
DCDB-A030-A060	3X6	1	4	470	104.88
DCDB-A040-A080	4X8	1	4	470	150.91
DCDB-A060-A100	6X10	1	10	470	201.48
DCDB-A080-A120	8X12	1	0	470	340.80

DC Isolation Coupler PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-A005-G020	1/2X2	1	5	470	80.06
DCDB-A007-G030	3/4X3	1	5	470	98.96
DCDB-A010-G030	1X3	1	5	470	207.14
DCDB-A015-G040	1-1/2X4	1	4	470	238.53
DCDB-A020-G040	2X4	1	4	470	246.84
DCDB-A030-G060	3X6	1	4	470	270.03
DCDB-A040-G080	4X8	1	4	470	340.58

DC Isolation Coupler PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B005-A020	1/2X2	1	5	470	50.03
DCDB-B007-A030	3/4X3	1	5	470	59.91
DCDB-B010-A030	1X3	1	4	470	66.08
DCDB-B015-A040	1-1/2X4	1	4	470	70.66
DCDB-B020-A040	2X4	1	4	470	76.37
DCDB-B030-A060	3X6	1	5	470	109.55
DCDB-B040-A080	4X8	1	4	470	164.01
DCDB-B060-A100	6X10	1	0	470	214.33
DCDB-B080-A120	8X12	1	0	470	368.66

DC Isolation Coupler PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B005-G020	1/2X2	1	5	470	105.58
DCDB-B010-G030	1X3	1	5	470	211.97
DCDB-B015-G040	1-1/2X4	1	4	470	274.21
DCDB-B020-G040	2X4	1	4	470	300.16
DCDB-B030-G060	3X6	1	5	470	333.31
DCDB-B040-G080	4X8	1	4	470	393.49

DC Isolation Coupler PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B005-B020	1/2X2	1	5	470	127.97
DCDB-B007-B030	3/4X3	1	5	470	156.97
DCDB-B010-B030	1X3	1	5	470	188.31
DCDB-B015-B040	1-1/2X4	1	4	470	198.65

DC Isolation Coupler PVC Sch 80 x PVC Sch 80

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B020-B040	2X4	1	4	470	209.66
DCDB-B030-B060	3X6	1	4	470	226.51
DCDB-B040-B080	4X8	1	4	470	245.25
DCDB-B060-B100	6X10	1	0	470	251.23
DCDB-B080-B120	8X12	1	0	470	413.15

DC Isolation Coupler CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-A020	1/2X2	1	5	470	51.38
DCDB-C007-A030	3/4X3	1	5	470	68.91
DCDB-C010-A030	1X3	1	5	470	69.67
DCDB-C015-A040	1-1/2X4	1	4	470	81.77
DCDB-C020-A040	2X4	1	4	470	114.37
DCDB-C030-A060	3X6	1	5	470	185.21
DCDB-C040-A080	4X8	1	4	470	312.12
DCDB-C060-A100	6X10	1	0	470	480.38
DCDB-C080-A120	8X12	1	0	470	529.17

DC Isolation Coupler CPVC Sch 80 x Sch 80 Gray

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-B020	1/2X2	1	5	470	51.81
DCDB-C007-B030	3/4X3	1	5	470	60.98
DCDB-C010-B030	1X3	1	5	470	61.76
DCDB-C015-B040	1-1/2X4	1	4	470	86.92
DCDB-C020-B040	2X4	1	4	470	119.49
DCDB-C030-B060	3X6	1	5	470	195.22
DCDB-C040-B080	4X8	1	4	470	329.80
DCDB-C060-B100	6X10	1	0	470	517.32
DCDB-C080-B120	8X12	1	0	470	555.64

DC Isolation Coupler CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-C020	1/2X2	1	4	470	105.31
DCDB-C007-C030	3/4X3	1	5	470	116.43
DCDB-C010-C030	1X3	1	5	470	244.78
DCDB-C015-C040	1-1/2X4	1	4	470	265.84
DCDB-C020-C040	2X4	1	4	470	297.64
DCDB-C030-C060	3X6	1	4	470	385.98
DCDB-C040-C080	4X8	1	4	470	393.65
DCDB-C060-C100	6X10	1	0	470	658.07
DCDB-C080-C120	8X12	1	0	470	1023.19

DC Isolation Coupler CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-G020	1/2X2	1	5	470	111.40
DCDB-C007-G030	3/4X3	1	5	470	122.60
DCDB-C010-G030	1X3	1	5	470	254.71



Double Containment Isolation Couplers

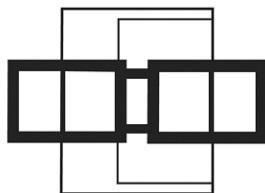
DC Isolation Coupler

CPVC Sch 80 x PVC Sch 40 Clear

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C015-G040	1-1/2X4	1	4	470	348.33
DCDB-C020-G040	2X4	1	4	470	380.89
DCDB-C030-G060	3X6	1	5	470	404.78

Double Containment Termination Fittings



DC Termination Fittings are a special configuration for starting or stopping the containment portion of a system. Termination Fittings consist of a reducer coupling to accept the Containment pipe that is pre-fabricated to an internal extender coupling for connection to existing Carrier system. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Termination Fitting PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-A005-A020	1/2X2	8	0	470	114.81
DCTM-A007-A030	3/4X3	1	7	470	120.80
DCTM-A010-A030	1X3	9	0	470	126.52
DCTM-A015-A040	1-1/2X4	4	0	470	136.57
DCTM-A020-A040	2X4	4	0	470	143.38
DCTM-A030-A060	3X6	1	2	470	195.61
DCTM-A040-A080	4X8	1	3	470	255.15
DCTM-A060-A100	6X10	1	2	470	483.08
DCTM-A080-A120	8X12	1	2	470	781.44

DC Termination Fitting PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-A005-G020	1/2X2	8	0	470	149.42
DCTM-A007-G030	3/4X3	1	7	470	244.51
DCTM-A010-G030	1X3	1	9	470	245.39
DCTM-A015-G040	1-1/2X4	1	4	470	308.18
DCTM-A020-G040	2X4	1	4	470	315.08
DCTM-A030-G060	3X6	1	2	470	488.85
DCTM-A040-G080	4X8	1	3	470	780.49

DC Termination Fitting PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B005-A020	1/2X2	8	0	470	125.94
DCTM-B007-A030	3/4X3	9	0	470	140.68
DCTM-B010-A030	1X3	8	0	470	141.09
DCTM-B015-A040	1-1/2X4	4	0	470	160.91
DCTM-B020-A040	2X4	5	0	470	168.21
DCTM-B030-A060	3X6	1	4	470	262.64
DCTM-B040-A080	4X8	1	3	470	335.99
DCTM-B060-A100	6X10	1	0	470	639.71
DCTM-B080-A120	8X12	1	3	470	949.65

DC Termination Fitting PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B005-G020	1/2X2	9	0	470	165.12
DCTM-B007-G030	3/4X3	10	0	470	263.33
DCTM-B010-G030	1X3	8	0	470	263.75
DCTM-B015-G040	1-1/2X4	1	4	470	335.91
DCTM-B020-G040	2X4	5	0	470	342.66
DCTM-B030-G060	3X6	1	2	470	561.39
DCTM-B040-G080	4X8	1	3	470	985.48

DC Termination Fitting PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B005-B020	1/2X2	10	0	470	142.87
DCTM-B007-B030	3/4X3	8	0	470	177.99
DCTM-B010-B030	1X3	8	0	470	178.41

DC Termination Fitting PVC Sch 80 x PVC Sch 80

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B015-B040	1-1/2X4	4	0	470	204.19
DCTM-B020-B040	2X4	4	0	470	211.48
DCTM-B030-B060	3X6	1	2	470	343.53
DCTM-B040-B080	4X8	1	2	470	427.39
DCTM-B060-B100	6X10	1	2	470	976.65
DCTM-B080-B120	8X12	1	3	470	1177.33

DC Termination Fitting CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-A020	1/2X2	8	0	470	126.73
DCTM-C007-A030	3/4X3	1	8	470	142.28
DCTM-C010-A030	1X3	8	0	470	148.53
DCTM-C015-A040	1-1/2X4	4	0	470	178.88
DCTM-C020-A040	2X4	3	0	470	191.52
DCTM-C030-A060	3X6	1	2	470	306.99
DCTM-C040-A080	4X8	1	3	470	398.96
DCTM-C060-A100	6X10	1	2	470	808.09
DCTM-C080-A120	8X12	1	3	470	1707.23

DC Termination Fitting CPVC Sch 80 x Sch 80 Gray

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-B020	1/2X2	8	0	470	143.67
DCTM-C007-B030	3/4X3	8	0	470	179.60
DCTM-C010-B030	1X3	8	0	470	185.82
DCTM-C015-B040	1-1/2X4	4	0	470	222.14
DCTM-C020-B040	2X4	1	4	470	234.79
DCTM-C030-B060	3X6	1	2	470	387.78
DCTM-C040-B080	4X8	1	3	470	490.34
DCTM-C060-B100	6X10	1	2	470	1146.08
DCTM-C080-B120	8X12	1	3	470	1934.75

DC Termination Fitting CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-G020	1/2X2	8	0	470	171.46
DCTM-C007-G030	3/4X3	10	0	470	283.14
DCTM-C010-G030	1X3	1	9	470	294.12
DCTM-C015-G040	1-1/2X4	10	0	470	385.94
DCTM-C020-G040	2X4	3	0	470	398.59
DCTM-C030-G060	3X6	1	15	470	674.59
DCTM-C040-G080	4X8	1	3	470	1021.40

DC Termination Fitting CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-C020	1/2X2	9	0	470	215.23
DCTM-C007-C030	3/4X3	8	0	470	219.94
DCTM-C010-C030	1X3	4	0	470	226.16
DCTM-C015-C040	1-1/2X4	4	0	470	286.26



Double Containment Termination Fittings

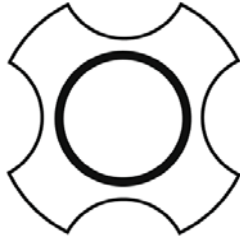
DC Termination Fitting

CPVC Sch 80 x CPVC Sch 80

(continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C020-C040	2X4	4	0	470	298.88
DCTM-C030-C060	3X6	1	3	470	541.38
DCTM-C040-C080	4X8	1	2	470	967.82
DCTM-C060-C100	6X10	1	2	470	1473.00
DCTM-C080-C120	8X12	1	3	470	2368.27

Double Containment Centralizers



Centralizers are a simple slip-on design that are positioned and held in place by a few wraps of clean-room adhesive on each side. Centralizers hold the Carrier piping centrally located within the Containment piping and are designed with an annular space for routing of leak detection cable, if used. See *Double Containment Design & Installation Guide* for proper installation.

The following Spacing Chart can be used as a guide for determining the quantity of Centralizers needed, based on temperature and Carrier pipe size and schedule selected.

RECOMMENDED MINIMUM CENTRALIZER SUPPORT SPACING (ft.) *

Carrier Size (in.)	PVC SCHEDULE 40 CARRIER					PVC SCHEDULE 80 CARRIER					CPVC SCHEDULE 80 CARRIER					
	Temperature °F					Temperature °F					Temperature °F					
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°	73°	100°	120°	140°	160°	180°
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	6	5-1/2	5	3-1/2	2
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	7	6-1/2	6	5-1/2	3-1/2	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7	7	6-1/2	6	4	3-1/2
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8	8	7-1/2	7	4-1/2	4
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9	8-1/2	8	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	10	9-1/2	9	8	5-1/2	5
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	11	10-1/2	10	9	6	5-1/2
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	11-1/2	11	10-1/2	9-1/2	6-1/2	6
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	12-1/2	12	11-1/2	10-1/2	7-1/2	6-1/2

Note: Specified minimum spacing can also be used for system support according to the secondary Containment pipe size and schedule used. Where practical, system support should correspond to internal carrier support (centralizers) to minimize concentrated point loads.

* **Note:** Data furnished is based on raw material manufacturer's information. This information can be considered a reliable recommendation, but not a guarantee. Actual service conditions and system parameters should be evaluated by qualified personnel.

DC Centralizer IPS O.D. x Sch 40 White I.D.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-A020	1/2X2	55	330	470	13.23
DCCT-H007-A030	3/4X3	55	220	470	14.73
DCCT-H010-A030	1X3	55	220	470	14.73
DCCT-H015-A040	1-1/2X4	55	0	470	19.11
DCCT-H020-A040	2X4	55	0	470	19.11
DCCT-H030-A060	3X6	55	0	470	24.41
DCCT-H040-A080	4X8	55	0	470	30.16
DCCT-H060-A100	6X10	25	0	470	39.13
DCCT-H080-A120	8X12	25	0	470	49.13

DC Centralizer IPS O.D. x Sch 80 CPVC I.D.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-C020	1/2X2	55	330	470	13.23
DCCT-H007-C030	3/4X3	55	220	470	14.73
DCCT-H010-C030	1X3	55	220	470	14.73
DCCT-H015-C040	1-1/2X4	55	0	470	19.11
DCCT-H020-C040	2X4	55	0	470	19.11
DCCT-H030-C060	3X6	55	0	470	24.41
DCCT-H040-C080	4X8	55	0	470	30.16
DCCT-H060-C100	6X10	1	24	470	39.13
DCCT-H080-C120	8X12	20	0	470	49.13

DC Centralizer IPS O.D. x Sch 40 Clear I.D.

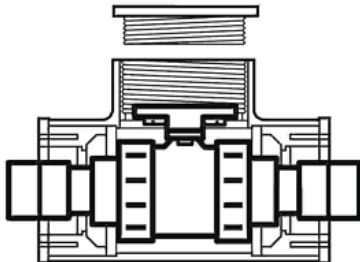
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-G020	1/2X2	55	330	470	13.23
DCCT-H007-G020	3/4X2	55	330	470	13.23
DCCT-H010-G030	1X3	55	220	470	14.73
DCCT-H015-G040	1-1/2X4	55	220	470	19.11
DCCT-H020-G040	2X4	55	0	470	19.11
DCCT-H030-G060	3X6	55	0	470	24.41
DCCT-H040-G080	4X8	55	0	470	30.16

DC Centralizer IPS O.D. x Sch 80 PVC I.D.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-B020	1/2X2	55	330	470	13.23
DCCT-H007-B020	3/4X2	55	330	470	13.23
DCCT-H010-B030	1X3	55	220	470	14.73
DCCT-H015-B040	1-1/2X4	55	0	470	19.11
DCCT-H020-B040	2X4	55	0	470	19.11
DCCT-H030-B060	3X6	55	0	470	24.41
DCCT-H040-B080	4X8	55	0	470	30.16
DCCT-H060-B100	6X10	25	0	470	39.13
DCCT-H080-B120	8X12	20	0	470	49.13



Double Containment Ball Valve Box With Valve



DC Ball Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Ball Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union 2000 Industrial Ball Valve with Lockout Handle and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union 2000 Industrial Ball Valve Specifications, Sizes 1/2" - 2":

Material: PVC/CPVC
 Seats: PTFE
 Seals: EPDM/FKM
 PR, Water: 235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
 All Valves assembled with Silicone-Free,
 Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Additional Sizes, Optional External Stem & Handle Extensions, Custom Elastomer Seals, or Seat & Seal Repair Kits

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union 2000 Industrial Ball Valve PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-A005-A020 294.92	VBA30-A005-A020 300.11	1	0	470
3/4X3	VBA20-A007-A030 307.17	VBA30-A007-A030 313.34	1	5	470
1X3	VBA20-A010-A030 315.89	VBA30-A010-A030 323.29	1	0	470
1-1/2X4	VBA20-A015-A040 542.13	VBA30-A015-A040 554.06	1	0	470
2X4	VBA20-A020-A040 616.43	VBA30-A020-A040 576.02	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-A005-G020 1308.18	VBA30-A005-G020 1313.37	1	0	470
3/4X3	VBA20-A007-G030 1316.97	VBA30-A007-G030 1323.14	1	0	470
1X3	VBA20-A010-G030 1327.69	VBA30-A010-G030 1336.14	1	0	470
1-1/2X4	VBA20-A015-G040 2387.56	VBA30-A015-G040 2399.48	1	0	470
2X4	VBA20-A020-G040 2423.22	VBA30-A020-G040 2438.36	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-B005-A020 309.49	VBA30-B005-A020 314.69	1	5	470
3/4X3	VBA20-B007-A030 322.21	VBA30-B007-A030 328.37	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1X3	VBA20-B010-A030 333.06	VBA30-B010-A030 626.58	1	0	470
1-1/2X4	VBA20-B015-A040 575.59	VBA30-B015-A040 730.40	1	0	470
2X4	VBA20-B020-A040 633.16	VBA30-B020-A040 758.16	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-B005-G020 1318.61	VBA30-B005-G020 1323.80	1	0	470
3/4X3	VBA20-B007-G030 1332.08	VBA30-B007-G030 1338.25	1	0	470
1X3	VBA20-B010-G030 1342.87	VBA30-B010-G030 1350.54	1	0	470
1-1/2X4	VBA20-B015-G040 2417.84	VBA30-B015-G040 2429.78	1	0	470
2X4	VBA20-B020-G040 2454.53	VBA30-B020-G040 2469.04	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-B005-B020 441.42	VBA30-B005-B020 623.96	1	0	470
3/4X3	VBA20-B007-B030 632.26	VBA30-B007-B030 638.43	1	0	470
1X3	VBA20-B010-B030 642.33	VBA30-B010-B030 649.38	1	0	470
1-1/2X4	VBA20-B015-B040 833.28	VBA30-B015-B040 845.34	1	0	470

**Double Containment
Ball Valve Box With Valve**



Valve Box, with PVC True Union 2000 Industrial Ball Valve

PVC Sch 80 x PVC Sch 80 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2X4	VBA20-B020-B040 978.56	VBA30-B020-B040 993.17	1	0	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-A020 333.21	VBA30-C005-A020 340.00	1	0	470
3/4X3	VBA20-C007-A030 345.96	VBA30-C007-A030 354.54	1	0	470
1X3	VBA20-C010-A030 366.87	VBA30-C010-A030 377.03	1	0	470
1-1/2X4	VBA20-C015-A040 649.68	VBA30-C015-A040 683.83	1	0	470
2X4	VBA20-C020-A040 698.25	VBA30-C020-A040 1075.27	1	0	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-B020 635.17	VBA30-C005-B020 641.96	1	0	470
3/4X3	VBA20-C007-B030 656.06	VBA30-C007-B030 664.63	1	5	470
1X3	VBA20-C010-B030 676.92	VBA30-C010-B030 687.08	1	4	470
1-1/2X4	VBA20-C015-B040 1009.69	VBA30-C015-B040 1027.96	1	3	470
2X4	VBA20-C020-B040 1068.99	VBA30-C020-B040 1099.72	1	5	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x CPVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-C020 959.13	VBA30-C005-C020 965.91	1	0	470
3/4X3	VBA20-C007-C030 983.27	VBA30-C007-C030 991.85	1	3	470
1X3	VBA20-C010-C030 1024.84	VBA30-C010-C030 1839.80	1	3	470
1-1/2X4	VBA20-C015-C040 1983.59	VBA30-C015-C040 2000.69	1	3	470
2X4	VBA20-C020-C040 2042.49	VBA30-C020-C040 2073.22	1	5	470

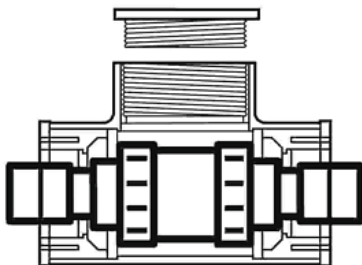
Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-G020 1334.95	VBA30-C005-G020 1341.73	1	4	470
3/4X3	VBA20-C007-G030 1355.83	VBA30-C007-G030 1364.40	1	0	470
1X3	VBA20-C010-G030 1376.68	VBA30-C010-G030 1410.68	1	5	470
1-1/2X4	VBA20-C015-G040 2480.95	VBA30-C015-G040 920.21	1	0	470
2X4	VBA20-C020-G040 2540.12	VBA30-C020-G040 2570.85	1	0	470



Double Containment Ball Check Valve Box With Valve



DC Ball Check Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Ball Check Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union 2000 Industrial Ball Check Valve and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union 2000 Industrial Ball Check Valve Specifications,
Sizes 1/2" - 2":

Material: PVC/CPVC
Seals: EPDM/FKM
PR, Water: 235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves assembled with Silicone-Free,
Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Additional Sizes, Custom Elastomer Seals, or Seat & Seal Repair Kits

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of flow.

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-A005-A020 299.28	VBC3-A005-A020 305.95	1	4	470
3/4X3	VBC2-A007-A030 309.68	VBC3-A007-A030 316.97	1	4	470
1X3	VBC2-A010-A030 322.39	VBC3-A010-A030 330.92	1	0	470
1-1/2X4	VBC2-A015-A040 567.82	VBC3-A015-A040 581.57	1	3	470
2X4	VBC2-A020-A040 615.11	VBC3-A020-A040 634.17	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-A005-G020 1314.63	VBC3-A005-G020 1320.35	1	4	470
3/4X3	VBC2-A007-G030 1324.80	VBC3-A007-G030 1332.08	1	4	470
1X3	VBC2-A010-G030 1337.51	VBC3-A010-G030 1346.06	1	3	470
1-1/2X4	VBC2-A015-G040 2409.67	VBC3-A015-G040 2423.43	1	3	470
2X4	VBC2-A020-G040 2456.83	VBC3-A020-G040 2475.89	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-B005-A020 315.68	VBC3-B005-A020 322.36	1	4	470
3/4X3	VBC2-B007-A030 330.01	VBC3-B007-A030 337.29	1	4	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1X3	VBC2-B010-A030 342.27	VBC3-B010-A030 344.14	1	3	470
1-1/2X4	VBC2-B015-A040 592.16	VBC3-B015-A040 605.89	1	3	470
2X4	VBC2-B020-A040 639.71	VBC3-B020-A040 658.77	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-B005-G020 1325.52	VBC3-B005-G020 1332.20	1	4	470
3/4X3	VBC2-B007-G030 1339.84	VBC3-B007-G030 1347.13	1	4	470
1X3	VBC2-B010-G030 1352.11	VBC3-B010-G030 605.89	1	3	470
1-1/2X4	VBC2-B015-G040 2434.01	VBC3-B015-G040 2447.75	1	3	470
2X4	VBC2-B020-G040 2481.47	VBC3-B020-G040 1029.38	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-B005-B020 625.76	VBC3-B005-B020 631.72	1	4	470
3/4X3	VBC2-B007-B030 640.07	VBC3-B007-B030 647.36	1	4	470
1X3	VBC2-B010-B030 652.33	VBC3-B010-B030 459.32	1	3	470
1-1/2X4	VBC2-B015-B040 962.69	VBC3-B015-B040 976.44	1	3	470

**Double Containment
Ball Check Valve Box With Valve**



**Valve Box, with PVC True Union 2000 Industrial Ball
Check Valve**

PVC Sch 80 x PVC Sch 80 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2X4	VBC2-B020-B040 1010.31	VBC3-B020-B040 1029.36	1	3	470

**Valve Box, with CPVC True Union 2000 Industrial Ball
Check Valve**

CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-A020 346.80	VBC3-C005-A020 355.59	1	4	470
3/4X3	VBC2-C007-A030 366.97	VBC3-C007-A030 377.31	1	4	470
1X3	VBC2-C010-A030 391.71	VBC3-C010-A030 402.03	1	3	470
1-1/2X4	VBC2-C015-A040 702.31	VBC3-C015-A040 723.06	1	4	470
2X4	VBC2-C020-A040 772.92	VBC3-C020-A040 801.65	1	4	470

**Valve Box, with CPVC True Union 2000 Industrial Ball
Check Valve**

CPVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-B020 651.59	VBC3-C005-B020 660.37	1	4	470
3/4X3	VBC2-C007-B030 671.76	VBC3-C007-B030 682.09	1	4	470
1X3	VBC2-C010-B030 694.81	VBC3-C010-B030 706.97	1	3	470
1-1/2X4	VBC2-C015-B040 999.45	VBC3-C015-B040 1020.20	1	3	470
2X4	VBC2-C020-B040 1075.38	VBC3-C020-B040 1104.12	1	0	470

**Valve Box, with CPVC True Union 2000 Industrial Ball
Check Valve**

CPVC Sch 80 x CPVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-C020 1031.77	VBC3-C005-C020 1040.56	1	0	470
3/4X3	VBC2-C007-C030 1052.07	VBC3-C007-C030 1062.40	1	4	470
1X3	VBC2-C010-C030 1074.98	VBC3-C010-C030 1087.14	1	4	470
1-1/2X4	VBC2-C015-C040 1868.85	VBC3-C015-C040 1889.62	1	3	470
2X4	VBC2-C020-C040 1936.81	VBC3-C020-C040 1965.56	1	3	470

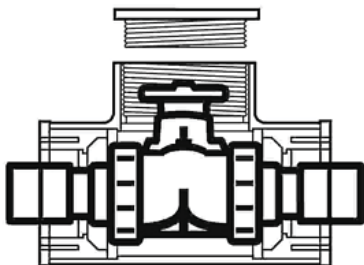
**Valve Box, with CPVC True Union 2000 Industrial Ball
Check Valve**

CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-G020 1323.97	VBC3-C005-G020 1332.75	1	4	470
3/4X3	VBC2-C007-G030 1371.68	VBC3-C007-G030 1382.01	1	4	470
1X3	VBC2-C010-G030 1394.58	VBC3-C010-G030 1406.73	1	3	470
1-1/2X4	VBC2-C015-G040 2515.74	VBC3-C015-G040 2536.49	1	4	470
2X4	VBC2-C020-G040 2586.34	VBC3-C020-G040 2615.09	1	4	470



Double Containment Diaphragm Valve Box With Valve



DC Diaphragm Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Diaphragm Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union Diaphragm Valve and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union Diaphragm Valve Specifications, Sizes 1/2" - 2":

Material: PVC/CPVC
Seals: EPDM/FKM
PR, Water: 235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area

Contact Spears® for Pricing & Availability on Additional Sizes, Elastomer Backed PTFE Diaphragms, or Diaphragm & Seal Repair Kits.

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-A005-A020 380.66	VBD30-A005-A020 394.93	1	0	470
3/4X3	VBD20-A007-A030 398.35	VBD30-A007-A030 414.55	1	0	470
1X3	VBD20-A010-A030 433.12	VBD30-A010-A030 450.87	1	0	470
1-1/2X4	VBD20-A015-A040 738.49	VBD30-A015-A040 782.71	1	0	470
2X4	VBD20-A020-A040 791.87	VBD30-A020-A040 853.82	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-A005-G020 1390.48	VBD30-A005-G020 1404.76	1	0	470
3/4X3	VBD20-A007-G030 1434.64	VBD30-A007-G030 1450.85	1	0	470
1X3	VBD20-A010-G030 1469.57	VBD30-A010-G030 1487.33	1	0	470
1-1/2X4	VBD20-A015-G040 2581.06	VBD30-A015-G040 2625.27	1	0	470
2X4	VBD20-A020-G040 2634.39	VBD30-A020-G040 2696.34	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-B005-A020 391.78	VBD30-B005-A020 406.04	1	0	470
3/4X3	VBD20-B007-A030 413.38	VBD30-B007-A030 429.59	1	0	470
1X3	VBD20-B010-A030 447.69	VBD30-B010-A030 465.45	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2X4	VBD20-B015-A040 762.99	VBD30-B015-A040 807.20	1	0	470
2X4	VBD20-B020-A040 816.60	VBD30-B020-A040 878.55	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-B005-G020 1430.49	VBD30-B005-G020 1444.76	1	0	470
3/4X3	VBD20-B007-G030 1449.67	VBD30-B007-G030 1465.88	1	0	470
1X3	VBD20-B010-G030 1483.99	VBD30-B010-G030 1501.75	1	0	470
1-1/2X4	VBD20-B015-G040 2605.40	VBD30-B015-G040 2649.61	1	0	470
2X4	VBD20-B020-G040 2659.17	VBD30-B020-G040 2721.12	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-B005-B020 701.82	VBD30-B005-B020 716.11	1	0	470
3/4X3	VBD20-B007-B030 723.38	VBD30-B007-B030 739.59	1	0	470
1X3	VBD20-B010-B030 757.67	VBD30-B010-B030 775.43	1	0	470
1-1/2X4	VBD20-B015-B040 1115.61	VBD30-B015-B040 1159.82	1	0	470
2X4	VBD20-B020-B040 1169.38	VBD30-B020-B040 1231.33	1	0	470

**Double Containment
Diaphragm Valve Box With Valve**



**Valve Box, with CPVC True Union Diaphragm Valve
CPVC Sch 80 x PVC Sch 40**

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-A020 491.73	VBD30-C005-A020 555.78	1	0	470
3/4X3	VBD20-C007-A030 522.32	VBD30-C007-A030 637.62	1	0	470
1X3	VBD20-C010-A030 589.54	VBD30-C010-A030 675.31	1	0	470
1-1/2X4	VBD20-C015-A040 937.07	VBD30-C015-A040 1040.33	1	0	470
2X4	VBD20-C020-A040 973.87	VBD30-C020-A040 1095.31	1	0	470

**Valve Box, with CPVC True Union Diaphragm Valve
CPVC Sch 80 x PVC Sch 80**

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-B020 761.13	VBD30-C005-B020 825.20	1	5	470
3/4X3	VBD20-C007-B030 832.38	VBD30-C007-B030 947.69	1	6	470
1X3	VBD20-C010-B030 877.61	VBD30-C010-B030 963.39	1	6	470
1-1/2X4	VBD20-C015-B040 1307.94	VBD30-C015-B040 1384.72	1	4	470
2X4	VBD20-C020-B040 1344.74	VBD30-C020-B040 1466.17	1	0	470

**Valve Box, with CPVC True Union Diaphragm Valve
CPVC Sch 80 x CPVC Sch 80**

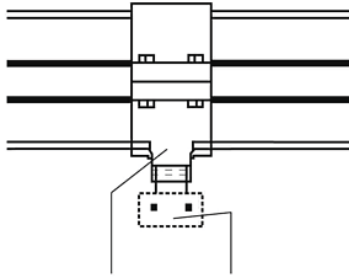
Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-C020 1089.14	VBD30-C005-C020 1153.20	1	0	470
3/4X3	VBD20-C007-C030 1159.59	VBD30-C007-C030 1274.91	1	0	470
1X3	VBD20-C010-C030 1204.77	VBD30-C010-C030 1290.55	1	0	470
1-1/2X4	VBD20-C015-C040 2133.62	VBD30-C015-C040 2210.38	1	0	470
2X4	VBD20-C020-C040 2170.41	VBD30-C020-C040 2291.85	1	0	470

**Valve Box, with CPVC True Union Diaphragm Valve
CPVC Sch 80 x PVC Sch 40 Clear**

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-G020 1501.41	VBD30-C005-G020 1565.47	1	0	470
3/4X3	VBD20-C007-G030 1532.14	VBD30-C007-G030 1647.46	1	0	470
1X3	VBD20-C010-G030 1577.39	VBD30-C010-G030 1663.16	1	0	470
1-1/2X4	VBD20-C015-G040 2779.19	VBD30-C015-G040 2855.62	1	0	470
2X4	VBD20-C020-G040 2815.99	VBD30-C020-G040 2937.42	1	0	470



Double Containment Clamp-on Saddles for Leak Detection Sensors



Leak Detection Sensor Saddles are special devices which can be installed on the Containment system where a "low-point" is desired for leak detection apparatus. Spears® Clamp-on style saddles feature an internal O-ring seal to allow easy installation anywhere on the containment piping. Saddles may also be used in Containment high points for air relief or for connection of Containment drainage valves (see note below). See *Double Containment Design & Installation Guide* for proper installation.

PVC White Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

with EPDM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

467SE-247SR	2X1/2	3/4	1	10	046	53.52
467SE-248SR	2X3/4	7/8	1	10	046	53.52
467SE-333SR ¹	3X1/2	7/8	1	10	046	71.82
467SE-334SR	3X3/4	7/8	1	10	046	71.82
467SE-415SR ¹	4X1/2	1-1/8	1	10	046	90.12
467SE-416SR ¹	4X3/4	1-1/8	1	10	046	90.12
467SE-523SR ¹	6X1/2	1-1/8	1	4	046	151.43
467SE-524SR ¹	6X3/4	1-1/8	1	4	046	151.43
467SE-573SR ¹	8X1/2	4	1	0	046	217.25
467SE-574SR ¹	8X3/4	4	1	0	046	217.25

¹ 1-Outlet Sized with Adapter

PVC White Saddles with FKM O-ring seals available by special order

PVC Gray Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

with EPDM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867S-247SR	2X1/2	3/4	1	10	086	57.77
867S-248SR	2X3/4	7/8	1	10	086	57.77
867S-333SR ¹	3X1/2	7/8	1	10	086	77.67
867S-334SR	3X3/4	7/8	1	10	086	77.67
867S-415SR ¹	4X1/2	1-1/8	1	10	086	97.79
867S-416SR ¹	4X3/4	1-1/8	1	10	086	97.79
867S-523SR ¹	6X1/2	1-1/8	1	4	086	141.37
867S-524SR ¹	6X3/4	1-1/8	1	4	086	141.37
867S-573SR ¹	8X1/2	4	1	0	086	262.14
867S-574SR ¹	8X3/4	4	1	0	086	262.14

¹ 1-Outlet sized with Adapter

PVC Gray Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

with FKM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867SV-247SR	2X1/2	3/4	1	10	086	64.64
867SV-248SR	2X3/4	7/8	1	10	086	64.64
867SV-333SR ¹	3X1/2	7/8	1	10	086	86.42
867SV-334SR	3X3/4	7/8	1	10	086	86.42
867SV-415SR ¹	4X1/2	1-1/8	1	10	086	109.12
867SV-416SR ¹	4X3/4	1-1/8	1	10	086	109.12
867SV-523SR ¹	6X1/2	1-1/8	1	4	086	160.27
867SV-524SR ¹	6X3/4	1-1/8	1	4	086	160.27
867SV-573SR ¹	8X1/2	4	1	0	086	286.42
867SV-574SR ¹	8X3/4	4	1	0	086	286.42

Clamp-on Saddle Specifications, Containment sizes 2" - 8":

Material: PVC White/PVC Gray/CPVC
 Seals: EPDM/FKM
 Hardware: Stainless Steel (no fluid contact)
 Outlet: Special Reinforced (SR) Female Plastic thread
 1/2" or 3/4" NPT (see note below)
 PR, Water: 235 psi @ 73°F (23°C), 2" - 4"
 200 psi @ 73°F (23°C), 6"
 150 psi @ 73°F (23°C), 8"

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Note: Saddles specified in this catalog are for listed containment pipe sizes through 8", with 1/2" or 3/4" NPT connections. For a wide variety of additional pipe and outlet sizes, including solvent weld outlets, please refer to Spears® *PVC/CPVC Clamp-On & Hot-Tap Saddles*.

PVC Gray Clamp-On Saddle x SR Thread (continued)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

with FKM O-ring Seal & SS Hardware

1-Outlet sized with Adapter

CPVC Gray Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------------	--------	----------	-----------	------------

with EPDM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867S-247CSR	2X1/2	3/4	1	10	096	96.75
867S-248CSR	2X3/4	7/8	1	10	096	96.75
867S-333CSR ¹	3X1/2	7/8	1	10	096	129.51
867S-334CSR	3X3/4	7/8	1	10	096	129.51
867S-415CSR ¹	4X1/2	1-1/8	1	10	096	162.99
867S-416CSR ¹	4X3/4	1-1/8	1	10	096	162.99
867S-523CSR ¹	6X1/2	1-1/8	1	4	096	271.65
867S-524CSR ¹	6X3/4	1-1/8	1	4	096	271.65
867S-573CSR	8X1/2	4	1	0	096	482.60
867S-574CSR ¹	8X3/4	4	1	0	096	482.60

¹ 1-Outlet sized with Adapter

with FKM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867SV-247CSR	2X1/2	3/4	1	10	096	107.72
867SV-248CSR	2X3/4	7/8	1	10	096	107.72
867SV-333CSR ¹	3X1/2	7/8	1	10	096	144.71
867SV-334CSR	3X3/4	7/8	1	10	096	144.71
867SV-415CSR ¹	4X1/2	1-1/8	1	10	096	182.83
867SV-416CSR ¹	4X3/4	1-1/8	1	10	096	182.83
867SV-523CSR ¹	6X1/2	1-1/8	1	4	096	304.72
867SV-524CSR ¹	6X3/4	1-1/8	1	4	096	304.72
867SV-573CSR ¹	8X1/2	4	1	0	096	524.93
867SV-574CSR ¹	8X3/4	4	1	0	096	524.93

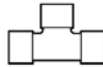
¹ 1-Outlet sized with Adapter

Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Tee Soc x Soc x Soc



280-102502	6	1	8	300	46.59
280-102499	6X2	1	6	300	36.79
280-102500	6X3	1	4	300	39.88
280-102501	6X4	1	4	300	41.73
280-102507	8	1	2	300	73.79
280-102503	8X2	1	2	300	47.46
280-102504	8X3	1	3	300	56.39
280-102505	8X4	1	2	300	58.85
280-102506	8X6	1	0	300	67.43
280-102513	10	1	0	300	92.01
280-102508	10X2	1	0	300	74.81
280-102509	10X3	1	0	300	76.04
280-102510	10X4	1	0	300	77.93
280-102511	10X6	1	0	300	79.73
280-102512	10X8	1	0	300	85.49
280-102520	12	1	0	300	149.65
280-102514	12X2	1	2	300	98.14
280-102515	12X3	1	0	300	104.32
280-102516	12X4	1	0	300	109.16
280-102517	12X6	1	0	300	111.33
280-102518	12X8	1	0	300	116.59
280-102519	12X10	1	0	300	127.58
280-102528	15	1	0	300	296.92
280-102521	15X2	1	0	300	159.47
280-102522	15X3	1	0	300	159.47
280-102523	15X4	1	0	300	165.62
280-102524	15X6	1	0	300	170.51
280-102525	15X8	1	0	300	190.15
280-102526	15X10	1	0	300	212.21
280-102527	15X12	1	0	300	247.80
280-102537	18	1	0	300	516.55
280-102529	18X2	1	0	300	300.56
280-102530	18X3	1	0	300	302.98
280-102531	18X4	1	0	300	305.48
280-102532	18X6	1	0	300	311.61
280-102533	18X8	1	0	300	316.54
280-102534	18X10	1	0	300	345.99
280-102535	18X12	1	0	300	381.59
280-102536	18X15	1	0	300	417.15
280-102547	20	1	0	300	639.23
280-102538	20X2	1	0	300	380.34
280-102539	20X3	1	0	300	384.27
280-102540	20X4	1	0	300	390.14
280-102541	20X6	1	0	300	402.44
280-102542	20X8	1	0	300	411.01
280-102543	20X10	1	0	300	455.16
280-102544	20X12	1	0	300	483.40
280-102545	20X15	1	0	300	519.02
280-102546	20X18	1	0	300	584.00

90° Elbow Soc x Soc



280-100812	6	1	4	300	73.61
280-100813	8	1	2	300	90.75
280-100814	10	1	0	300	144.79
280-100815	12	1	0	300	190.15
280-100816	15	1	0	300	310.38
280-100817	18	1	0	300	537.36
280-100818	20	1	0	300	723.93

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

11-1/4° Elbow Soc x Soc



280-100114	6	1	10	300	23.32
280-100115	8	1	4	300	33.15
280-100116	10	1	2	300	47.82
280-100117	12	1	2	300	66.24
280-100118	15	1	0	300	114.09
280-100119	18	1	0	300	196.32
280-100120	20	1	0	300	249.05

15° Elbow Soc x Soc



280-100234	6	1	10	300	23.32
280-100235	8	1	4	300	33.15
280-100236	10	1	2	300	47.82
280-100237	12	1	2	300	66.24
280-100238	15	1	0	300	114.09
280-100239	18	1	0	300	199.97
280-100240	20	1	0	300	258.84

22-1/2° Elbow Soc x Soc



280-100354	6	1	4	300	23.32
280-100355	8	1	3	300	33.15
280-100356	10	1	2	300	47.82
280-100357	12	1	2	300	66.24
280-100358	15	1	0	300	114.09
280-100359	18	1	0	300	199.97
280-100360	20	1	0	300	258.84

30° Elbow Soc x Soc



280-100474	6	1	8	300	39.23
280-100475	8	1	4	300	57.61
280-100476	10	1	2	300	71.15
280-100477	12	1	2	300	116.59
280-100478	15	1	0	300	187.72
280-100479	18	1	0	300	332.45
280-100480	20	1	0	300	369.29

45° Elbow Soc x Soc



280-100592	6	1	4	300	39.23
280-100593	8	1	4	300	57.61
280-100594	10	1	2	300	71.15
280-100595	12	1	2	300	116.59
280-100596	15	1	0	300	187.72
280-100597	18	1	0	300	332.45
280-100598	20	1	0	300	369.29

60° Elbow Soc x Soc



280-100702	6	1	4	300	73.61
280-100703	8	1	2	300	90.75
280-100704	10	1	0	300	144.79
280-100705	12	1	0	300	190.15
280-100706	15	1	0	300	310.38
280-100707	18	1	0	300	537.36
280-100708	20	1	0	300	723.93



Fabricated Fittings

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Coupling

Soc x Soc



280-100001	4 IPS	1	10	300	15.89
280-100002	6	1	5	300	19.61
280-100003	8	1	6	300	22.07
280-100004	10	1	4	300	30.68
280-100005	12	1	4	300	41.73
280-100006	15	1	0	300	73.61
280-100007	18	1	0	300	131.24
280-100008	20	1	0	300	161.93

Reducer

Soc x Soc



280-100928	8X6	1	2	300	34.35
2829-626	10X6	1	4	300	138.38
280-100931	10X8	1	4	300	52.76
280-100933	12X6	1	6	300	197.32
280-100934	12X8	1	4	300	153.36
280-100935	12X10	1	4	300	76.09
2829-726	15X6	1	0	300	342.43
2829-728	15X8	1	0	309	245.95
280-100939	15X10	1	0	300	174.87
280-100940	15X12	1	0	300	115.28
2829-786	18X6	1	0	300	514.23
2829-788	18X8	1	0	300	483.79
280-100944	18X10	1	0	300	423.29
280-100945	18X12	1	0	300	379.04
280-100946	18X15	1	0	300	185.26
2829-816	20X6	1	0	300	791.83
2829-818	20X8	1	0	300	753.89
2829-820	20X10	1	0	300	697.04
2829-822	20X12	1	0	300	640.64
2829-825	20X15	1	0	300	523.91
280-100953	20X18	1	0	300	271.12

PIP x IPS Reducer

Soc x Soc



280-101536	6X4	1	4	300	27.59
280-101537	8X6	1	8	300	39.88
280-101538	10X8	1	4	300	52.76
280-101534	12X8	1	4	300	153.36
280-101539	12X10	1	4	300	92.00
280-101540	15X12	1	0	300	147.18

IPS X PIP Adapter

Soc x Soc



280-101649	6	1	4	300	30.68
280-101650	8	1	4	300	45.36
280-101651	10	1	4	300	71.15
280-101652	12	1	4	300	100.59

Concrete Adapter

Soc x Concrete



280-101761	6X6	1	5	300	29.44
280-101762	8X8	1	6	300	42.92
280-101763	10X10	1	4	300	66.24
280-101764	12X12	1	4	300	93.20
280-101765	12X14	1	0	300	99.34
280-101766	15X14	1	0	300	137.37
280-101767	15X15	1	0	300	141.09

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Concrete Adapter (continued)

Soc x Concrete

280-101768	15X16	1	0	300	143.55
280-101769	18X18	1	0	300	166.85
280-101770	20X20	1	0	300	208.56

Linegate Valve Adapter

Linegate x Soc



280-101777	6	1	6	300	24.45
280-101778	8	1	6	300	27.74
280-101779	10	1	4	300	44.20
280-101780	12	1	4	300	62.58
280-101781	15	1	0	300	107.94
2845-180	18	1	0	300	155.42

Linegate Valve PIP Adapter

Linegate x Soc



2845-180P	18	1	0	300	155.42
-----------	----	---	---	-----	--------

Cross

Soc x Soc x Soc x Soc



280-103286	6	1	0	300	77.27
280-103283	6X2	1	0	300	61.33
280-103284	6X3	1	0	300	61.33
280-103285	6X4	1	4	300	67.43
280-103291	8	1	0	300	105.54
280-103287	8X2	1	0	300	85.85
280-103288	8X3	1	0	300	85.85
280-103289	8X4	1	0	300	92.00
280-103290	8X6	1	0	300	96.87
280-103297	10	1	0	300	143.55
280-103292	10X2	1	2	300	85.85
280-103293	10X3	1	0	300	88.95
280-103294	10X4	1	0	300	92.00
280-103295	10X6	1	0	300	103.06
280-103296	10X8	1	0	300	117.73
280-103304	12	1	0	300	199.97
280-103298	12X2	1	0	300	115.95
280-103299	12X3	1	0	300	117.13
280-103300	12X4	1	0	300	120.20
280-103301	12X6	1	0	300	130.04
280-103302	12X8	1	0	300	141.09
280-103303	12X10	1	0	300	170.51
280-103321	15	1	0	300	381.59
280-103313	15X2	1	0	300	170.51
280-103314	15X3	1	0	300	174.21
280-103315	15X4	1	0	300	182.82
280-103316	15X6	1	0	300	193.84
280-103317	15X8	1	0	300	208.56
280-103318	15X10	1	0	300	246.62
280-103319	15X12	1	0	300	296.92
280-103342	18	1	0	300	612.22
280-103332	18X2	1	0	300	331.26
280-103333	18X3	1	0	300	334.35
280-103334	18X4	1	0	300	337.42
280-103335	18X6	1	0	300	345.99
280-103336	18X8	1	0	300	355.79
280-103337	18X10	1	0	300	404.84
280-103338	18X12	1	0	300	430.69
280-103340	18X15	1	0	300	490.80
280-103354	20	1	0	300	806.11
280-103343	20X2	1	0	300	464.98
280-103344	20X3	1	0	300	468.66
280-103345	20X4	1	0	300	472.38

Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Cross (continued)

Soc x Soc x Soc x Soc

280-103346	20X6	1	0	300	483.40
280-103347	20X8	1	0	300	495.68
280-103348	20X10	1	0	300	531.23
280-103349	20X12	1	0	300	571.75
280-103351	20X15	1	0	300	598.73
280-103353	20X18	1	0	300	703.03

Orchard Riser

Saddle x Riser



2880-04030	4X4	1	0	301	35.52
2880-53230	6X4	1	25	301	35.52
2880-06030	6X6	1	25	301	61.33
2880-58230	8X4	1	25	301	35.52
2880-58530	8X6	1	25	301	46.59
2880-08030	8X8	1	12	301	85.89
2880-62430	10X4	1	30	301	36.79
2880-62630	10X6	1	20	301	46.59
2880-62830	10X8	1	16	301	63.79
2880-10030	10X10	1	6	301	122.65
2880-66430	12X4	1	25	301	38.01
2880-66630	12X6	1	20	301	46.59
2880-66830	12X8	1	12	301	63.79
2880-67030	12X10	1	9	301	88.31
2880-12030	12X12	1	6	301	171.75
2880-72430	15X4	1	25	301	40.46
2880-72630	15X6	1	25	301	53.94
2880-72830	15X8	1	12	301	72.39
2880-73030	15X10	1	9	301	100.59
2880-73230	15X12	1	6	301	138.62
2880-15030	15X15	1	4	301	287.08
2880-78430	18X4	1	25	301	44.20
2880-78630	18X6	1	25	301	52.46
2880-78830	18X8	1	10	301	76.09
2880-79030	18X10	1	9	301	101.82
2880-79230	18X12	1	6	301	157.01
2880-79530	18X15	1	4	301	226.96
2880-18030	18X18	1	3	301	430.62
2880-81430	20X4	1	0	301	46.62
2880-81630	20X6	1	12	301	61.36
2880-81830	20X8	1	12	301	92.00
2880-82030	20X10	1	6	301	143.56
2880-82230	20X12	1	5	301	174.21
2880-82530	20X15	1	0	301	256.46
2880-82830	20X18	1	0	301	315.31
2880-20030	20X20	1	2	301	555.82

Erosion Pot Riser

Saddle x Riser x Pot



2881-53232	6X4X8	1	16	301	67.99
2881-06032	6X6X10	1	0	301	81.36
2881-58232	8X4X8	1	20	301	67.99
2881-58532	8X6X10	1	0	301	81.36
2881-08032	8X8X12	1	0	301	115.05
2881-62432	10X4X8	1	16	301	67.99
2881-62632	10X6X10	1	0	301	81.36
2881-62832	10X8X12	1	12	301	115.05
2881-10032	10X10X15	1	0	301	158.07
2881-66432	12X4X8	1	20	301	67.99
2881-66632	12X6X10	1	12	301	81.36
2881-66832	12X8X12	1	12	301	115.05
2881-67032	12X10X15	1	0	301	158.07
2881-12032	12X12X18	1	0	301	209.24
2881-72432	15X4X8	1	0	301	67.99

Erosion Pot Riser (continued)

Saddle x Riser x Pot

2881-72632	15X6X10	1	12	301	81.36
2881-72832	15X8X12	1	0	301	115.05
2881-73032	15X10X15	1	0	301	158.07
2881-73232	15X12X18	1	0	301	209.24
2881-15032	15X15X20	1	0	301	308.03
2881-78432	18X4X8	1	0	301	67.99
2881-78632	18X6X10	1	0	301	81.36
2881-78832	18X8X12	1	0	301	115.05
2881-79032	18X10X15	1	0	301	158.07
2881-79232	18X12X18	1	0	301	209.24
2881-79532	18X15X20	1	0	301	308.03
2881-81432	20X4X8	1	0	301	67.99
2881-81632	20X6X10	1	0	301	81.36
2881-81832	20X8X12	1	0	301	115.05
2881-82032	20X10X15	1	0	301	158.07
2881-82232	20X12X18	1	0	301	209.24
2881-82532	20X15X20	1	0	301	308.03

Mechanical Vent Assembly

Saddle x Riser/Vent



2882-420	4X2	1	10	301	67.43
2882-422	4X3	1	0	301	104.24
2882-528	6X2	1	10	301	67.43
2882-530	6X3	1	5	301	104.24
2882-532	6X4	1	5	301	144.79
2882-578	8X2	1	8	301	67.43
2882-580	8X3	1	4	301	104.24
2882-582	8X4	1	8	301	144.79
2882-621	10X2	1	10	301	67.43
2882-623	10X3	1	5	301	104.24
2882-624	10X4	1	3	301	144.79
2882-661	12X2	1	10	301	67.43
2882-663	12X3	1	5	301	104.24
2882-664	12X4	1	4	301	144.79
2882-721	15X2	1	0	301	67.44
2882-723	15X3	1	6	301	104.24
2882-724	15X4	1	4	301	144.79
2882-781	18X2	1	0	301	67.44
2882-783	18X3	1	0	301	104.24
2882-784	18X4	1	4	301	144.79
2882-811	20X2	1	0	301	67.44
2882-813	20X3	1	0	301	104.24
2882-814	20X4	1	0	301	144.79

Mechanical Vent Riser

Saddle x Riser/Vent x Chamber



2883-52842	6X2X4	1	0	301	78.52
2883-57842	8X2X6	1	0	301	84.66
2883-58042	8X3X6	1	0	301	106.71
2883-62142	10X2X8	1	12	301	103.06
2883-62342	10X3X8	1	8	301	122.65
2883-62442	10X4X8	1	12	301	144.79
2883-66142	12X2X10	1	0	301	132.48
2883-66342	12X3X10	1	16	301	150.88
2883-66442	12X4X10	1	12	301	171.75
2883-72442	15X4X12	1	6	301	223.27
2883-78442	18X4X15	1	0	301	288.31
2883-81442	20X4X18	1	0	301	406.12

Vent Base

Saddle x Riser x Outlet



2888-532020	6X4X2	1	2	301	50.94
-------------	-------	---	---	-----	-------



Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Vent Base (continued)

Saddle x Riser x Outlet

2888-585030	8X6X3	1	0	301	157.60
2888-585040	8X6X4	1	4	301	79.73
2888-628060	10X8X6	1	0	301	122.65
2888-670060	12X10X6	1	0	301	130.04
2888-732080	15X12X8	1	0	301	195.05
2888-795080	18X15X8	1	0	301	269.94
2888-828080	20X18X8	1	0	301	488.35

Low Head Wye

Soc x Soc



2875-060	6	1	2	300	86.11
2875-080	8	1	0	300	113.89
2875-100	10	1	0	300	148.17
2875-120	12	1	0	300	206.43
2875-150	15	1	0	300	319.35
2875-183	18	1	0	300	767.89
2875-200	20	1	0	300	1029.76

Reducing Low Head Wye

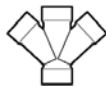
Soc x Soc



2875-532	6X4	1	4	300	67.15
2875-585	8X6	1	0	300	99.34
2875-626	10X6	1	0	300	127.04
2875-628	10X8	1	0	300	134.01
2875-666	12X6	1	0	300	139.62
2875-668	12X8	1	0	300	160.28
2875-670	12X10	1	0	300	171.22
2875-726	15X6	1	0	300	188.21
2875-728	15X8	1	0	300	203.99
2875-730	15X10	1	0	300	223.41
2875-732	15X12	1	0	300	245.28
2875-786	18X6	1	0	300	303.59
2875-788	18X8	1	0	300	308.39
2875-790	18X10	1	0	300	337.00
2875-792	18X12	1	0	300	371.67
2875-795	18X15	1	0	300	406.34
2875-816	20X6	1	0	300	379.47
2875-818	20X8	1	0	300	385.47
2875-820	20X10	1	0	300	421.24
2875-822	20X12	1	0	300	464.58
2875-825	20X15	1	0	300	507.94
2875-828	20X18	1	0	300	893.68

Double Wye

Soc x Soc



2876-060	6	1	0	300	135.23
2876-080	8	1	0	300	154.05
2876-100	10	1	0	300	257.96
2876-120	12	1	0	300	308.09
2876-150	15	1	0	300	476.64
2876-183	18	1	0	300	1292.38
2876-200	20	1	0	300	1837.24

Reducing Double Wye

Soc x Soc



2876-585	8X6	1	0	300	108.76
2876-626	10X6	1	0	300	154.05
2876-628	10X8	1	0	300	170.38
2876-666	12X6	1	0	300	208.39
2876-668	12X8	1	0	300	239.23

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Double Wye (continued)

Soc x Soc

2876-670	12X10	1	0	300	286.01
2876-726	15X6	1	0	300	280.91
2876-728	15X8	1	0	300	304.45
2876-730	15X10	1	0	300	333.47
2876-732	15X12	1	0	300	452.14
2876-786	18X6	1	0	300	453.14
2876-788	18X8	1	0	300	460.28
2876-790	18X10	1	0	300	502.98
2876-792	18X12	1	0	300	554.74
2876-795	18X15	1	0	300	606.48
2876-816	20X6	1	0	300	625.86
2876-818	20X8	1	0	300	642.18
2876-820	20X10	1	0	300	657.37
2876-822	20X12	1	0	300	693.40
2876-825	20X15	1	0	300	758.11
2876-828	20X18	1	0	300	1402.01

End Cap

Soc



280-107539	4 IPS	1	10	300	11.04
280-107540	6	1	10	300	12.26
280-107541	8	10	0	300	20.83
280-107542	10	1	10	300	33.15
280-107543	12	1	10	300	51.52
280-107545	15	1	5	300	72.39
280-107547	18	1	5	300	132.48
280-107548	20	1	5	300	177.89

Surface Reducer

Soc



280-102013	6X2	1	10	300	19.61
280-102015	6X3	1	10	300	19.61
280-102016	6X4	1	10	300	19.61
280-102018	8X2	1	10	300	26.95
280-102020	8X3	1	10	300	26.95
280-102021	8X4	1	10	300	26.95
280-102022	8X6	1	10	300	26.95
280-102024	10X2	1	10	300	53.94
280-102026	10X3	1	10	300	53.94
280-102027	10X4	1	10	300	53.94
280-102028	10X6	1	10	300	53.94
280-102029	10X8	1	10	300	53.94
280-102031	12X2	1	10	300	66.24
280-102033	12X3	1	10	300	66.24
280-102034	12X4	1	10	300	66.24
280-102035	12X6	1	10	300	66.24
280-102036	12X8	1	10	300	66.24
280-102037	12X10	1	10	300	66.24
280-102048	15X2	1	5	300	93.20
280-102050	15X3	1	5	300	93.20
280-102051	15X4	1	5	300	93.20
280-102052	15X6	1	5	300	93.20
280-102053	15X8	1	5	300	93.20
280-102054	15X10	1	5	300	93.20
280-102055	15X12	1	5	300	93.20
280-102067	18X2	1	5	300	139.85
280-102069	18X3	1	4	300	139.85
280-102070	18X4	1	5	300	139.85
280-102071	18X6	1	5	300	139.85
280-102072	18X8	1	5	300	139.85
280-102073	18X10	1	5	300	139.85
280-102074	18X12	1	5	300	139.85
280-102075	18X15	1	5	300	139.85

Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Surface Reducer (continued)

Soc

280-102077	20X2	1	0	300	185.26
280-102136	20X3	1	0	300	185.26
280-102137	20X4	1	5	300	185.26
280-102138	20X6	1	5	300	185.26
280-102139	20X8	1	5	300	185.26
280-102140	20X10	1	5	300	185.26
280-102141	20X12	1	5	300	185.26
280-102142	20X15	1	5	300	185.26
280-102143	20X18	1	5	300	185.26

Saddle

Soc



280-101788	4X2	1	40	300	19.61
280-101789	6X2	1	10	300	19.61
280-101790	8X2	1	10	300	19.61
280-101791	10X2	1	10	300	19.61
280-101792	12X2	1	10	300	19.61
280-101793	15X2	1	10	300	19.61
280-101794	18X2	1	20	300	19.61
280-101795	20X2	1	10	300	20.83
280-101796	4X3	1	5	300	20.83
280-101797	6X3	1	10	300	20.83
280-101798	8X3	1	10	300	20.83
280-101799	10X3	1	10	300	20.83
280-101800	12X3	1	10	300	20.83
280-101801	15X3	1	10	300	20.83
280-101802	18X3	1	20	300	20.83
280-101803	20X3	1	10	300	30.92
280-101804	6X4	1	10	300	23.32
280-101805	8X4	1	10	300	23.32
280-101806	10X4	1	10	300	23.32
280-101807	12X4	1	10	300	23.32
280-101808	15X4	1	10	300	23.32
280-101809	18X4	1	10	300	23.32
280-101810	20X4	1	8	300	23.32
280-101811	8X6	1	8	300	29.44
280-101812	10X6	1	8	300	29.44
280-101813	12X6	1	8	300	29.44
280-101814	15X6	1	8	300	29.44
280-101815	18X6	1	10	300	29.44
280-101816	20X6	1	7	300	33.15
280-101817	10X8	1	8	300	34.35
280-101818	12X8	1	8	300	34.35
280-101819	15X8	1	8	300	34.35
280-101820	18X8	1	8	300	38.01
280-101821	20X8	1	8	300	53.94
280-101822	12X10	1	10	300	41.73
280-101823	15X10	1	10	300	47.82
280-101824	18X10	1	10	300	49.05
280-101825	20X10	1	7	300	90.75
280-101826	15X12	1	5	300	63.79
280-101827	18X12	1	3	300	82.16
280-101828	20X12	1	0	300	99.34
280-101829	18X15	1	0	300	106.71
280-101830	20X15	1	0	300	136.16
280-101831	20X18	1	0	300	150.88

Stub Saddle

Soc



280-101883	4X2	1	10	300	24.45
280-101884	6X2	1	10	300	24.45
280-101885	8X2	1	10	300	24.45
280-101886	10X2	1	10	300	24.45

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Stub Saddle (continued)

Soc

280-101887	12X2	1	10	300	25.75
280-101888	15X2	1	10	300	28.22
280-101889	18X2	1	10	300	28.22
280-101890	20X2	1	10	300	31.88
280-101891	4X3	1	10	300	29.44
280-101892	6X3	1	5	300	29.44
280-101893	8X3	1	5	300	29.44
280-101894	10X3	1	5	300	29.44
280-101895	12X3	1	5	300	31.88
280-101896	15X3	1	5	300	31.88
280-101897	18X3	1	10	300	31.88
280-101898	20X3	1	5	300	34.35
280-101899	6X4	1	10	300	34.35
280-101900	8X4	1	10	300	34.35
280-101901	10X4	1	10	300	34.35
280-101902	12X4	1	10	300	34.35
280-101903	15X4	1	10	300	34.35
280-101904	18X4	1	10	300	36.09
280-101905	20X4	1	10	300	36.79
280-101906	8X6	1	6	300	40.46
280-101907	10X6	1	8	300	40.46
280-101908	12X6	1	6	300	40.46
280-101909	15X6	1	8	300	42.92
280-101910	18X6	1	10	300	42.92
280-101911	20X6	1	7	300	49.05
280-101912	10X8	1	4	300	53.94
280-101913	12X8	1	3	300	53.94
280-101914	15X8	1	5	300	57.61
280-101915	18X8	1	5	300	61.33
280-101916	20X8	1	0	300	77.27
280-101917	12X10	1	3	300	71.15
280-101918	15X10	1	5	300	74.84
280-101919	18X10	1	4	300	76.09
280-101920	20X10	1	0	300	117.73
280-101921	15X12	1	0	300	106.71
280-101922	18X12	1	0	300	123.91
280-101923	20X12	1	0	300	141.09
280-101924	18X15	1	0	300	166.85
280-101925	20X15	1	0	300	197.51
280-101926	20X18	1	0	300	240.45

Same Size Saddle

Soc



280-101937	6X6	1	10	300	33.71
280-101938	8X8	1	5	300	49.05
280-101939	10X10	1	5	300	67.43
280-101940	12X12	1	4	300	98.14
280-101941	15X15	1	0	300	147.18
280-101942	18X18	1	0	300	251.52
280-101943	20X20	1	0	300	343.53

Same Size Stub Saddle

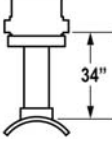
Soc



280-101949	6X6	1	5	300	58.85
280-101950	8X8	1	4	300	94.21
280-101951	10X10	1	0	300	115.28
280-101952	12X12	1	0	300	131.24
280-101953	15X15	1	0	300	196.32
280-101954	18X18	1	0	300	341.08
280-101955	20X20	1	0	300	398.72



Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories

	Size	Disc Code	Part Number List Price Each
DISTRIBUTING GATE RISER (Saddle x Riser x Pot)			
GATES NOT INCLUDED IN PRICE (See CHART #1 on Next Page)			
	6x4x8	301	2884-53234 --- 103.08
	8x4x8	301	2884-58234 --- 103.08
	8x6x10	301	2884-58534 --- 132.48
	10x4x8	301	2884-62434 --- 103.08
	10x6x10	301	2884-62634 --- 132.48
	10x8x12	301	2884-62834 --- 196.32
	12x4x8	301	2884-66434 --- 103.08
	12x6x10	301	2884-66634 --- 132.48
	12x8x12	301	2884-66834 --- 196.32
	12x10x15	301	2884-67034 --- 280.36
	15x4x8	301	2884-72334 --- 103.08
	15x6x10	301	2884-72634 --- 132.48
	15x8x12	301	2884-72834 --- 196.32
	15x10x15	301	2884-73034 --- 281.00
	15x12x18	301	2884-73234 --- 510.40
	18x4x8	301	2884-78434 --- 103.08
	18x6x10	301	2884-78634 --- 132.48
	18x8x12	301	2884-78834 --- 196.32
	18x10x15	301	2884-79034 --- 280.36
	18x12x18	301	2884-79234 --- 510.40
	20x4x8	301	2884-81434 --- 103.08
	20x6x10	301	2884-81634 --- 132.48
	20x8x12	301	2884-81834 --- 196.34
	20x10x15	301	2884-82034 --- 280.36
	20x12x18	301	2884-82234 --- 510.40

HOW TO ORDER A DISTRIBUTING GATE RISER

Choose the Distributing Gate Riser size required:

Example: 6 x 4 x 8

(6" Saddle x 4" Riser x 8" Pot)
Part Number 2884-53234 ---

Next, choose the Gate size required from CHART #1:

Example: 2-1/2" Gates

(Code Number "2")

Next, add this Code Number to the end of the Part Number:

Example: 2884-53234 2 ---

Next, choose the position required for the gates from CHART #2:

Example: Standard 2-Way Gates

(Code Number "05")

Next, add this Code Number to the very end of the Part Number:

Example: 2884-532342 05

The Part Number is now complete for a
6" Saddle x 4" Riser x 8" Pot
with 2-1/2" Standard 2-Way Gates --

2884-53234205

HOW TO CALCULATE A DISTRIBUTING GATE RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:

Example: \$103.08

Next, find the List Price Each for the size of Gate required from CHART #1:

Example: 2-1/2" Gate -- \$15.92 each

Next, multiply the Gate price by the number of Gates required:

Example: \$15.92 x 2 = \$31.84

Next, add this amount to the base unit price, for the Total List Price Each:

Example: \$103.08 + \$31.84 = \$134.92

The Total List Price Each for a
6" Saddle x 4" Riser x 8" Pot with 2-1/2"
Standard 2-Way Gates installed is

\$134.92

Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories



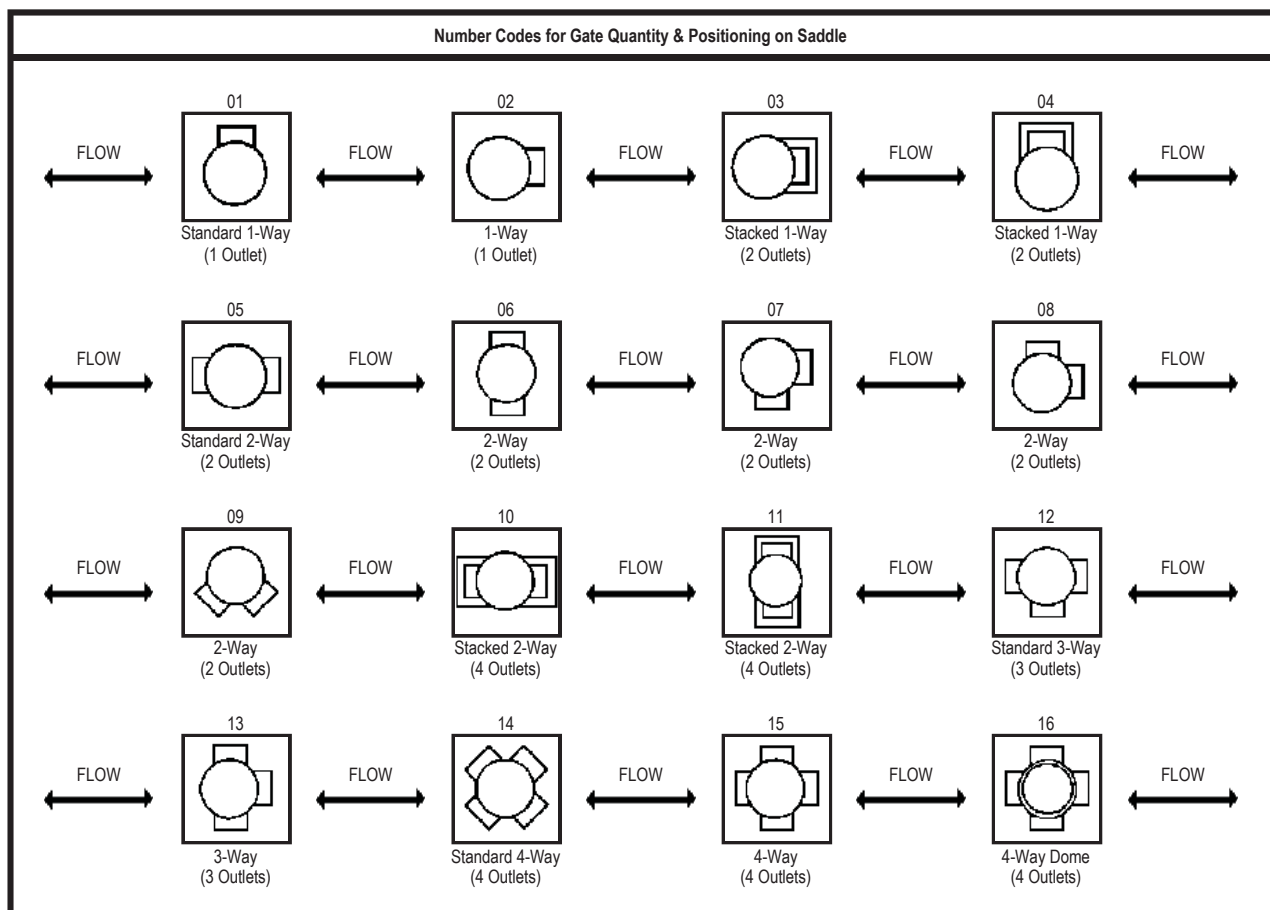
CHART #1

Gate/Hole Size	Distributing Gate Size Code	Disc Code	List Price Each Installed
2" Gate	1	301	13.49
2- 1/2" Gate	2	301	15.92
3" Gate	3	301	18.38
4" Gate	4	301	26.98
2" Hole*	5	301	—
2- 1/2" Hole*	6	301	—
3" Hole*	7	301	—
4" Hole*	8	301	—

* Hole Size Codes **MUST** be chosen **ONLY** when ordering with **NO GATES INSTALLED**.

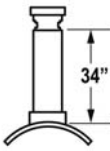
Number code for Gate Hole positioning must also be chosen from **CHART #2** below.

CHART #2





Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Part Number		Size	Disc Code	List Price Each				
RITE FLO RISER (Saddle x Riser)								
GATES NOT INCLUDED IN PRICE (See CHART #3 on Next Page)				1 Outlet	2 Outlets	3 Outlets	4 Outlets	
	2885-58534	8x6	---	301	124.62	128.53	131.15	133.41
	2885-62634	10x6	---	301	124.62	128.53	131.15	133.41
	2885-66634	12x6	---	301	124.62	128.53	131.15	133.41
	2885-72634	15x6	---	301	124.62	128.53	131.15	133.41
	2885-78634	18x6	---	301	124.62	128.53	131.15	133.41
	2885-81634	20x6	---	301	124.62	128.53	131.15	133.41

HOW TO ORDER A RITE FLO RISER

Choose the Rite Flo Riser size required:

Example: 8 x 6 Riser
(8" Saddle x 6" Riser)
Part Number 2885-58534 ---

Next, choose the Gate size required from CHART #3:

Example: 3" Gates
(Code Number "3")

Next, add this Code Number to the end of the Part Number:

Example: 2885-58534 3---

Next, choose the position required for the gates from CHART #4:

Example: Standard 2-Way (2 Outlets)
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:

Example: 2885-585343 05

The Part Number is now complete for an 8" Saddle x 6" Standard 2-Way Riser
with 3" Gates --

2885-58534305

HOW TO CALCULATE A RITE FLO RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:

Example: \$133.41

Next, find the List Price Each for the 3" Gate required from CHART #3:

Example: 3" Gate -- \$47.20 each

Next, multiply the Gate price by the number of Gates required:

Example: \$47.20 x 4 = \$188.80

Next, add this amount to the base unit price, for the Total List Price Each:

Example: \$133.41 + \$188.80 = \$322.21

The Total List Price Each for a
8" Saddle x 6" 4-Way Dome Riser
with 3" Gates installed is

\$322.21

Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories



CHART #3

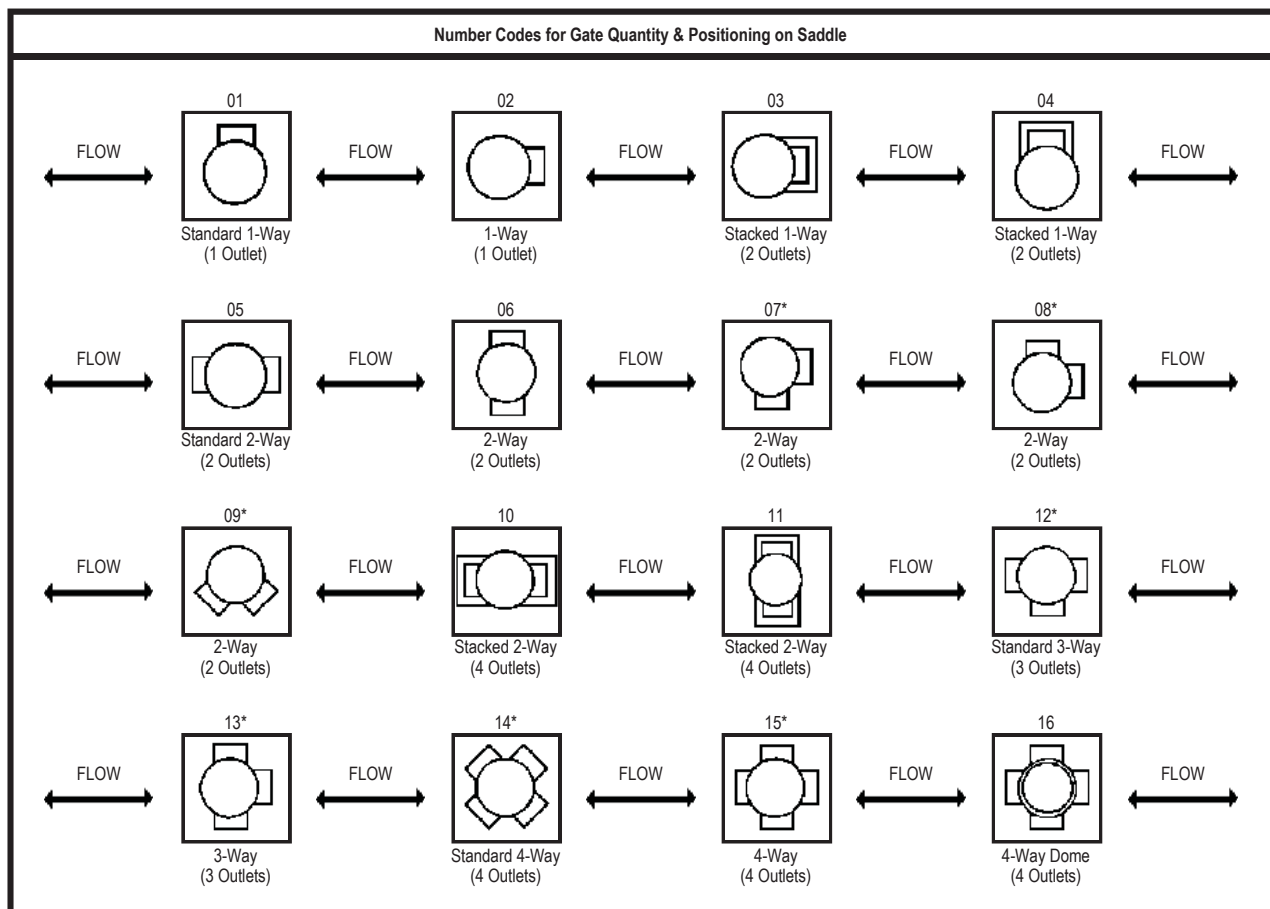
Gate/Hole Size	Gate Size Code	Disc Code	Rite Flo List Price Each Installed
3" Gate	3	301	47.20
2" Hole*	5	301	—
3" Hole*	7	301	—

* Hole Size Codes **MUST** be chosen **ONLY** when ordering with **NO GATES INSTALLED**.

Number code for Gate Hole positioning must also be chosen from **CHART #4** below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers **ONLY**.

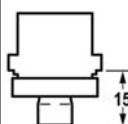
CHART #4



*Staggered gates are provided for Rite Flo Risers to allow adequate room for gates to operate properly.



Fabricated Fittings PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Size	Disc Code	Part Number	List Price Each
DISTRIBUTING GATE REPAIR UNIT (Riser x Pot)			
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			
	4x8	301	28840-42715 --- 85.89
	6x10	301	28840-53715 --- 115.33
	8x12	301	28840-59115 --- 165.61
	10x15	301	28840-63515 --- 218.92
	12x18	301	28840-67815 --- 413.51

HOW TO ORDER DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS

Choose the Repair Unit size required:

Example: 4 x 8 Distributing Gate Repair Unit
(4" Riser x 8" Pot)
Part Number 28840-42715 _ _ _

Next, choose the Gate size required from CHART #5:

Example: 2" Gate
(Code Number "1")

Next, add this Code Number to the end of the

Part Number:
Example: 28840-42715 1 _ _

Next, choose the position required for the gates from CHART #6:

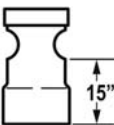
Example: 4-Way
(Code Number "14")

Next, add this Code Number to the very end of the Part Number:

Example: 28840-427151 14

The Part Number is now complete for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit with 2" 4-Way Gates –

28840-4271514

Part Number Size		Disc Code	List Price Each			
RITE FLO RISER REPAIR UNIT						
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	28850-06015 6" ---	301	62.95	68.18	73.39	78.67

HOW TO CALCULATE DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each above:

Example: \$85.89

Next, find the List Price Each for the size of Gate required from CHART #5:

Example: 2" Gate – \$13.50 each

Next, multiply the Gate price by the number of Gates required:

Example: \$13.50 x 4 = \$54.00

Next, add this amount to the base unit price, for the Total List Price Each:

Example: \$85.89 + \$54.00 = \$139.89

The Total List Price Each for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit
with 2" 4-Way Gates installed is

\$139.89



CHART #5

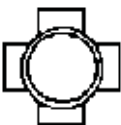
Gate/Hole Size	Gate Size Code	Disc Code	Distributing Gate List Price Each Installed	Rite Flo Gate List Price Each Installed
2" Gate	1	301	13.49	—
2- 1/2" Gate	2	301	15.92	—
3" Gate	3	301	18.38	47.20
4" Gate	4	301	26.98	—
2" Hole*	5	301	—	—
2- 1/2" Hole*	6	301	—	—
3" Hole*	7	301	—	—
4" Hole*	8	301	—	—

* Hole Size Codes **MUST** be chosen **ONLY** when ordering with **NO GATES INSTALLED**.

Number code for Gate Hole positioning must also be chosen from CHART #6 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers **ONLY**.

CHART #6

Repair Unit Number Codes for Gate Quantity & Positioning			
02  1-Way (1 Outlet)	04  Stacked 1-Way (2 Outlets)	06  2-Way (2 Outlets)	08*  2-Way (2 Outlets)
10  Stacked 2-Way (4 Outlets)	12*  3-Way (3 Outlets)	14*  4-Way (4 Outlets)	16  4-Way Dome (4 Outlets)

*Staggered gates are provided for Rite Flo Riser Repair Units to allow adequate room for gate to operate properly.

All Low Head PIP Fabricated Fittings showing size outlets of 4" and under are IPS size on that outlet



Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings

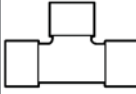
	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Tee (Socket)

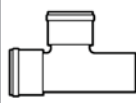
	6	290-102502 89.55	300-102502 107.15	3301-060P 107.73
	6X2	290-102499 62.58	300-102499 72.39	3301-528P 81.24
	6X3	290-102500 67.43	300-102500 77.27	3301-530P 87.42
	6X4	290-102501 69.93	300-102501 80.94	3301-532P 90.69
	8	290-102507 154.43	300-102507 158.24	3301-080P 215.97
	8X2	290-102503 77.27	300-102503 89.55	3301-578P 122.51
	8X3	290-102504 85.85	300-102504 96.87	3301-580P 133.51
	8X4	290-102505 96.87	300-102505 105.54	3301-582P 144.42
	8X6	290-102506 115.28	300-102506 130.04	3301-585P 178.94
	10	290-102513 223.27	300-102513 254.00	3301-100P 322.38
	10X2	290-102508 112.85	300-102508 123.91	3301-621P 170.32
	10X3	290-102509 123.91	300-102509 158.24	3301-623P 216.73
	10X4	290-102510 143.55	300-102510 161.93	3301-624P 223.28
	10X6	290-102511 158.24	300-102511 165.62	3301-626P 244.97
	10X8	290-102512 182.82	300-102512 220.85	3301-628P 303.81
	12	290-102520 316.54	300-102520 404.84	3301-120P 506.86
	12X2	290-102514 149.65	300-102514 179.06	3301-661P 266.96
	12X3	290-102515 176.69	300-102515 214.68	3301-663P 295.07
	12X4	290-102516 199.97	300-102516 238.01	3301-664P 325.83
	12X6	290-102517 210.99	300-102517 258.84	3301-666P 356.63
	12X8	290-102518 249.05	300-102518 305.48	3301-668P 422.18
	12X10	290-102519 287.08	300-102519 352.11	3301-670P 468.41
	15	290-102528 592.58	300-102528 696.89	3301-150P 905.48
	15X2	290-102521 276.06	300-102521 322.65	3301-721P 404.84
	15X3	290-102522 290.78	300-102522 339.85	3301-723P 430.69
	15X4	290-102523 299.36	300-102523 354.58	3301-724P 445.36
	15X6	290-102524 325.09	300-102524 390.14	3301-726P 504.26
	15X8	290-102525 375.41	300-102525 436.78	3301-728P 580.36
	15X10	290-102526 425.73	300-102526 516.55	3301-730P 656.39
	15X12	290-102527 487.04	300-102527 580.36	3301-732P 757.67
	18	290-102537 917.74	300-102537 1069.86	3301-180P 1523.89
	18X2	290-102529 479.53	300-102529 523.85	3301-781P 639.23
	18X3	290-102530 494.45	300-102530 537.36	3301-783P 715.27
	18X4	290-102531 547.19	300-102531 591.39	3301-784P 761.92
	18X6	290-102532 563.14	300-102532 612.22	3301-786P 780.33
	18X8	290-102533 586.47	300-102533 637.99	3301-788P 871.11
	18X10	290-102534 619.59	300-102534 685.85	3301-790P 952.08

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Tee (Socket) (continued)

	18X12	290-102535 685.85	300-102535 814.69	3301-792P 1069.86
	18X15	290-102536 795.05	300-102536 985.22	3301-795P 1245.38
	21	290-102558 1693.18	300-102558 1992.56	3301-210P 2271.07
	21X2	290-102548 695.20	300-102548 873.56	3301-841P 993.81
	21X3	290-102549 712.15	300-102549 879.68	3301-843P 1011.02
	21X4	290-102550 736.14	300-102550 889.52	3301-844P 1055.17
	21X6	290-102551 780.33	300-102551 1078.45	3301-846P 1209.78
	21X8	290-102552 833.06	300-102552 1110.36	3301-848P 1260.05
	21X10	290-102553 888.27	300-102553 1152.07	3301-850P 1318.97
	21X12	290-102554 972.97	300-102554 1163.14	3301-852P 1640.42
	21X15	290-102555 1072.34	300-102555 1333.66	3301-855P 1874.77
	21X18	290-102556 1251.44	300-102556 1523.89	3301-858P 2138.60
	24	290-102570 2311.60	300-102570 2666.15	3301-240P 2725.08
	24X2	290-102559 917.74	300-102559 1084.60	3301-901P 1171.69
	24X3	290-102560 976.61	300-102560 1143.51	3301-903P 1230.60
	24X4	290-102561 1031.86	300-102561 1230.60	3301-904P 1318.97
	24X6	290-102562 1087.08	300-102562 1318.97	3301-906P 1406.08
	24X8	290-102563 1158.23	300-102563 1406.08	3301-908P 1523.89
	24X10	290-102564 1192.57	300-102564 1523.89	3301-910P 1640.42
	24X12	290-102565 1289.53	300-102565 1640.42	3301-912P 1758.20
	24X15	290-102566 1415.85	300-102566 1787.67	3301-915P 1933.69
	24X18	290-102567 1612.21	300-102567 2022.00	3301-918P 2197.47
	24X21	290-102569 1813.39	300-102569 2166.74	3301-921P 2607.26
	27	2901-270 3501.91	3001-270 4148.83	3301-270P 5133.46
	27X4	2901-934 1248.57	3001-934 1567.65	3301-934P 1958.03
	27X6	2901-936 1317.42	3001-936 1687.79	3301-936P 2109.55
	27X8	2901-938 1402.36	3001-938 1806.63	3301-938P 2259.69
	27X10	2901-940 1420.94	3001-940 1931.77	3301-940P 2416.06
	27X12	2901-942 1561.67	3001-942 2087.01	3301-942P 2608.71
	27X15	2901-945 1714.12	3001-945 2297.20	3301-945P 2872.63
	27X18	2901-948 1952.92	3001-948 2604.86	3301-948P 3255.45
	27X21	2901-951 2197.16	3001-951 2771.29	3301-951P 3463.31
	27X24	2901-954 2801.35	3001-954 3421.93	3301-954P 4276.42

Tee (Gasket x Spigot x Gasket)

	6	290-103062 184.02	300-103062 190.15	3301-060232P 202.88
	6X4	290-103061 159.47	300-103061 177.89	3301-532232P 191.69
	8	290-103067 233.13	300-103067 254.00	3301-080232P 305.08

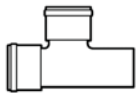
Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Tee (Gasket x Spigot x Gasket) (continued)

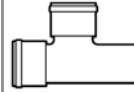
8X4	290-103065 196.32	300-103065 215.91	3301-582232P 229.00
8X6	290-103066 220.85	300-103066 228.21	3301-585232P 267.02
10	290-103073 348.45	300-103073 386.49	3301-100232P 457.88
10X4	290-103070 304.27	300-103070 316.54	3301-624232P 331.04
10X6	290-103071 310.38	300-103071 330.02	3301-626232P 368.09
10X8	290-103072 342.29	300-103072 354.58	3301-628232P 400.12
12	290-103080 480.94	300-103080 525.13	3301-120232P 634.93
12X4	290-103076 354.58	300-103076 398.72	3301-664232P 444.23
12X6	290-103077 364.38	300-103077 412.21	3301-666232P 476.63
12X8	290-103078 422.05	300-103078 424.52	3301-668232P 508.14
12X10	290-103079 434.34	300-103079 468.66	3301-670232P 571.55
15	290-103088 768.05	300-103088 949.65	3301-150232P 1138.56
15X4	290-103083 569.29	300-103083 601.16	3301-724232P 791.36
15X6	290-103084 576.38	300-103084 696.89	3301-726232P 841.64
15X8	290-103085 607.31	300-103085 709.17	3301-728232P 873.56
15X10	290-103086 653.92	300-103086 727.59	3301-730232P 917.74
15X12	290-103087 696.89	300-103087 791.36	3301-732232P 976.27
18	290-103097 1224.46	300-103097 1423.23	3301-180232P 1834.27
18X4	290-103091 738.60	300-103091 823.26	3301-784232P 1012.20
18X6	290-103092 791.36	300-103092 885.82	3301-786232P 1107.92
18X8	290-103093 808.55	300-103093 999.97	3301-788232P 1202.40
18X10	290-103094 899.35	300-103094 1044.12	3301-790232P 1296.87
18X12	290-103095 975.40	300-103095 1107.92	3301-792232P 1360.71
18X15	290-103096 1019.57	300-103096 1170.48	3301-795232P 1455.14
21	2901-210232 1927.53	3001-210232 2371.74	3301-210232P 2896.81
21X4	290-103110 1145.98	300-103110 1392.60	3301-844232P 1676.01
21X6	290-103111 1158.23	300-103111 1423.23	3301-846232P 1707.89
21X8	290-103112 1219.57	300-103112 1499.33	3301-848232P 1790.09
21X10	290-103113 1257.60	300-103113 1518.94	3301-850232P 1847.74
21X12	290-103114 1380.34	300-103114 1613.43	3301-852232P 2024.46
21X15	290-103115 1494.43	300-103115 1676.01	3301-855232P 2182.71
21X18	290-103116 1690.73	300-103116 2024.46	3301-858232P 2467.40
24	2901-240232 4322.97	3001-240232 4579.35	3301-240232P 6243.22
24X6	2901-906232 3074.15	3001-906232 3483.32	3301-906232P 4354.19
24X8	2901-908232 3235.31	3001-908232 3612.11	3301-908232P 4579.20
24X10	2901-910232 3400.77	3001-910232 3677.29	3301-910232P 4879.46
24X12	2901-912232 3584.27	3001-912232 3773.58	3301-912232P 5095.95



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Tee (Gasket x Spigot x Gasket) (continued)

24X15	2901-915232 3772.13	3001-915232 3935.01	3301-915232P 5353.69
24X18	2901-918232 3967.42	3001-918232 4127.62	3301-918232P 5611.53
24X21	2901-921232 4177.64	3001-921232 4386.61	3301-921232P 5934.20
27	2901-270232 6503.11	3001-270232 7255.56	3301-270232P 9191.09
27X6	2901-936232 3842.27	3001-936232 4354.06	3301-936232P 5482.61
27X8	2901-938232 4043.65	3001-938232 4579.28	3301-938232P 5740.28
27X10	2901-940232 4251.53	3001-940232 4837.07	3301-940232P 5998.07
27X12	2901-942232 4481.67	3001-942232 5095.99	3301-942232P 6288.28
27X15	2901-945232 4716.81	3001-945232 5353.69	3301-945232P 6514.74
27X18	2901-948232 4960.88	3001-948232 5643.92	3301-948232P 7030.25
27X21	2901-951232 5222.40	3001-951232 5934.33	3301-951232P 7416.87
27X24	2901-954232 5497.60	3001-954232 6192.08	3301-954232P 7836.11



Tee (Gasketed)

6	290-103174 184.02	300-103174 190.15	3301-0602P 202.88
6X4	290-103173 159.47	300-103173 177.89	3301-5322P 191.69
8	290-103179 233.13	300-103179 254.00	3301-0802P 305.08
8X4	290-103177 196.32	300-103177 215.91	3301-5822P 229.00
8X6	290-103178 220.85	300-103178 228.21	3301-5852P 267.02
10	290-103185 348.45	300-103185 386.49	3301-1002P 457.88
10X4	290-103182 304.27	300-103182 316.54	3301-6242P 331.04
10X6	290-103183 310.38	300-103183 330.02	3301-6262P 368.09
10X8	290-103184 342.29	300-103184 354.58	3301-6282P 400.12
12	290-103192 480.94	300-103192 525.13	3301-1202P 634.93
12X4	290-103188 354.58	300-103188 398.72	3301-6642P 444.23
12X6	290-103189 364.38	300-103189 412.21	3301-6662P 476.62
12X8	290-103190 422.05	300-103190 424.52	3301-6682P 508.14
12X10	290-103191 434.34	300-103191 468.66	3301-6702P 571.55
15	290-103200 768.05	300-103200 949.65	3301-1502P 1138.56
15X4	290-103195 569.29	300-103195 601.16	3301-7242P 791.36
15X6	290-103196 576.38	300-103196 696.89	3301-7262P 841.64
15X8	290-103197 607.31	300-103197 709.17	3301-7282P 873.56
15X10	290-103198 653.92	300-103198 727.59	3301-7302P 917.74
15X12	290-103199 696.89	300-103199 791.36	3301-7322P 980.33
18	290-103209 1224.46	300-103209 1423.23	3301-1802P 1834.27
18X4	290-103203 738.60	300-103203 823.26	3301-7842P 1012.20
18X6	290-103204 791.36	300-103204 885.82	3301-7862P 1107.92
18X8	290-103205 808.55	300-103205 999.97	3301-7882P 1202.40

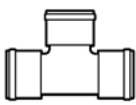




Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Tee (Gasketed) (continued)

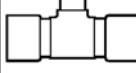
	18X10	290-103206 899.35	300-103206 1044.12	3301-7902P 1296.87
	18X12	290-103207 975.40	300-103207 1107.92	3301-7922P 1360.71
	18X15	290-103208 1019.57	300-103208 1170.48	3301-7952P 1455.14
	21	290-103230 1927.53	300-103230 2371.74	3301-2102P 2896.81
	21X4	290-103222 1145.98	300-103222 1392.60	3301-8442P 1676.01
	21X6	290-103223 1158.23	300-103223 1423.23	3301-8462P 1707.89
	21X8	290-103224 1219.57	300-103224 1499.33	3301-8482P 1790.09
	21X10	290-103225 1257.60	300-103225 1518.94	3301-8502P 1847.74
	21X12	290-103226 1380.34	300-103226 1613.43	3301-8522P 2024.46
	21X15	290-103227 1494.43	300-103227 1676.01	3301-8552P 2182.71
	21X18	290-103228 1690.73	300-103228 2024.46	3301-8582P 2467.40
	24	2901-2402 4322.97	3001-2402 4579.35	3301-2402P 6243.22
	24X6	2901-9062 3074.15	3001-9062 3483.32	3301-9062P 4354.19
	24X8	2901-9082 3235.31	3001-9082 3612.11	3301-9082P 4579.20
	24X10	2901-9102 3400.77	3001-9102 3677.29	3301-9102P 4879.46
	24X12	2901-9122 3584.27	3001-9122 3773.58	3301-9122P 5095.95
	24X15	2901-9152 3772.13	3001-9152 3935.01	3301-9152P 5353.69
	24X18	2901-9182 3967.42	3001-9182 4127.62	3301-9182P 5611.53
	24X21	2901-9212 4177.64	3001-9212 4386.61	3301-9212P 5934.20
	27	2901-2702 6503.11	3001-2702 7255.56	3301-2702P 9191.09
	27X6	2901-9362 3842.27	3001-9362 4354.06	3301-9362P 5482.61
	27X8	2901-9382 4043.65	3001-9382 4579.28	3301-9382P 5740.28
	27X10	2901-9402 4251.53	3001-9402 4837.07	3301-9402P 5998.07
	27X12	2901-9422 4481.67	3001-9422 5095.99	3301-9422P 6288.28
	27X15	2901-9452 4716.81	3001-9452 5353.69	3301-9452P 6514.74
	27X18	2901-9482 4960.88	3001-9482 5643.92	3301-9482P 7030.25
	27X21	2901-9512 5222.40	3001-9512 5934.33	3301-9512P 7416.87
	27X24	2901-9542 5497.60	3001-9542 6192.08	3301-9542P 7836.11

Reinforced Tee (Soc x Soc x Fipt)

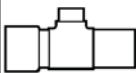
	6X2	---	300-202152 75.27	3302-528P 114.54
	6X3	---	300-202154 82.16	3302-530P 131.24
	6X4	---	300-202155 92.00	3302-532P 134.95
	8X2	---	300-202157 114.09	3302-578P 185.38
	8X3	---	300-202159 120.20	3302-580P 197.95
	8X4	---	300-202160 130.04	3302-582P 167.85
	10X2	---	300-202162 155.83	3302-621P 209.27
	10X3	---	300-202164 191.37	3302-623P 259.22

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

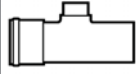
Reinforced Tee (Soc x Soc x Fipt) (continued)

	10X4	---	300-202165 204.89	3302-624P 255.07
	12X2	---	300-202167 238.01	3302-661P 257.58
	12X3	---	300-202169 263.75	3302-663P 283.15
	12X4	---	300-202170 301.80	3302-664P 331.39
	15X2	---	300-202172 392.28	3302-721P 453.93
	15X3	---	300-202174 417.29	3302-723P 478.49
	15X4	---	300-202175 447.51	3302-724P 490.80

Reinforced Tee (Soc x Spig x Fipt)

	6X2	---	300-202222 62.58	---
	6X3	---	300-202224 73.61	---
	6X4	---	300-202225 85.85	---
	8X2	---	300-202227 100.59	---
	8X3	---	300-202229 110.41	---
	8X4	---	300-202230 120.20	---
	10X2	---	300-202232 149.61	---
	10X3	---	300-202234 182.82	---
	10X4	---	300-202235 193.84	---
	12X2	---	300-202237 223.27	---
	12X3	---	300-202239 255.17	---
	12X4	---	300-202240 290.78	---
	15X2	---	300-202242 390.14	3302-72113P 441.69
	15X3	---	300-202244 413.46	3302-72313P 472.38
	15X4	---	300-202245 440.43	3302-72413P 484.61

Reinforced Tee (Gasket x Spig x Fipt)

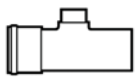
	6X2	---	300-202362 107.94	---
	6X3	---	300-202364 139.85	---
	6X4	---	300-202365 146.01	---
	8X2	---	300-202367 152.13	---
	8X3	---	300-202369 177.89	---
	8X4	---	300-202370 196.32	---
	10X2	---	300-202372 228.21	---
	10X3	---	300-202374 240.45	---
	10X4	---	300-202375 250.25	---
	12X2	---	300-202377 316.54	---
	12X3	---	300-202379 342.29	---
	12X4	---	300-202380 354.58	---
	15X2	---	300-202382 442.92	3302-72123P 539.55
	15X3	---	300-202384 468.66	3302-72323P 578.24

Fabricated Fittings **PVC 125, 100 & 80 PSI PIP Fabricated Fittings**

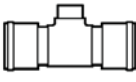


	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Reinforced Tee (Gasket x Spig x Fipt) (continued)

	15X4	---	300-202385 506.71	3302-72423P 630.48
---	------	-----	----------------------	-----------------------

Reinforced Tee (Gasket x Fipt)

	6X2	---	300-202432 114.09	---
	6X3	---	300-202434 139.85	---
	6X4	---	300-202435 152.13	---
	8X2	---	300-202437 171.75	---
	8X3	---	300-202439 187.72	---
	8X4	---	300-202440 202.42	---
	10X2	---	300-202442 247.80	---
	10X3	---	300-202444 272.35	---
	10X4	---	300-202445 291.97	---
	12X2	---	300-202447 348.45	---
	12X3	---	300-202449 366.82	---
	12X4	---	300-202450 392.63	---
	15X2	---	300-202452 506.71	3302-7212P 619.11
	15X3	---	300-202454 525.13	3302-7232P 672.68
	15X4	---	300-202455 550.91	3302-7242P 707.42

PIP X IPS Tee (Socket)

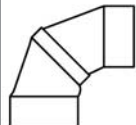
	6	2901-060PXI 84.18	3001-060PXI 107.15	3301-060PXI 107.73
	8	2901-080PXI 154.43	3001-080PXI 215.28	3301-080PXI 215.97
	8X6	2901-585PXI 108.37	3001-585PXI 130.04	3301-585PXI 168.20
	10	2901-100PXI 209.87	3001-100PXI 254.00	3301-100PXI 322.38
	10X6	2901-626PXI 148.75	3001-102821 165.62	3301-626PXI 230.27
	10X8	2901-628PXI 171.85	3001-628PXI 339.99	3301-628PXI 285.58
	12	2901-120PXI 316.54	3001-120PXI 404.84	3301-120PXI 476.45
	12X6	2901-666PXI 251.54	3001-102599 258.84	3301-666PXI 335.23
	12X8	2901-668PXI 234.11	3001-102607 305.48	3301-668PXI 396.85
	12X10	2901-670PXI 287.08	3001-670PXI 352.11	3301-670PXI 440.31
	15X6	2901-726PXI 305.59	3001-102708 390.14	3301-726PXI 474.01
	15X8	2901-728PXI 352.88	3001-102709 492.14	3301-728PXI 545.54
	15X10	2901-730PXI 400.18	3001-730PXI 516.55	3301-730PXI 617.01
	15X12	2901-732PXI 457.82	3001-102817 580.36	3301-732PXI 712.21
	18X6	2901-786PXI 529.35	3001-786PXI 612.22	3301-786PXI 733.51
	18X8	2901-788PXI 551.28	3001-788PXI 637.99	3301-788PXI 818.84
	18X10	2901-790PXI 619.59	3001-790PXI 685.85	3301-790PXI 894.96

	Size	80 PIP Disc Code: 310 Part Number Price Each	100 PIP Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
--	------	---	--	--

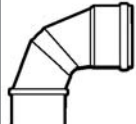
PIP X IPS Tee (Socket) (continued)

	18X12	2901-792PXI 685.85	3001-792PXI 814.69	3301-792PXI 1005.67
	21X6	2901-846PXI 780.33	3001-846PXI 1078.08	3301-846PXI 1137.19
	21X8	2901-848PXI 783.08	3001-848PXI 1110.36	3301-848PXI 1184.45
	21X10	2901-850PXI 888.27	3001-850PXI 1152.07	3301-850PXI 1239.83
	21X12	2901-852PXI 914.59	3001-852PXI 1163.14	3301-852PXI 1542.00
	24X6	2901-906PXI 1087.08	3001-906PXI 1318.97	3301-906PXI 1321.72
	24X8	2901-908PXI 1158.23	3001-908PXI 1406.08	3301-908PXI 1432.46
	24X10	2901-910PXI 1192.57	3001-910PXI 1523.89	3301-910PXI 1542.00
	24X12	2901-912PXI 1212.16	3001-912PXI 1640.42	3301-912PXI 1652.71

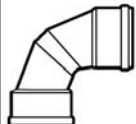
90° Elbow (Socket)

	6	290-100812 121.46	300-100812 142.33	3306-060P 176.45
	8	290-100813 164.40	300-100813 224.55	3306-080P 256.04
	10	290-100814 269.93	300-100814 316.54	3306-100P 353.34
	12	290-100815 347.17	300-100815 444.11	3306-120P 459.67
	15	290-100816 579.12	300-100816 688.32	3306-150P 787.68
	18	290-100817 871.11	300-100817 1025.67	3306-180P 1348.39
	21	290-100819 1363.12	300-100819 1652.67	3306-210P 2030.60
	24	290-100820 3046.54	300-100820 3633.02	3306-240P 3826.83
	27	2906-270 3245.43	3006-270 3853.56	3306-270P 4260.29

90° Elbow (Gasket x Spigot)

	6	290-100878 147.18	300-100878 159.47	3306-06023P 234.72
	8	290-100879 233.13	300-100879 255.17	3306-08023P 304.95
	10	290-100880 347.17	300-100880 393.81	3306-10023P 471.04
	12	290-100881 472.38	300-100881 559.47	3306-12023P 677.71
	15	290-100882 905.48	300-100882 1143.51	3306-15023P 1289.53
	18	290-100883 1518.94	300-100883 1758.20	3306-18023P 1787.67
	21	290-100885 2201.15	300-100885 2639.19	3306-21023P 3187.65
	24	2906-24023 3513.18	3006-24023 3992.52	3306-24023P 4992.22
	27	2906-27023 4767.00	3006-27023 5521.54	3306-27023P 6563.63

90° Elbow (Gasketed)

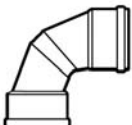
	6	290-100900 147.18	300-100900 159.47	3306-0602P 234.72
	8	290-100901 233.13	300-100901 255.17	3306-0802P 304.95
	10	290-100902 347.17	300-100902 393.81	3306-1002P 471.04
	12	290-100903 472.38	300-100903 559.47	3306-1202P 677.71
	15	290-100904 905.48	300-100904 1143.51	3306-1502P 1289.53
	18	290-100905 1518.94	300-100905 1758.20	3306-1802P 1787.67
	21	290-100907 2201.15	300-100907 2639.19	3306-2102P 3187.65
	24	2906-2402 3513.18	3006-2402 3992.52	3306-2402P 4992.22



Fabricated Fittings PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

90° Elbow (Gasketed) (continued)

	27	2906-2702 4767.00	3006-2702 5521.54	3306-2702P 6563.63
---	----	----------------------	----------------------	-----------------------

11-1/4° Elbow (Socket)

	6	290-100114 33.15	300-100114 39.23	3311-060P 48.57
	8	290-100115 53.94	300-100115 58.85	3311-080P 72.28
	10	290-100116 96.87	300-100116 111.63	3311-100P 140.02
	12	290-100117 137.37	300-100117 155.83	3311-120P 192.71
	15	290-100118 213.47	300-100118 261.29	3311-150P 339.85
	18	290-100119 366.82	300-100119 434.34	3311-180P 539.85
	21	290-100121 612.22	300-100121 698.09	3311-210P 909.17
	24	290-100122 823.26	300-100122 909.17	3311-240P 981.54
	27	2911-270 1032.16	3011-270 1102.41	3311-270P 1433.89

11-1/4° Elbow (Gasket x Spigot)

	6	290-100186 98.14	300-100186 120.20	3311-06023P 139.99
	8	290-100187 159.47	300-100187 177.89	3311-08023P 208.33
	10	290-100188 239.24	300-100188 263.75	3311-10023P 305.67
	12	290-100189 325.09	300-100189 380.34	3311-12023P 441.98
	15	290-100190 572.98	300-100190 628.17	3311-15023P 743.53
	18	290-100191 907.92	300-100191 1040.43	3311-18023P 1236.77
	21	290-100193 1341.02	300-100193 1442.91	3311-21023P 1875.99
	24	2911-24023 2219.44	3011-24023 2511.59	3311-24023P 3152.73
	27	2911-27023 2871.55	3011-27023 3248.12	3311-27023P 3925.54

11-1/4° Elbow (Gasketed)

	6	290-100210 98.14	300-100210 120.20	3311-0602P 139.99
	8	290-100211 159.47	300-100211 177.89	3311-0802P 208.33
	10	290-100212 239.24	300-100212 263.75	3311-1002P 305.67
	12	290-100213 325.09	300-100213 380.34	3311-1202P 441.98
	15	290-100214 572.98	300-100214 628.17	3311-1502P 743.53
	18	290-100215 907.92	300-100215 1040.43	3311-1802P 1236.77
	21	290-100217 1341.02	300-100217 1442.91	3311-2102P 1875.99
	24	2911-2402 2219.44	3011-2402 2511.59	3311-2402P 3152.73
	27	2911-2702 2871.55	3011-2702 3248.12	3311-2702P 3925.54

15° Elbow (Socket)

	6	290-100234 33.15	300-100234 39.23	3318-060P 48.57
	8	290-100235 53.94	300-100235 58.85	3318-080P 72.28
	10	290-100236 96.87	300-100236 111.63	3318-100P 140.02
	12	290-100237 137.37	300-100237 155.83	3318-120P 192.71

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
--	------	---	--	--

15° Elbow (Socket) (continued)

	15	290-100238 213.47	300-100238 261.29	3318-150P 339.85
	18	290-100239 366.82	300-100239 434.34	3318-180P 539.85
	21	290-100241 612.22	300-100241 698.09	3318-210P 909.17
	24	290-100242 823.26	300-100242 909.17	3318-240P 981.54
	27	2918-270 1032.16	3018-270 1102.41	3318-270P 1433.89

15° Elbow (Gasket x Spigot)

	6	290-100306 98.14	300-100306 120.20	3318-06023P 139.99
	8	290-100307 159.47	300-100307 177.89	3318-08023P 208.33
	10	290-100308 239.24	300-100308 263.75	3318-10023P 305.67
	12	290-100309 325.09	300-100309 380.34	3318-12023P 441.98
	15	290-100310 572.98	300-100310 628.17	3318-15023P 743.53
	18	290-100311 907.92	300-100311 1040.43	3318-18023P 1236.77
	21	290-100313 1341.02	300-100313 1442.91	3318-21023P 1875.99
	24	2918-24023 2219.44	3018-24023 2511.59	3318-24023P 3152.73
	27	2918-27023 2871.55	3018-27023 3248.12	3318-27023P 3925.54

15° Elbow (Gasketed)

	6	290-100330 98.14	300-100330 120.20	3318-0602P 139.99
	8	290-100331 159.47	300-100331 177.89	3318-0802P 208.33
	10	290-100332 239.24	300-100332 263.75	3318-1002P 305.67
	12	290-100333 325.09	300-100333 380.34	3318-1202P 441.98
	15	290-100334 572.98	300-100334 628.17	3318-1502P 743.53
	18	290-100335 907.92	300-100335 1040.43	3318-1802P 1236.77
	21	290-100336 1341.06	300-100336 1442.91	3318-2102P 1875.99
	24	2918-2402 2219.44	3018-2402 2511.59	3318-2402P 3152.73
	27	2918-2702 2871.55	3018-2702 3248.12	3318-2702P 3925.54

22-1/2° Elbow (Socket)

	6	290-100354 33.15	300-100354 39.23	3316-060P 47.84
	8	290-100355 53.94	300-100355 58.85	3316-080P 71.68
	10	290-100356 96.87	300-100356 111.63	3316-100P 140.02
	12	290-100357 137.37	300-100357 155.83	3316-120P 192.71
	15	290-100358 213.47	300-100358 261.29	3316-150P 339.85
	18	290-100359 366.82	300-100359 434.34	3316-180P 539.85
	21	290-100361 612.22	300-100361 698.09	3316-210P 909.17
	24	290-100362 823.26	300-100362 909.17	3316-240P 981.54
	27	2916-270 1032.16	3016-270 1102.41	3316-270P 1433.89

Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

22-1/2° Elbow (Gasket x Spigot)

	6	290-100426 98.14	300-100426 120.20	3316-06023P 139.99
	8	290-100427 159.47	300-100427 177.89	3316-08023P 208.33
	10	290-100428 239.24	300-100428 263.75	3316-10023P 305.67
	12	290-100429 325.09	300-100429 380.34	3316-12023P 441.98
	15	290-100430 572.98	300-100430 628.17	3316-15023P 743.53
	18	290-100431 907.92	300-100431 1040.43	3316-18023P 1236.77
	21	290-100433 1341.02	300-100433 1442.91	3316-21023P 1875.99
	24	2916-24023 2219.44	3016-24023 2511.59	3316-24023P 3152.73
	27	2916-27023 2871.55	3016-27023 3248.12	3316-27023P 3925.54

22-1/2° Elbow (Gasketed)

	6	290-100450 98.14	300-100450 120.20	3316-0602P 139.99
	8	290-100451 159.47	300-100451 177.89	3316-0802P 208.33
	10	290-100452 239.24	300-100452 263.75	3316-1002P 305.67
	12	290-100453 325.09	300-100453 380.34	3316-1202P 441.98
	15	290-100454 572.98	300-100454 628.17	3316-1502P 743.53
	18	290-100455 907.92	300-100455 1040.43	3316-1802P 1236.77
	21	290-100457 1341.02	300-100457 1442.91	3316-2102P 1875.99
	24	2916-2402 2219.44	3016-2402 2511.59	3316-2402P 3152.73
	27	2916-2702 2871.55	3016-2702 3248.12	3316-2702P 3925.54

30° Elbow (Socket)

	6	290-100474 50.27	300-100474 52.76	3315-060P 67.48
	8	290-100475 76.09	300-100475 92.00	3315-080P 113.92
	10	290-100476 117.73	300-100476 138.62	3315-100P 172.42
	12	290-100477 169.27	300-100477 206.12	3315-120P 228.61
	15	290-100478 267.44	300-100478 320.22	3315-150P 396.27
	18	290-100479 436.78	300-100479 533.71	3315-180P 668.65
	21	290-100481 706.72	300-100481 861.34	3315-210P 1084.60
	24	290-100482 2015.89	300-100482 2343.47	3315-240P 2460.04
	27	2915-270 2221.92	3015-270 2499.78	3315-270P 2753.83

30° Elbow (Gasket x Spigot)

	6	290-100546 122.65	300-100546 141.09	3315-06023P 168.47
	8	290-100547 184.02	300-100547 199.97	3315-08023P 237.75
	10	290-100548 258.84	300-100548 287.08	3315-10023P 336.21
	12	290-100549 348.45	300-100549 408.57	3315-12023P 480.14
	15	290-100550 709.17	300-100550 826.96	3315-15023P 923.86
	18	290-100551 996.25	300-100551 1171.69	3315-18023P 1464.93
	21	290-100553 1484.59	300-100553 1268.36	3315-21023P 2085.81
	24	2915-24023 2381.81	3015-24023 3266.20	3315-24023P 3383.18

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

30° Elbow (Gasket x Spigot) (continued)

	27	2915-27023 3217.97	3015-27023 3755.29	3315-27023P 4397.72
--	----	-----------------------	-----------------------	------------------------

30° Elbow (Gasketed)

	6	290-100570 122.65	300-100570 141.09	3315-0602P 168.47
	8	290-100571 184.02	300-100571 199.97	3315-0802P 237.75
	10	290-100572 258.84	300-100572 287.08	3315-1002P 336.21
	12	290-100573 348.45	300-100573 408.57	3315-1202P 480.14
	15	290-100574 709.17	300-100574 826.96	3315-1502P 923.86
	18	290-100575 996.25	300-100575 1171.69	3315-1802P 1464.93
	21	290-100577 1484.59	300-100577 1268.36	3315-2102P 2085.81
	24	2915-2402 2382.07	3015-2402 3266.20	3315-2402P 3383.18
	27	2915-2702 3217.97	3015-2702 3755.29	3315-2702P 4397.72

45° Elbow (Socket)

	6	290-100592 50.27	300-100592 52.76	3317-060P 67.51
	8	290-100593 76.09	300-100593 92.00	3317-080P 113.92
	10	290-100594 117.73	300-100594 138.62	3317-100P 172.42
	12	290-100595 169.27	300-100595 206.12	3317-120P 228.61
	15	290-100596 267.44	300-100596 320.22	3317-150P 396.27
	18	290-100597 436.78	300-100597 533.71	3317-180P 668.65
	21	290-100599 706.72	300-100599 861.34	3317-210P 1084.60
	24	290-100600 2015.89	300-100600 2343.47	3317-240P 2460.04
	27	2917-270 2221.92	3017-270 2499.78	3317-270P 2753.83

45° Elbow (Gasket x Spigot)

	6	290-100658 122.65	300-100658 141.09	3317-06023P 168.47
	8	290-100659 184.02	300-100659 199.97	3317-08023P 237.75
	10	290-100660 258.84	300-100660 287.08	3317-10023P 336.21
	12	290-100661 348.45	300-100661 408.57	3317-12023P 480.14
	15	290-100662 709.17	300-100662 826.96	3317-15023P 923.86
	18	290-100663 996.25	300-100663 1171.69	3317-18023P 1464.93
	21	290-100665 1484.59	300-100665 1268.36	3317-21023P 2085.81
	24	2917-24023 2382.07	3017-24023 3266.20	3317-24023P 3383.18
	27	2917-27023 3217.97	3017-27023 3755.29	3317-27023P 4397.72

45° Elbow (Gasketed)

	6	290-100680 122.65	300-100680 141.09	3317-0602P 168.47
	8	290-100681 184.02	300-100681 199.97	3317-0802P 237.75
	10	290-100682 258.84	300-100682 287.08	3317-1002P 336.21
	12	290-100683 348.45	300-100683 408.57	3317-1202P 480.14



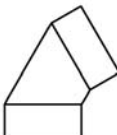
Fabricated Fittings PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

45° Elbow (Gasketed) (continued)

	15	290-100684 709.17	300-100684 826.96	3317-1502P 923.86
	18	290-100685 996.25	300-100685 1171.69	3317-1802P 1464.93
	21	290-100687 1484.59	300-100687 1765.59	3317-2102P 2085.81
	24	2917-2402 2382.07	3017-2402 3266.20	3317-2402P 3383.18
	27	2917-2702 3217.97	3017-2702 3755.29	3317-2702P 4397.72

60° Elbow (Socket)

	6	290-100702 121.46	300-100702 142.33	3324-060P 176.45
	8	290-100703 164.40	300-100703 224.55	3324-080P 256.01
	10	290-100704 269.93	300-100704 316.54	3324-100P 353.34
	12	290-100705 347.17	300-100705 444.11	3324-120P 459.67
	15	290-100706 579.12	300-100706 688.32	3324-150P 787.68
	18	290-100707 871.11	300-100707 1025.67	3324-180P 1348.39
	21	290-100709 1363.12	300-100709 1652.67	3324-210P 2030.60
	24	290-100710 3046.54	300-100710 3633.02	3324-240P 3826.83
	27	2924-270 3245.43	3024-270 3853.56	3324-270P 4260.29

60° Elbow (Gasket x Spigot)

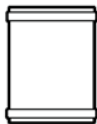
	6	290-100768 147.18	300-100768 159.47	3324-06023P 234.72
	8	290-100769 233.13	300-100769 255.17	3324-08023P 304.95
	10	290-100770 347.17	300-100770 393.81	3324-10023P 471.04
	12	290-100771 472.38	300-100771 559.47	3324-12023P 677.71
	15	290-100772 905.48	300-100772 1143.51	3324-15023P 1289.53
	18	290-100773 1518.94	300-100773 1758.20	3324-18023P 1787.67
	21	290-100775 2201.15	300-100775 2639.19	3324-21023P 3187.65
	24	2924-24023 3513.18	3024-24023 3992.52	3324-24023P 4992.22
	27	2924-27023 4767.00	3024-27023 5521.54	3324-27023P 6563.63

60° Elbow (Gasketed)

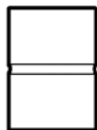
	6	290-100790 147.18	300-100790 159.47	3324-0602P 234.72
	8	290-100791 233.13	300-100791 255.17	3324-0802P 304.95
	10	290-100792 347.17	300-100792 393.81	3324-1002P 471.04
	12	290-100793 472.38	300-100793 559.47	3324-1202P 677.71
	15	290-100794 905.48	300-100794 1143.51	3324-1502P 1289.53
	18	290-100795 1518.94	300-100795 1758.20	3324-1802P 1787.67
	21	290-100797 2201.15	300-100797 2639.19	3324-2102P 3187.65
	24	2924-2402 3513.18	3024-2402 3992.52	3324-2402P 4992.22
	27	2924-2702 4767.00	3024-2702 5521.54	3324-2702P 6563.63

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

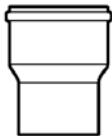
Repair Coupling (Gasketed)

	6	2928-060 98.24	3028-060 111.63	3328-060P 127.58
	8	2928-080 137.62	3028-080 158.24	3328-080P 190.12
	10	2928-100 237.58	3028-100 254.00	3328-100P 299.59
	12	2928-120 331.39	3028-120 348.45	3328-120P 414.85
	15	2928-150 494.45	3028-150 519.02	3328-150P 628.17
	18	2928-180 823.82	3028-180 949.65	3328-180P 1307.73
	21	2928-210 1138.33	3028-210 1366.62	3328-210P 1837.55
	24	2928-240 1578.09	3028-240 1894.93	3328-240P 2570.13
	27	2928-270 2021.01	3028-270 2522.91	3328-270P 3211.64

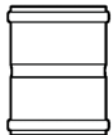
Coupling (Socket)

	6	290-100002 29.44	300-100002 33.15	3329-060P 43.92
	8	290-100003 36.79	300-100003 45.36	3329-080P 55.85
	10	290-100004 61.33	300-100004 72.39	3329-100P 89.37
	12	290-100005 92.00	300-100005 111.63	3329-120P 145.09
	15	290-100006 139.85	300-100006 191.37	3329-150P 217.99
	18	290-100007 320.22	300-100007 402.44	3329-180P 490.69
	21	290-100009 425.73	300-100009 703.03	3329-210P 793.75
	24	290-100010 747.17	300-100010 937.36	3329-240P 954.62
	27	2929-270 905.76	3029-270 1128.48	3329-270P 1743.17
	30	2929-300 1187.95	3029-300 1832.56	---

Coupling (Gasket x Spigot)

	6	290-100068 61.33	300-100068 65.01	3329-06023P 81.35
	8	290-100069 93.20	300-100069 100.59	3329-08023P 128.77
	10	290-100070 138.62	300-100070 147.18	3329-10023P 191.23
	12	290-100071 170.51	300-100071 199.97	3329-12023P 250.99
	15	290-100072 263.75	300-100072 398.72	3329-15023P 463.79
	18	290-100073 442.92	300-100073 539.85	3329-18023P 610.22
	21	290-100075 647.83	300-100075 837.99	3329-21023P 929.94
	24	2929-24023 791.36	3029-24023 1053.89	3329-24023P 1316.86
	27	2929-27023 1027.62	3029-27023 1284.38	3329-27023P 1605.76

Coupling (Gasketed)

	6	290-100090 73.61	300-100090 82.16	3329-0602P 106.32
	8	290-100091 134.95	300-100091 152.28	3329-0802P 174.62
	10	290-100092 172.69	300-100092 193.84	3329-1002P 256.74
	12	290-100093 217.18	300-100093 283.68	3329-1202P 285.58
	15	290-100094 349.64	300-100094 521.42	3329-1502P 542.26
	18	290-100095 584.00	300-100095 615.94	3329-1802P 770.05
	21	290-100097 730.02	300-100097 996.25	3329-2102P 1133.41

Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Coupling (Gasketed) (continued)

	24	2929-2402 1225.75	3029-2402 1326.19	3329-2402P 1591.69
	27	2929-2702 1412.60	3029-2702 1657.74	3329-2702P 2073.12

Reducer Coupling (Socket)

	6X2	2929-528 62.74	3029-528 111.20	---
	6X2-1/2	---	3029-529 92.82	---
	6X3	---	3029-530 96.87	---
	6X4	2929-532 36.24	3029-532 40.48	3329-532P 43.17
	8X2	2929-578 156.55	---	---
	8X2-1/2	---	3029-579 161.92	---
	8X3	---	3029-580 169.72	---
	8X4	2929-582 103.05	300-100927 110.57	3329-582P 128.64
	8X6	2929-585 53.65	300-100928 62.58	3329-585P 72.54
	10X2	2929-621 185.06	3029-621 227.92	---
	10X2-1/2	---	3029-622 187.26	---
	10X3	---	3029-623 133.67	---
	10X4	2929-624 141.76	3029-624 164.38	3329-624P 180.64
	10X6	2929-626 117.21	300-100930 128.77	3329-626P 126.52
	10X8	2929-628 73.69	300-100931 85.85	3329-628P 160.42
	12X2	---	3029-661 455.60	---
	12X2-1/2	---	3029-662 311.31	---
	12X3	---	3029-663 281.94	---
	12X4	2929-664 203.46	3029-664 212.21	3329-664P 309.44
	12X6	2929-666 186.56	300-100933 198.77	3329-666P 286.61
	12X8	2929-668 130.00	300-100934 137.79	3329-668P 250.87
	12X10	2929-670 107.36	300-100935 123.91	3329-670P 236.67
	15X2	2929-721 464.68	---	---
	15X3	2929-723 422.94	3029-723 487.43	---
	15X4	2929-724 438.67	3029-724 469.40	3329-724P 556.32
	15X6	2929-726 414.73	3029-726 443.76	3329-726P 482.86
	15X8	2929-728 389.20	3029-728 420.35	3329-728P 453.02
	15X10	2929-730 268.53	3029-730 336.16	3329-730P 365.64
	15X12	2929-732 173.34	300-100940 199.97	3329-732P 344.96
	18X4	2929-784 853.66	3029-784 958.60	3329-784P 1015.27
	18X6	2929-786 889.07	3029-786 937.97	3329-786P 994.15
	18X8	2929-788 819.58	3029-788 868.76	3329-788P 929.58
18X10	2929-790 527.42	3029-790 568.67	3329-790P 642.64	

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Reducer Coupling (Socket) (continued)

	18X12	2929-792 517.04	3029-792 534.17	3329-792P 605.64
	18X15	2929-795 310.71	300-100946 364.38	3329-795P 442.92
	21X3	2929-843 1060.92	---	---
	21X4	2929-844 1084.28	3029-844 1142.83	3329-844P 1234.27
	21X6	2929-846 1038.74	3029-846 1101.05	3329-846P 1172.63
	21X8	2929-848 866.92	3029-848 910.63	3329-848P 934.56
	21X10	2929-850 803.05	3029-850 848.03	3329-850P 876.77
	21X12	2929-852 808.61	3029-852 776.64	3329-852P 823.25
	21X15	2929-855 711.96	3029-855 754.59	3329-855P 904.83
	21X18	2929-858 428.55	300-100960 501.79	3329-858P 629.44
	24X3	2929-903 1684.06	3029-903 1016.94	---
	24X6	2929-906 1719.93	3029-906 1834.22	3329-906P 1999.29
	24X8	2929-908 1631.80	3029-908 1711.24	3329-908P 1804.79
	24X10	2929-910 1553.34	3029-910 1637.21	3329-910P 1758.00
	24X12	2929-912 1359.62	3029-912 1440.82	3329-912P 1538.79
	24X15	2929-915 989.16	3029-915 1068.29	3329-915P 1081.53
	24X18	2929-918 938.59	3029-918 1004.28	3329-918P 1072.17
	24X20	---	3029-920 1380.34	---
	24X21	2929-921 635.31	300-100969 738.60	3329-921P 898.09
	27X6	2929-936 2236.27	3029-936 2387.36	3329-936P 2578.36
	27X8	2929-938 2080.05	3029-938 2257.80	3329-938P 2411.02
	27X10	2929-940 1950.16	3029-940 2077.73	3329-940P 2220.99
	27X12	2929-942 1832.18	3029-942 1942.12	3329-942P 2097.17
	27X15	2929-945 1443.26	3029-945 1542.17	3329-945P 1645.57
	27X18	2929-948 1353.89	3029-948 1448.05	3329-948P 1524.12
	27X21	2929-951 1122.86	3029-951 1344.85	3329-951P 1437.85
	27X24	2929-954 873.35	3029-954 1089.17	3329-954P 1358.20
	30X18	2929-978 2702.25	3029-978 3375.63	---
	30X21	---	3029-981 2847.40	---
	30X24	2929-984 2022.41	3029-984 2539.97	---
	30X27	2929-987 2006.92	3029-987 2160.51	---

Reducer Coupling (Gasket x Spigot)

	6X4	2929-53223 87.36	300-101310 89.55	3329-53223P 127.69
	8X4	2929-58223 198.41	300-100927 110.57	3329-58223P 247.40
	8X6	2929-58523 105.15	300-101312 127.58	3329-58523P 165.67
	10X4	2929-62423 290.01	3029-62423 316.12	3329-62423P 347.38
	10X6	2929-62623 225.41	300-100930 128.77	3329-62623P 282.65

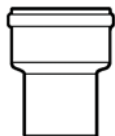


Fabricated Fittings PVC 125, 100 & 80 PSI PIP Fabricated Fittings

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Reducer Coupling (Gasket x Spigot) (continued)

10X8	2929-62823 171.39	300-101315 184.02	3329-62823P 253.20
12X4	2929-66423 391.26	3029-66423 408.09	3329-66423P 572.17
12X6	2929-66623 358.76	300-100933 198.77	3329-66623P 551.16
12X8	2929-66823 249.99	300-100934 137.79	3329-66823P 482.45
12X10	2929-67023 240.05	300-101319 269.93	3329-67023P 329.66
15X4	2929-72423 843.62	3029-72423 902.68	3329-72423P 1138.13
15X6	2929-72623 797.55	3029-72623 853.38	3329-72623P 872.87
15X8	2929-72823 748.47	3029-72823 808.37	3329-72823P 858.23
15X10	2929-73023 516.38	3029-73023 646.46	3329-73023P 749.65
15X12	2929-73223 412.58	300-101324 449.05	3329-73223P 579.58
18X4	2929-78423 1746.44	3029-78423 1843.46	3329-78423P 1952.44
18X6	2929-78623 1709.75	3029-78623 1803.79	3329-78623P 1911.80
18X8	2929-78823 1575.99	3029-78823 1670.67	3329-78823P 1787.64
18X10	2929-79023 1014.26	3029-79023 1093.62	3329-79023P 1235.85
18X12	2929-79223 994.33	3029-79223 1027.24	3329-79223P 1164.69
18X15	2929-79523 726.66	300-101330 853.97	3329-79523P 885.82
21X6	2929-84623 1997.56	3029-84623 2117.48	3329-84623P 2255.06
21X8	2929-84823 1733.84	3029-84823 1750.52	3329-84823P 1797.23
21X10	2929-85023 1544.35	3029-85023 1630.82	3329-85023P 1686.08
21X12	2929-85223 1436.22	3029-85223 1493.54	3329-85223P 1583.17
21X15	2929-85523 1369.15	3029-85523 1451.15	3329-85523P 1541.57
21X18	2929-85823 1076.09	300-101344 1364.54	3329-85823P 1455.14
24X6	2929-90623 3307.55	3029-90623 3527.34	3329-90623P 3844.22
24X8	2929-90823 3138.08	3029-90823 3290.84	3329-90823P 3470.75
24X10	2929-91023 2987.18	3029-91023 3147.78	3329-91023P 3380.76
24X12	2929-91223 2614.64	3029-91223 2769.77	3329-91223P 2959.20
24X15	2929-91523 1902.23	3029-91523 2054.42	3329-91523P 2689.13
24X18	2929-91823 1804.97	3029-91823 2026.63	3329-91823P 2559.72
24X21	2929-92123 1605.79	3029-92123 1992.56	3329-92123P 2440.59
27X6	2929-93623 4300.52	3029-93623 4591.08	3329-93623P 4957.64
27X8	2929-93823 3999.88	3029-93823 4341.37	3329-93823P 4634.60
27X10	2929-94023 3750.31	3029-94023 4007.35	3329-94023P 4270.36
27X12	2929-94223 3521.21	3029-94223 3734.26	3329-94223P 4032.09
27X15	2929-94523 2774.36	3029-94523 2964.51	3329-94523P 3521.21
27X18	2929-94823 2595.66	3029-94823 2783.52	3329-94823P 3405.93
27X21	2929-95123 2295.54	3029-95123 2584.20	3329-95123P 3358.55
27X24	2929-95423 2247.96	3029-95423 2826.59	3329-95423P 3323.27



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Reducer Coupling (Spigot x Gasket)

6X4	2929-53232 83.20	300-101383 86.25	3329-53232P 110.99
8X4	2929-58232 190.48	3029-58232 204.15	3329-58232P 237.51
8X6	2929-58532 100.95	300-101385 120.20	3329-58532P 128.27
10X4	2929-62432 278.41	3029-62432 303.47	3329-62432P 333.49
10X6	2929-62632 216.38	3029-62632 237.74	3329-62632P 271.36
10X8	2929-62832 158.63	300-101388 179.34	3329-62832P 229.05
12X4	2929-66432 375.62	3029-66432 391.77	3329-66432P 549.28
12X6	2929-66632 344.40	3029-66632 366.97	3329-66632P 529.11
12X8	2929-66832 240.00	3029-66832 277.26	3329-66832P 463.05
12X10	2929-67032 229.49	300-101392 254.00	3329-67032P 323.96
15X4	2929-72432 809.86	3029-72432 866.57	3329-72432P 1092.61
15X6	2929-72632 765.64	3029-72632 819.26	3329-72632P 891.44
15X8	2929-72832 718.55	3029-72832 776.03	3329-72832P 823.89
15X10	2929-73032 495.62	3029-73032 620.59	3329-73032P 719.66
15X12	2929-73232 337.00	300-101397 392.63	3329-73232P 557.00
18X4	2929-78432 1676.59	3029-78432 1769.72	3329-78432P 1874.35
18X6	2929-78632 1641.35	3029-78632 1731.62	3329-78632P 1835.34
18X8	2929-78832 1512.95	3029-78832 1603.84	3329-78832P 1716.14
18X10	2929-79032 973.45	3029-79032 1049.86	3329-79032P 1186.42
18X12	2929-79232 954.54	3029-79232 986.16	3329-79232P 1118.11
18X15	2929-79532 660.74	300-101403 759.46	3329-79532P 852.76
21X6	2929-84632 1917.66	3029-84632 2032.79	3329-84632P 2164.85
21X8	2929-84832 1664.48	3029-84832 1680.49	3329-84832P 1773.22
21X10	2929-85032 1458.75	3029-85032 1565.58	3329-85032P 1618.64
21X12	2929-85232 1378.79	3029-85232 1433.80	3329-85232P 1518.66
21X15	2929-85532 1314.38	3029-85532 1392.96	3329-85532P 1479.87
21X18	2929-85832 1015.26	300-101417 1144.72	3329-85832P 1328.80
24X6	2929-90632 3175.24	3029-90632 3386.24	3329-90632P 3690.55
24X8	2929-90832 3012.56	3029-90832 3159.20	3329-90832P 3331.92
24X10	2929-91032 2867.69	3029-91032 3021.87	3329-91032P 3245.66
24X12	2929-91232 2510.31	3029-91232 2658.98	3329-91232P 2840.82
24X15	2929-91532 1826.41	3029-91532 1973.86	3329-91532P 2581.57
24X18	2929-91832 1732.77	3029-91832 1945.56	3329-91832P 2456.55
24X21	2929-92132 1580.17	3029-92132 1902.99	3329-92132P 2116.43
27X6	2929-93632 4128.48	3029-93632 4407.61	3329-93632P 4759.34
27X8	2929-93832 3839.89	3029-93832 4167.44	3329-93832P 4445.21
27X10	2929-94032 3600.20	3029-94032 3847.06	3329-94032P 4099.54



Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Reducer Coupling (Spigot x Gasket) (continued)

	27X12	2929-94232 3380.36	3029-94232 3584.91	3329-94232P 3870.82
	27X15	2929-94532 2663.56	3029-94532 2845.92	3329-94532P 3379.47
	27X18	2929-94832 2491.83	3029-94832 2672.18	3329-94832P 3269.68
	27X21	2929-95132 2203.71	3029-95132 2480.83	3329-95132P 3030.51
	27X24	2929-95432 2208.33	3029-95432 2644.97	3329-95432P 3189.63

Reducer Coupling (Gasketed)

	6X4	2929-5322 101.18	300-101456 120.20	3329-5322P 152.82
	8X4	2929-5822 226.66	3029-5822 242.94	3329-5822P 282.62
	8X6	2929-5852 127.97	300-101458 158.24	3329-5852P 196.69
	10X4	2929-6242 331.29	3029-6242 361.13	3329-6242P 395.51
	10X6	2929-6262 257.91	3029-6262 282.92	3329-6262P 322.93
	10X8	2929-6282 224.53	300-101461 254.00	3329-6282P 317.47
	12X4	2929-6642 446.99	3029-6642 466.41	3329-6642P 653.65
	12X6	2929-6662 409.84	3029-6662 436.69	3329-6662P 629.64
	12X8	2929-6682 334.02	3029-6682 389.87	3329-6682P 551.03
	12X10	2929-6702 301.62	300-101465 348.45	3329-6702P 438.95
	15X4	2929-7242 964.94	3029-7242 1031.35	3329-7242P 1300.27
	15X6	2929-7262 911.12	3029-7262 974.92	3329-7262P 1061.81
	15X8	2929-7282 855.06	3029-7282 923.48	3329-7282P 980.43
	15X10	2929-7302 589.69	3029-7302 719.88	3329-7302P 856.41
	15X12	2929-7322 444.96	300-101470 506.71	3329-7322P 633.08
	18X4	2929-7842 1994.62	3029-7842 2105.94	3329-7842P 2229.96
	18X6	2929-7862 1953.20	3029-7862 2060.64	3329-7862P 2184.05
	18X8	2929-7882 1800.41	3029-7882 1908.58	3329-7882P 2042.23
	18X10	2929-7902 1158.40	3029-7902 1249.34	3329-7902P 1411.83
	18X12	2929-7922 1135.85	3029-7922 1173.53	3329-7922P 1331.17
	18X15	2929-7952 794.96	300-101476 885.82	3329-7952P 1012.20
	21X6	2929-8462 2281.98	3029-8462 2419.01	3329-8462P 2576.17
	21X8	2929-8482 1980.74	3029-8482 1998.88	3329-8482P 2109.45
	21X10	2929-8502 1735.92	3029-8502 1862.79	3329-8502P 1926.59
	21X12	2929-8522 1640.77	3029-8522 1706.22	3329-8522P 1807.51
	21X15	2929-8552 1563.66	3029-8552 1657.22	3329-8552P 1760.72
	21X18	2929-8582 1301.41	300-101489 1392.60	3329-8582P 1549.64
	24X6	2929-9062 3778.03	3029-9062 4030.37	3329-9062P 4390.45
	24X8	2929-9082 3585.23	3029-9082 3759.45	3329-9082P 3964.98
	24X10	2929-9102 3412.27	3029-9102 3595.15	3329-9102P 3861.67
	24X12	2929-9122 2986.98	3029-9122 3164.19	3329-9122P 3381.08

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Reducer Coupling (Gasketed) (continued)

	24X15	2929-9152 2173.25	3029-9152 2348.89	3329-9152P 3072.04
	24X18	2929-9182 2122.01	3029-9182 2315.02	3329-9182P 2923.18
	24X21	2929-9212 2097.08	3029-9212 2289.48	3329-9212P 2902.71
	27X6	2929-9362 4913.56	3029-9362 5202.76	3329-9362P 5663.49
	27X8	2929-9382 4570.49	3029-9382 4958.93	3329-9382P 5289.24
	27X10	2929-9402 4284.12	3029-9402 4577.58	3329-9402P 4878.12
	27X12	2929-9422 4021.82	3029-9422 4265.69	3329-9422P 4605.94
	27X15	2929-9452 3169.85	3029-9452 3385.34	3329-9452P 4020.45
	27X18	2929-9482 2964.31	3029-9482 3179.78	3329-9482P 3890.02
	27X21	2929-9512 2741.77	3029-9512 3070.28	3329-9512P 3836.15
	27X24	2929-9542 2644.95	3029-9542 2935.37	3329-9542P 3740.96

PIP X IPS Reducer (Socket)

	6X4	2929-532 36.24	---	---
	8X6	---	300-101537 47.82	---
	10X6	---	3029-626PXI 147.37	---
	10X8	---	300-101538 108.75	---
	12X10	---	300-101539 131.24	---
	15X10	---	300-101541 331.26	---
	15X12	---	300-101540 225.75	---

IPS X PIP Adapter (Socket)

	6	---	300-101649 39.23	---
	8	---	300-101650 56.39	---
	10	---	300-101651 94.48	---
	12	---	300-101652 147.18	---

IPS X PIP Adapter (Gasketed)

	6	---	300-101747 95.66	---
	8	---	300-101748 156.15	---
	10	---	300-101749 224.58	---
	12	---	300-101750 316.54	---

Cross (Socket)

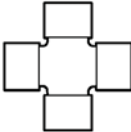
	6	290-103286 101.82	300-103286 141.09	3320-060P 175.58
	6X2	290-103283 77.27	300-103283 89.55	3320-528P 109.28
	6X3	290-103284 84.66	300-103284 100.59	3320-530P 118.02
	6X4	290-103285 92.00	300-103285 107.94	3320-532P 124.01
	8	290-103291 172.97	300-103291 206.12	3320-080P 254.14
	8X2	290-103287 95.66	300-103287 115.28	3320-578P 132.56
	8X3	290-103288 104.24	300-103288 126.35	3320-580P 148.58
	8X4	290-103289 111.63	300-103289 134.95	3320-582P 168.12



Fabricated Fittings PVC 125, 100 & 80 PSI PIP Fabricated Fittings

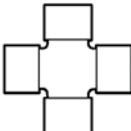
Size	80 PSI	100 PSI	125 PSI
	Disc Code: 310 Part Number Price Each	Disc Code: 320 Part Number Price Each	Disc Code: 330 Part Number Price Each

Cross (Socket) (continued)

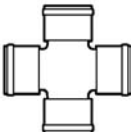
	8X6	290-103290 130.04	300-103290 155.83	3320-585P 192.71
	10	290-103297 293.21	300-103297 354.58	3320-100P 411.99
	10X2	290-103292 147.18	300-103292 153.36	3320-621P 171.88
	10X3	290-103293 158.24	300-103293 179.06	3320-623P 194.53
	10X4	290-103294 176.69	300-103294 191.37	3320-624P 236.41
	10X6	290-103295 199.97	300-103295 214.68	3320-626P 264.92
	10X8	290-103296 234.31	300-103296 261.29	3320-628P 323.76
	12	290-103304 455.16	300-103304 536.17	3320-120P 662.04
	12X2	290-103298 220.85	300-103298 225.75	3320-661P 285.98
	12X3	290-103299 244.14	300-103299 246.62	3320-663P 311.48
	12X4	290-103300 249.05	300-103300 269.93	3320-664P 333.67
	12X6	290-103301 267.44	300-103301 296.92	3320-666P 367.91
	12X8	290-103302 311.61	300-103302 345.99	3320-668P 378.88
	12X10	290-103303 366.82	300-103303 417.15	3320-670P 514.80
	15	290-103321 761.92	300-103321 923.86	3320-150P 1177.87
	15X2	290-103313 311.61	300-103313 352.11	3320-721P 411.01
	15X3	290-103314 316.54	300-103314 373.00	3320-723P 449.05
	15X4	290-103315 331.26	300-103315 381.59	3320-724P 466.20
	15X6	290-103316 364.38	300-103316 422.05	3320-726P 483.40
	15X8	290-103317 430.69	300-103317 483.40	3320-728P 660.09
	15X10	290-103318 498.12	300-103318 601.16	3320-730P 799.95
	15X12	290-103319 586.47	300-103319 703.03	3320-732P 914.01
	18	290-103342 1318.97	300-103342 1494.43	3320-180P 1904.21
	18X2	290-103332 466.20	300-103332 545.97	3320-781P 711.58
	18X3	290-103333 478.49	300-103333 571.75	3320-783P 750.88
	18X4	290-103334 495.68	300-103334 584.00	3320-784P 797.46
	18X6	290-103335 531.23	300-103335 630.63	3320-786P 879.68
	18X8	290-103336 588.91	300-103336 689.54	3320-788P 996.25
	18X10	290-103337 650.25	300-103337 747.17	3320-790P 1143.51
	18X12	290-103338 759.46	300-103338 923.86	3320-792P 1295.65
	18X15	290-103340 920.20	300-103340 1201.20	3320-795P 1538.60
	21	290-103367 1947.19	300-103367 2461.23	3320-210P 2929.97
	21X2	290-103355 711.58	300-103355 907.92	3320-841P 932.46
	21X3	290-103356 742.28	300-103356 956.99	3320-843P 1055.17
	21X4	290-103357 785.22	300-103357 996.25	3320-844P 1177.87
	21X6	290-103358 835.49	300-103358 1055.17	3320-846P 1272.29
	21X8	290-103359 903.01	300-103359 1143.51	3320-848P 1406.08

Size	80 PSI	100 PSI	125 PSI
	Disc Code: 310 Part Number Price Each	Disc Code: 320 Part Number Price Each	Disc Code: 330 Part Number Price Each

Cross (Socket) (continued)

	21X10	290-103360 976.61	300-103360 1260.05	3320-850P 1553.32
	21X12	290-103361 1093.20	300-103361 1406.08	3320-852P 1728.78
	21X15	290-103363 1253.93	300-103363 1640.42	3320-855P 1992.56
	21X18	290-103365 1502.99	300-103365 1963.12	3320-858P 2431.81
	24	290-103381 2783.93	300-103381 3280.85	3320-240P 4511.54
	24X2	290-103368 981.54	300-103368 1177.87	3320-901P 1226.94
	24X3	290-103369 1030.59	300-103369 1226.94	3320-903P 1282.16
	24X4	290-103370 1093.20	300-103370 1289.53	3320-904P 1348.39
	24X6	290-103371 1186.43	300-103371 1374.16	3320-906P 1435.54
	24X8	290-103372 1260.05	300-103372 1494.43	3320-908P 1582.75
	24X10	290-103373 1348.39	300-103373 1612.21	3320-910P 1758.20
	24X12	290-103374 1464.93	300-103374 1787.67	3320-912P 1933.69
	24X15	290-103376 1758.20	300-103376 2022.00	3320-915P 2197.47
	24X18	290-103378 1992.56	300-103378 2343.47	3320-918P 2636.73
	24X21	290-103380 2372.92	300-103380 2783.93	3320-921P 3193.74
	27	2920-270 4215.02	3020-270 4967.07	3320-270P 6456.02
	27X4	2920-934 1246.62	3020-934 1561.47	3320-934P 2029.38
	27X6	2920-936 1438.81	3020-936 1666.69	3320-936P 2168.18
	27X8	2920-938 1527.60	3020-938 1811.69	3320-938P 2355.95
	27X10	2920-940 1632.80	3020-940 1953.22	3320-940P 2539.85
	27X12	2920-942 1774.16	3020-942 2165.78	3320-942P 2815.11
	27X15	2920-945 2129.36	3020-945 2449.77	3320-945P 3184.38
	27X18	2920-948 2412.35	3020-948 2839.00	3320-948P 3675.84
	27X21	2920-951 2875.19	3020-951 3371.97	3320-951P 4385.44
	27X24	2920-954 3371.93	3020-954 3973.74	3320-954P 5164.61

Cross (Gasketed)

	6	290-104001 245.32	300-104001 252.69	3320-0602P 303.23
	6X4	290-104000 227.32	300-104000 233.13	3320-5322P 260.82
	8	290-104006 343.53	300-104006 364.38	3320-0802P 438.25
	8X4	290-104004 273.45	300-104004 282.15	3320-5822P 352.88
	8X6	290-104005 311.24	300-104005 318.99	3320-5852P 379.64
	10	290-104012 510.38	300-104012 512.84	3320-1002P 604.24
	10X4	290-104009 364.06	300-104009 368.07	3320-6242P 433.96
	10X6	290-104010 398.72	300-104010 411.01	3320-6262P 458.31
	10X8	290-104011 427.60	300-104011 460.11	3320-6282P 515.01
	12	290-104019 732.51	300-104019 761.92	3320-1202P 916.42
	12X4	290-104015 441.69	300-104015 472.38	3320-6642P 600.67

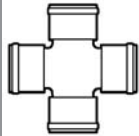
Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

Cross (Gasketed) (continued)

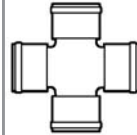
12X6	290-104016 478.49	300-104016 515.27	3320-6662P 639.71
12X8	290-104017 539.85	300-104017 588.91	3320-6682P 656.60
12X10	290-104018 625.72	300-104018 662.58	3320-6702P 777.35
15	290-104036 1143.51	300-104036 1318.97	3320-1502P 1656.36
15X4	290-104030 662.58	300-104030 834.32	3320-7242P 886.45
15X6	290-104031 711.58	300-104031 889.52	3320-7262P 923.18
15X8	290-104032 797.46	300-104032 950.86	3320-7282P 981.54
15X10	290-104033 920.20	300-104033 1042.91	3320-7302P 1104.26
15X12	290-104034 977.92	300-104034 1165.60	3320-7322P 1318.97
18	290-104057 1758.20	300-104057 1992.56	3320-1802P 2515.26
18X4	290-104049 981.54	300-104049 1104.26	3320-7842P 1128.76
18X6	290-104050 1067.42	300-104050 1226.94	3320-7862P 1282.45
18X8	290-104051 1202.40	300-104051 1349.63	3320-7882P 1368.99
18X10	290-104052 1288.28	300-104052 1472.36	3320-7902P 1524.79
18X12	290-104053 1411.01	300-104053 1595.01	3320-7922P 1668.69
18X15	2920-7952 1614.22	3020-7952 1814.67	3320-7952P 2143.55
21	290-104082 2910.36	300-104082 3875.43	3320-2102P 4101.00
21X4	290-104072 1570.49	300-104072 2657.15	3320-8442P 3147.16
21X6	290-104073 1680.88	300-104073 2760.37	3320-8462P 3212.73
21X8	290-104074 1840.40	300-104074 2879.75	3320-8482P 3356.98
21X10	290-104075 2024.46	300-104075 3045.68	3320-8502P 3435.63
21X12	290-104076 2269.87	300-104076 3212.21	3320-8522P 3593.00
21X15	290-104078 2515.26	300-104078 3359.35	3320-8552P 3615.11
21X18	290-104080 2699.29	300-104080 3709.48	3320-8582P 3804.26
24	2920-2402 5516.67	3020-2402 6595.12	3320-2402P 8222.40
24X4	2920-9042 2877.74	3020-9042 3199.51	3320-9042P 3998.76
24X6	2920-9062 2889.88	3020-9062 3230.39	3320-9062P 4014.24
24X8	2920-9082 3120.58	3020-9082 3468.63	3320-9082P 4334.80
24X10	2920-9102 3377.53	3020-9102 3751.98	3320-9102P 4688.87
24X12	2920-9122 3634.61	3020-9122 4037.34	3320-9122P 5045.31
24X15	2920-9152 4211.38	3020-9152 4678.82	3320-9152P 5848.73
24X18	2920-9182 4652.59	3020-9182 5168.58	3320-9182P 6461.76
24X21	2920-9212 5350.72	3020-9212 5945.69	3320-9212P 7431.11
27	2920-2702 7673.88	3020-2702 11029.28	3320-2702P 13751.19
27X4	2920-9342 3382.29	3020-9342 4000.89	3320-9342P 4998.58
27X6	2920-9362 3630.57	3020-9362 4016.54	3320-9362P 5071.82
27X8	2920-9382 3891.62	3020-9382 4336.81	3320-9382P 5421.37



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
------	---	--	--

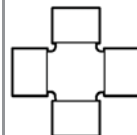
Cross (Gasketed) (continued)

27X10	2920-9402 4221.51	3020-9402 4688.98	3320-9402P 5862.76
27X12	2920-9422 4543.27	3020-9422 5049.19	3320-9422P 6310.13
27X15	2920-9452 5263.71	3020-9452 5848.56	3320-9452P 7311.73
27X18	2920-9482 5816.17	3020-9482 6461.76	3320-9482P 8075.85
27X21	2920-9512 6688.39	3020-9512 7431.11	3320-9512P 9290.89
27X24	2920-9542 7240.95	3020-9542 8222.56	3320-9542P 10278.47



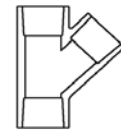
PIP X IPS Cross (Socket)

6	2920-060PXI 101.82	3020-060PXI 141.09	3320-060PXI 175.58
8	2920-080PXI 172.97	3020-080PXI 206.12	3320-080PXI 254.14
8X6	2920-585PXI 122.24	3020-585PXI 155.83	3320-585PXI 192.71
10	2920-100PXI 293.21	3020-100PXI 354.58	3320-100PXI 411.99
10X6	2920-626PXI 187.97	300-103700 214.68	3320-626PXI 249.02
10X8	2920-628PXI 220.24	3020-628PXI 291.83	3320-628PXI 304.34
12	2920-120PXI 455.16	3020-120PXI 536.17	3320-120PXI 662.04
12X6	2920-666PXI 267.44	3020-666PXI 296.92	3320-666PXI 345.83
12X8	2920-668PXI 311.61	3020-668PXI 345.99	3320-668PXI 729.43
12X10	2920-670PXI 344.81	3020-670PXI 417.15	3320-670PXI 483.92
15X6	2920-726PXI 342.52	3020-726PXI 422.05	3320-726PXI 454.40
15X8	2920-728PXI 404.85	3020-728PXI 483.40	3320-728PXI 620.48
15X10	2920-730PXI 468.23	3020-730PXI 601.16	3320-730PXI 751.95
15X12	2920-732PXI 551.28	3020-732PXI 703.03	3320-732PXI 859.17
18X6	2920-786PXI 531.23	3020-786PXI 630.63	3320-786PXI 879.68
18X8	2920-788PXI 553.57	3020-788PXI 689.54	3320-788PXI 936.47
18X10	2920-790PXI 650.25	3020-790PXI 747.17	3320-790PXI 1074.89
18X12	2920-792PXI 759.46	3020-792PXI 923.86	3320-792PXI 1217.92
21X6	2920-846PXI 875.21	3020-846PXI 1055.17	3320-846PXI 1195.96
21X8	2920-848PXI 903.01	3020-848PXI 1143.51	3320-848PXI 1321.72
21X10	2920-850PXI 976.61	3020-850PXI 1260.05	3320-850PXI 1460.12
21X12	2920-852PXI 1027.61	3020-852PXI 1406.08	3320-852PXI 1625.05
24X6	2920-906PXI 1186.43	3020-906PXI 1374.16	3320-906PXI 1349.40
24X8	2920-908PXI 1260.05	3020-908PXI 1494.43	3320-908PXI 1487.78
24X10	2920-910PXI 1348.39	3020-910PXI 1612.21	3320-910PXI 1652.71
24X12	2920-912PXI 1464.93	3020-912PXI 1787.67	3320-912PXI 1817.67



Wyes (Socket)

6	2975-060 193.72	---	---
6X4	2975-532 108.97	---	---
8	2975-080 205.64	---	---
8X4	2975-582 178.48	---	---



Fabricated Fittings
PVC 125, 100 & 80 PSI PIP Fabricated Fittings



	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Stub Surface Reducer (Socket) (continued)

	15X12	---	30040-732 363.27	---
	18X4	---	30040-784 695.20	---
	18X6	---	30040-786 715.28	---
	18X8	---	30040-788 730.60	---
	18X10	---	30040-790 757.43	---
	18X12	---	30040-792 778.33	---
	18X15	---	30040-795 891.63	---
	21X4	---	30040-844 964.83	---
	21X6	---	30040-846 974.55	---
	21X8	---	30040-848 1001.13	---
	21X10	---	30040-850 1034.19	---
	21X12	---	30040-852 1047.96	---
	21X15	---	30040-855 1161.64	---
	21X18	---	30040-858 1282.81	---
	24X4	---	30040-904 1089.32	---
	24X6	---	30040-906 1096.77	---
	24X8	---	30040-908 1124.53	---
	24X10	---	30040-910 1157.58	---
	24X12	---	30040-912 1172.25	---
	24X15	---	30040-915 1286.03	---
	24X18	---	30040-918 1407.25	---
	24X21	---	30040-921 1669.24	---

Eccentric Stub Surface Reducer (Socket)

	6X2	---	3040-528E 81.44	---
	6X3	---	3040-530E 82.08	---
	6X4	---	3040-532E 85.06	---
	8X2	---	3040-578E 105.57	---
	8X3	---	3040-580E 106.75	---
	8X4	---	3040-582E 108.63	---
	8X6	---	3040-585E 119.84	---
	10X2	---	3040-621E 127.58	---
	10X3	---	3040-623E 133.47	---
	10X4	---	3040-624E 142.20	---
	10X6	---	3040-626E 146.48	---
	10X8	---	3040-628E 165.98	---
	12X2	---	3040-661E 180.34	---
	12X4	---	3040-664E 212.21	---

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Eccentric Stub Surface Reducer (Socket) (continued)

	12X6	---	3040-666E 221.77	---
	12X8	---	3040-668E 227.31	---
	15X2	---	3040-721E 193.41	---
	15X3	---	3040-723E 220.98	---
	15X4	---	3040-724E 228.27	---
	15X6	---	3040-726E 232.98	---
	15X8	---	3040-728E 252.47	---
	15X10	---	3040-730E 277.29	---
	15X12	---	3040-732E 310.62	---
	18X2	---	3040-781E 448.98	---
	18X3	---	3040-783E 453.17	---
	18X4	---	3040-784E 457.53	---
	18X6	---	3040-786E 465.19	---
	18X8	---	3040-788E 484.71	---
	18X10	---	3040-790E 504.68	---
	18X12	---	3040-792E 538.03	---
	18X15	---	3040-795E 601.58	---
	21X2	---	3040-841E 558.24	---
	21X3	---	3040-843E 563.05	---
	21X4	---	3040-844E 566.21	---
	21X6	---	3040-846E 573.87	---
	21X8	---	3040-848E 593.38	---
	21X10	---	3040-850E 613.39	---
	21X12	---	3040-852E 646.73	---
	21X15	---	3040-855E 710.28	---
	21X18.701	---	3040-858E 788.99	---
	24X2	---	3040-901E 895.24	---
	24X3	---	3040-903E 902.05	---
	24X6	---	3040-906E 1045.25	---
	24X8	---	3040-908E 1064.77	---
	24X10	---	3040-910E 1084.77	---
	24X12	---	3040-912E 1118.08	---
	24X15	---	3040-915E 1171.69	---
	24X18	---	3040-918E 1260.38	---
24X21	---	3040-921E 1392.98	---	
27X3	---	3040-933E 1642.45	---	
27X4	---	3040-934E 1643.67	---	



Fabricated Fittings PVC 125, 100 & 80 PSI PIP Fabricated Fittings

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Eccentric Stub Surface Reducer (Socket) (continued)

	27X6	---	3040-936E 1654.46	---
	27X8	---	3040-938E 1673.98	---
	27X10	---	3040-940E 1693.96	---
	27X12	---	3040-942E 1727.31	---
	27X15	---	3040-945E 1780.88	---
	27X18	---	3040-948E 1869.58	---
	27X21	---	3040-951E 2002.20	---
	27X24	---	3040-954E 4354.15	---
	30X18	---	3040-978E 2850.04	---

Cap (Socket)

	6	---	300-107540 49.05	---
	8	---	300-107541 62.58	---
	10	---	300-107542 100.59	---
	12	---	300-107543 132.48	---
	15	---	300-107545 215.91	---
	18	---	300-107547 421.81	---
	21	---	300-107549 645.34	---
	24	---	300-107550 882.46	---
	27	---	3047-270 1107.38	---
	30	---	3047-300 2705.66	---

Saddle (Socket)

	6X2	---	300-101789 61.33	---
	6X3	---	300-101797 73.61	---
	6X4	---	300-101804 85.85	---
	8X2	---	300-101790 61.33	---
	8X3	---	300-101798 73.61	---
	8X4	---	300-101805 85.85	---
	8X6	---	300-101811 98.14	---
	10X2	---	300-101791 61.33	---
	10X3	---	300-101799 73.61	---
	10X4	---	300-101806 85.85	---
	10X6	---	300-101812 98.14	---
	10X8	---	300-101817 110.41	---
	12X2	---	300-101792 61.33	---
	12X3	---	300-101800 73.61	---
	12X4	---	300-101807 85.85	---
	12X6	---	300-101813 98.14	---

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
--	------	---	--	--

Saddle (Socket) (continued)

	12X8	---	300-101818 110.41	---
	12X10	---	300-101822 122.65	---
	15X2	---	300-101793 61.33	---
	15X3	---	300-101801 88.61	---
	15X4	---	300-101808 85.85	---
	15X6	---	300-101814 98.14	---
	15X8	---	300-101819 110.41	---
	15X10	---	300-101823 122.65	---
	15X12	---	300-101826 170.62	---
	18X2	---	300-101794 61.33	---
	18X3	---	300-101802 131.61	---
	18X4	---	300-101809 167.82	---
	18X6	---	300-101815 202.64	---
	18X8	---	300-101820 216.49	---
	18X10	---	300-101824 249.22	---
	18X12	---	300-101827 262.77	---
	18X15	---	300-101829 402.01	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Stub Saddle (Socket)

	6X2	---	300-101884 85.85	---
	6X3	---	300-101892 94.48	---
	6X4	---	300-101899 109.16	---
	8X2	---	300-101885 85.85	---
	8X3	---	300-101893 94.48	---
	8X4	---	300-101900 109.16	---
	8X6	---	300-101906 134.95	---
	10X2	---	300-101886 85.85	---
	10X3	---	300-101894 94.48	---
	10X4	---	300-101901 109.16	---
	10X6	---	300-101907 134.95	---
	10X8	---	300-101912 176.69	---
	12X2	---	300-101887 85.85	---
	12X3	---	300-101895 94.48	---
	12X4	---	300-101902 109.16	---

Fabricated Fittings PVC 125, 100 & 80 PSI PIP Fabricated Fittings & Pipe Flanges



Glue-on Saddles

Size	80 PSI Disc Code: 310	100 PSI Disc Code: 320	125 PSI Disc Code: 330
	Part Number Price Each	Part Number Price Each	Part Number Price Each

Stub Saddle (Socket) (continued)

	12X6	---	300-101908 134.95	---
	12X8	---	300-101913 176.69	---
	12X10	---	300-101917 191.37	---
	15X2	---	300-101888 123.91	---
	15X3	---	300-101896 137.37	---
	15X4	---	300-101903 143.55	---
	15X6	---	300-101909 148.43	---
	15X8	---	300-101914 176.69	---
	15X10	---	300-101918 203.64	---
	15X12	---	300-101921 268.67	---
	18X2	---	300-101889 202.42	---
	18X3	---	300-101897 207.34	---

Size	80 PSI Disc Code: 310	100 PSI Disc Code: 320	125 PSI Disc Code: 330
	Part Number Price Each	Part Number Price Each	Part Number Price Each

Stub Saddle (Socket) (continued)

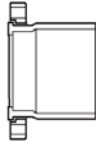
	18X4	---	300-101904 250.25	---
	18X6	---	300-101910 318.99	---
	18X8	---	300-101915 341.08	---
	18X10	---	300-101919 392.63	---
	18X12	---	300-101922 452.77	---
	18X15	---	300-101924 633.08	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Pipe Flanges

Size	80 PSI Disc Code: 310	100 PSI Disc Code: 320	125 PSI Disc Code: 330
	Part Number Price Each	Part Number Price Each	Part Number Price Each

Flange x PIP (Socket)

	6X6.140	---	---	354-060F 133.67
	8X8.160	---	---	354-080F 202.42
	10X10.200	---	---	354-100F 284.61
	12X12.240	---	---	354-120F 412.21
	14X15.300	---	---	354-150F 1098.76
	16X15.300	---	---	354-151F 1253.46
	18X18.360	---	354-182F 1904.21	---
	18X18.701	---	354-181F 1904.21	---
	20X22.047	---	354-201F 2900.51	---
	24X24.803	---	354-241F 4247.72	---

PIP =Plastic Irrigation Pipe (PIP dimensions are NOT the same as IPS dimensions.)
 Sizes 6" through 16" are furnished with Plastic Ring.
 Sizes 18" Through 24" are furnished with Steel Ring.



Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Tee (Gasket x Spigot x Fipt)

	4X1-1/2	---	---	---	340-102356 189.49	350-102356 220.87
	4X2	---	---	---	340-102357 189.49	350-102357 220.87
	4X2-1/2	---	---	---	340-102358 202.32	350-102358 234.83
	4X3	---	---	---	340-102359 202.32	---
	6X1-1/2	---	---	---	340-102361 275.58	350-102361 287.19
	6X2	---	---	---	340-102362 275.58	350-102362 287.19
	6X2-1/2	---	---	---	340-102363 293.03	350-102363 299.97
	6X3	---	---	---	340-102364 293.03	350-102364 299.97
	6X4	---	---	---	340-102365 304.60	350-102365 316.24
	8X1-1/2	---	---	---	340-102366 336.01	350-102366 409.26
	8X2	---	---	---	340-102367 336.01	350-102367 409.26
	8X2-1/2	---	---	---	340-102368 353.45	350-102368 426.69
	8X3	---	---	---	340-102369 353.45	350-102369 426.69
	8X4	---	---	---	340-102370 382.52	350-102370 444.12
	10X2	---	---	---	340-102372 570.87	350-102372 623.20
	10X2-1/2	---	---	---	340-102373 605.77	---
	10X3	---	---	---	340-102374 605.77	350-102374 653.43
	10X4	---	---	---	340-102375 637.13	350-102375 687.17
	12X2	---	---	---	340-102377 760.40	350-102377 818.52
	12X2-1/2	---	---	---	340-102378 792.95	---
	12X3	---	---	---	340-102379 792.95	350-102379 862.69
	12X4	---	---	---	340-102380 830.18	350-102380 906.91

Tee (Gasket x Gasket x Fipt)

	4X1-1/2	---	---	---	340-102426 209.28	350-102426 229.06
	4X2	---	---	---	340-102427 209.28	350-102427 229.06
	4X2-1/2	---	---	---	340-102428 227.86	350-102428 246.48
	4X3	---	---	---	340-102429 227.86	350-102429 246.48
	6X1-1/2	---	---	---	340-102431 301.12	350-102431 316.24
	6X2	---	---	---	340-102432 301.12	350-102432 316.24
	6X2-1/2	---	---	---	340-102433 312.76	350-102433 331.39
	6X3	---	---	---	340-102434 312.76	350-102434 331.39
	6X4	---	---	---	340-102435 322.06	350-102435 345.33
	8X1-1/2	---	---	---	340-102436 368.59	350-102436 441.82
	8X2	---	---	---	340-102437 368.59	350-102437 441.82
	8X2-1/2	---	---	---	340-102438 390.66	350-102438 465.06
	8X3	---	---	---	340-102439 390.66	350-102439 465.06
	8X4	---	---	---	340-102440 415.07	350-102440 641.20

Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Tee (Gasket x Gasket x Fipt) (continued)

	10X2	---	---	---	340-102442 624.35	350-102442 687.17
	10X2-1/2	---	---	---	340-102443 653.43	350-102443 725.55
	10X3	---	---	---	340-102444 653.43	350-102444 725.55
	10X4	---	---	---	340-102445 689.44	350-102445 754.56
	12X2	---	---	---	340-102447 805.40	350-102447 876.67
	12X2-1/2	---	---	---	340-102448 845.27	---
	12X3	---	---	---	340-102449 845.27	350-102449 920.85
	12X4	---	---	---	340-102450 888.27	350-102450 965.04

Tee (Soc x Soc x Soc)

	6	310-102502 72.27	320-102502 145.69	330-102502 161.97	340-102502 285.59	350-102502 302.22
	6X2	310-102499 57.08	320-102499 75.75	330-102499 90.89	340-102499 226.69	350-102499 235.45
	6X3	310-102500 60.60	320-102500 85.06	330-102500 96.71	340-102500 241.20	350-102500 247.16
	6X4	310-102501 66.44	320-102501 93.25	330-102501 108.38	340-102501 249.94	350-102501 264.61
	8	310-102507 121.25	320-102507 184.15	330-102507 217.99	340-102507 447.66	350-102507 532.53
	8X2	310-102503 79.25	320-102503 100.23	330-102503 108.38	340-102503 288.35	350-102503 318.58
	8X3	310-102504 85.06	320-102504 111.86	330-102504 121.25	340-102504 323.23	350-102504 345.33
	8X4	310-102505 90.89	320-102505 127.00	330-102505 138.65	340-102505 341.83	350-102505 362.76
	8X6	310-102506 108.38	320-102506 163.18	330-102506 172.48	340-102506 396.48	350-102506 430.18
	10	310-102513 180.64	320-102513 256.38	330-102513 354.32	340-102513 695.27	350-102513 845.27
	10X2	310-102508 108.38	320-102508 132.83	330-102508 170.15	340-102508 408.12	350-102508 485.98
	10X3	310-102509 127.00	320-102509 153.83	330-102509 200.47	340-102509 438.36	350-102509 517.37
	10X4	310-102510 144.54	320-102510 172.48	330-102510 226.09	340-102510 474.39	350-102510 555.75
	10X6	310-102511 157.35	320-102511 189.98	330-102511 250.55	340-102511 522.04	350-102511 611.55
	10X8	310-102512 167.83	320-102512 220.28	330-102512 298.36	340-102512 588.36	350-102512 687.17
	12	310-102520 248.24	320-102520 404.44	330-102520 531.47	340-102520 989.47	350-102520 1306.84
	12X2	310-102514 186.52	320-102514 200.47	330-102514 262.27	340-102514 539.46	350-102514 640.65
	12X3	310-102515 192.29	320-102515 212.13	330-102515 284.38	340-102515 575.55	350-102515 690.63
	12X4	310-102516 199.32	320-102516 236.60	330-102516 314.71	340-102516 615.07	350-102516 737.09
	12X6	310-102517 205.12	320-102517 270.40	330-102517 354.32	340-102517 683.68	350-102517 835.96
	12X8	310-102518 216.80	320-102518 298.36	330-102518 398.65	340-102518 761.55	350-102518 891.78
	12X10	310-102519 222.58	320-102519 356.66	330-102519 473.19	340-102519 851.09	350-102519 1044.09
	15X2	310-102521** 221.46	---	---	---	---
	15X3	310-102522** 233.09	---	---	---	---
	15X4	310-102523** 258.75	---	---	---	---
	15X6	310-102524** 264.58	---	---	---	---
	15X8	310-102525** 284.38	---	---	---	---
	15X10	310-102526** 298.36	---	---	---	---



Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Tee (Soc x Soc x Soc) (continued)

	15X12	310-102527** 336.83	---	---	---	---
	15X15	310-102528* 428.92	---	---	---	---

* 15" PIP O.D.
 ** 15" PIP O.D. x IPS

Tee (Gasket x Spigot x Gasket)

	4	---	320-103058 116.54	330-103058 121.25	340-103058 221.46	350-103058 248.47
	6	---	320-103062 169.01	330-103062 180.64	340-103062 342.98	350-103062 395.29
	6X4	---	320-103061 144.54	330-103061 174.81	340-103061 304.60	350-103061 327.86
	8	---	320-103067 233.62	330-103067 300.71	340-103067 509.26	350-103067 640.65
	8X4	---	320-103065 182.35	330-103065 199.32	340-103065 380.18	350-103065 462.75
	8X6	---	320-103066 212.13	330-103066 251.77	340-103066 420.89	350-103066 526.69
	10	---	320-103073 396.29	330-103073 481.38	340-103073 833.66	350-103073 1051.96
	10X4	---	320-103070 272.73	330-103070 348.47	340-103070 559.27	350-103070 702.26
	10X6	---	320-103071 300.71	330-103071 378.82	340-103071 611.55	350-103071 766.20
	10X8	---	320-103072 334.52	330-103072 420.76	340-103072 687.17	350-103072 865.04
	12	---	320-103080 554.80	330-103080 662.03	---	---
	12X4	---	320-103076 368.32	330-103076 451.12	340-103076 731.31	350-103076 918.49
	12X6	---	320-103077 392.79	330-103077 456.89	340-103077 804.58	350-103077 1011.55
	12X8	---	320-103078 434.74	330-103078 481.38	340-103078 891.78	350-103078 1110.36
	12X10	---	320-103079 495.37	330-103079 540.83	340-103079 1009.22	350-103079 1256.85
	12X12	---	---	---	340-103080 1183.57	---

Tee (Gasket x Gasket x Gasket)

	4	---	320-103170 139.85	330-103170 191.08	340-103170 219.76	350-103170 272.07
	6	---	320-103174 163.18	330-103174 216.80	340-103174 366.24	350-103174 397.61
	6X4	---	320-103173 144.54	330-103173 205.12	340-103173 316.24	350-103173 339.49
	8	---	320-103179 289.04	330-103179 312.76	340-103179 570.87	350-103179 673.19
	8X4	---	320-103177 216.80	330-103177 241.26	340-103177 447.66	350-103177 497.60
	8X6	---	320-103178 222.58	330-103178 272.73	340-103178 497.60	350-103178 549.98
	10	---	320-103185 420.76	330-103185 529.14	340-103185 935.96	350-103185 1098.76
	10X4	---	320-103182 322.86	330-103182 400.95	340-103182 702.26	350-103182 716.20
	10X6	---	320-103183 346.18	330-103183 418.42	340-103183 745.28	350-103183 777.87
	10X8	---	320-103184 376.47	330-103184 487.22	340-103184 833.66	350-103184 876.67
	12	---	320-103192 585.13	330-103192 765.77	340-103192 1301.06	350-103192 1519.65
	12X4	---	320-103188 412.58	330-103188 487.22	340-103188 891.78	350-103188 932.47
	12X6	---	320-103189 423.12	330-103189 501.17	340-103189 974.32	350-103189 1031.31
	12X8	---	320-103190 445.26	330-103190 601.45	340-103190 1067.56	350-103190 1127.79
	12X10	---	320-103191 529.14	330-103191 641.08	340-103191 1198.77	350-103191 1276.62

Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
		Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Reinforced Tee (Soc x Soc x Fipt)

	6X2	---	---	330-202152 81.59	---	---
	6X3	---	---	330-202154 93.25	---	---
	6X4	---	---	330-202155 106.03	---	---
	8X2	---	---	330-202157 117.71	---	---
	8X3	---	---	330-202159 137.52	---	---
	8X4	---	---	330-202160 150.31	---	---
	10X2	---	---	330-202162 181.79	---	---
	10X3	---	---	330-202164 212.13	---	---
	10X4	---	---	330-202165 231.92	---	---
	12X2	---	---	330-202167 262.27	---	---
	12X3	---	---	330-202169 292.57	---	---
	12X4	---	---	330-202170 322.86	---	---

Reinforced Tee (Soc x Spigot x Fipt)

	6X2	---	---	330-202222 81.59	---	---
	6X3	---	---	330-202224 93.25	---	---
	6X4	---	---	330-202225 106.03	---	---
	8X2	---	---	330-202227 116.54	---	---
	8X3	---	---	330-202229 130.48	---	---
	8X4	---	---	330-202230 143.32	---	---
	10X2	---	---	330-202232 172.48	---	---
	10X3	---	---	330-202234 201.61	---	---
	10X4	---	---	330-202235 222.58	---	---
	12X2	---	---	330-202237 249.41	---	---
	12X3	---	---	330-202239 278.57	---	---
	12X4	---	---	330-202240 310.05	---	---

Reinforced Tee (Gasket x Spigot x Fipt)

	6X2	---	---	330-202362 139.85	---	---
	6X3	---	---	330-202364 159.64	---	---
	6X4	---	---	330-202365 169.01	---	---
	8X2	---	---	330-202367 174.81	---	---
	8X3	---	---	330-202369 186.52	---	---
	8X4	---	---	330-202370 199.32	---	---
	10X2	---	---	330-202372 264.58	---	---
	10X3	---	---	330-202374 285.55	---	---
	10X4	---	---	330-202375 313.53	---	---
	12X2	---	---	330-202377 361.31	---	---
	12X3	---	---	330-202379 391.61	---	---
	12X4	---	---	330-202380 420.76	---	---



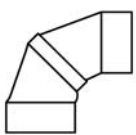
Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Reinforced Tee (Gasket x Gasket x Fipt)

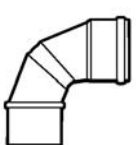
	6X2	---	---	330-202432 169.01	---	---
	6X3	---	---	330-202434 180.64	---	---
	6X4	---	---	330-202435 192.29	---	---
	8X2	---	---	330-202437 210.96	---	---
	8X3	---	---	330-202439 222.58	---	---
	8X4	---	---	330-202440 241.26	---	---
	10X2	---	---	330-202442 328.69	---	---
	10X3	---	---	330-202444 346.18	---	---
	10X4	---	---	330-202445 382.29	---	---
	12X2	---	---	330-202447 445.26	---	---
	12X3	---	---	330-202449 487.22	---	---
	12X4	---	---	330-202450 509.40	---	---

90° Elbow (Soc x Soc)

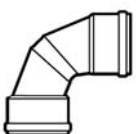
	6	310-100812 79.25	320-100812 102.53	330-100812 114.20	340-100812 294.15	350-100812 318.58
	8	310-100813 108.38	320-100813 157.35	330-100813 187.62	340-100813 408.12	350-100813 462.75
	10	310-100814 169.01	320-100814 245.93	330-100814 297.21	340-100814 620.88	350-100814 762.71
	12	310-100815 241.26	320-100815 342.64	330-100815 454.58	340-100815 899.91	350-100815 1023.18
	15	310-100816* 451.12	---	---	---	---

* 15" PIP O.D.

90° Elbow (Gasket x Spigot)

	4	---	---	330-100877 177.00	---	---
	6	---	320-100878 207.48	330-100878 238.94	340-100878 389.47	350-100878 409.26
	8	---	320-100879 314.71	330-100879 385.82	340-100879 555.75	350-100879 596.47
	10	---	320-100880 458.07	330-100880 607.23	340-100880 804.58	350-100880 982.45
	12	---	320-100881 614.26	330-100881 723.83	340-100881 1081.34	350-100881 1242.91

90° Elbow (Gasket x Gasket)

	4	---	---	330-100899 177.00	340-100899 263.92	350-100899 293.03
	6	---	320-100900 207.48	330-100900 238.94	340-100900 389.47	350-100900 409.26
	8	---	320-100901 314.71	330-100901 385.82	340-100901 555.75	350-100901 596.47
	10	---	320-100902 458.07	330-100902 607.23	340-100902 804.58	350-100902 982.45
	12	---	320-100903 614.26	330-100903 723.83	340-1202 900.63	350-100903 1242.91

11-1/4° Elbow (Soc x Soc)

	4	---	---	330-100113 33.76	340-100113 37.38	350-100113 44.84
	6	310-100114 30.25	320-100114 39.64	330-100114 47.76	340-100114 52.31	350-100114 55.79
	8	310-100115 47.76	320-100115 60.60	330-100115 94.37	340-100115 90.68	350-100115 102.31
	10	310-100116 67.57	320-100116 96.71	330-100116 134.04	340-100116 156.98	350-100116 210.40
	12	310-100117 109.51	320-100117 151.53	330-100117 217.99	340-100117 246.48	350-100117 351.15

Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

11-1/4° Elbow (Soc x Soc) (continued)

	15	310-100118 184.15	---	---	---	---
---	----	----------------------	-----	-----	-----	-----

11-1/4° Elbow (Gasket x Spigot)

	4	---	---	330-100185 121.25	340-100185 134.55	350-100185 165.57
	6	---	320-100186 135.19	330-100186 169.01	340-100186 186.87	350-100186 204.63
	8	---	320-100187 165.51	330-100187 252.93	340-100187 274.06	350-100187 330.20
	10	---	320-100188 283.25	330-100188 336.83	340-100188 389.47	350-100188 573.17
	12	---	320-100189 378.82	330-100189 456.89	340-100189 567.40	350-100189 789.48

11-1/4° Elbow (Gasket x Gasket)

	4	---	---	330-100209 121.25	340-100209 134.55	350-100209 165.57
	6	---	320-100210 135.19	330-100210 169.01	340-100210 186.87	350-100210 204.63
	8	---	320-100211 165.51	330-100211 252.93	340-100211 274.06	350-100211 330.20
	10	---	320-100212 283.25	330-100212 336.83	340-100212 389.47	350-100212 573.17
	12	---	320-100213 378.82	330-100213 456.89	340-100213 567.40	350-100213 789.48

15° Elbow (Soc x Soc)

	4	---	---	330-100233 33.76	340-100233 37.38	350-100233 44.84
	6	310-100234 30.25	320-100234 39.64	330-100234 47.76	340-100234 52.31	350-100234 55.79
	8	310-100235 47.76	320-100235 60.60	330-100235 73.39	340-100235 90.68	350-100235 104.32
	10	310-100236 67.57	320-100236 96.71	330-100236 134.04	340-100236 156.98	350-100236 210.40
	12	310-100237 109.51	320-100237 151.53	330-100237 217.99	340-100237 246.48	350-100237 351.15
	15	310-100238* 184.15	---	---	---	---

* 15° PIP O.D.

15° Elbow (Gasket x Spigot)

	4	---	---	330-100305 121.25	340-100305 134.55	350-100305 165.57
	6	---	320-100306 135.19	330-100306 169.01	340-100306 186.87	350-100306 204.63
	8	---	320-100307 165.51	330-100307 252.93	340-100307 274.06	350-100307 330.20
	10	---	320-100308 283.25	330-100308 336.83	340-100308 389.47	350-100308 573.17
	12	---	320-100309 378.82	330-100309 456.89	340-100309 567.40	350-100309 789.48

15° Elbow (Gasket x Gasket)

	4	---	---	330-100329 121.25	340-100329 134.55	350-100329 165.57
	6	---	320-100330 135.19	330-100330 169.01	340-100330 186.87	350-100330 204.63
	8	---	320-100331 177.89	330-100331 252.93	340-100331 274.06	350-100331 330.20
	10	---	320-100332 263.75	330-100332 336.83	340-100332 389.47	350-100332 573.17
	12	---	320-100333 380.32	330-100333 456.89	340-100333 567.40	350-100333 789.48



Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
		Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

22-1/2° Elbow (Soc x Soc)

	4	---	---	330-100353 33.76	340-100353 37.38	350-100353 44.84
	6	310-100354 30.25	320-100354 39.64	330-100354 47.76	340-100354 52.31	350-100354 55.79
	8	310-100355 47.76	320-100355 60.60	330-100355 73.39	340-100355 90.68	350-100355 104.32
	10	310-100356 67.57	320-100356 96.71	330-100356 134.04	340-100356 156.98	350-100356 210.40
	12	310-100357 109.51	320-100357 151.53	330-100357 217.99	340-100357 246.48	350-100357 351.15
	15	310-100358* 184.15	---	---	---	---

* 15" PIP O.D.

22-1/2° Elbow (Gasket x Spigot)

	4	---	---	330-100425 121.25	340-100425 134.55	350-100425 165.57
	6	---	320-100426 135.19	330-100426 169.01	340-100426 186.87	350-100426 204.63
	8	---	320-100427 165.51	330-100427 252.93	340-100427 274.06	350-100427 330.20
	10	---	320-100428 283.25	330-100428 336.83	340-100428 389.47	350-100428 573.17
	12	---	320-100429 378.82	330-100429 456.89	340-100429 567.40	350-100429 789.48

22-1/2° Elbow (Gasket x Gasket)

	4	---	---	330-100449 121.25	340-100449 134.55	350-100449 165.57
	6	---	320-100450 135.19	330-100450 169.01	340-100450 186.87	350-100450 204.63
	8	---	320-100451 165.51	330-100451 252.93	340-100451 274.06	350-100451 330.20
	10	---	320-100452 283.25	330-100452 336.83	340-100452 389.47	350-100452 573.17
	12	---	320-100453 378.82	330-100453 456.89	340-100453 567.40	350-100453 789.48

30° Elbow (Soc x Soc)

	4	---	---	330-100473 41.94	340-100473 88.31	350-100473 146.81
	6	310-100474 41.94	320-100474 52.46	330-100474 59.42	340-100474 216.24	350-100474 261.36
	8	310-100475 61.74	320-100475 87.41	330-100475 92.05	340-100475 294.15	350-100475 351.15
	10	310-100476 89.75	320-100476 134.04	330-100476 189.98	340-100476 455.78	350-100476 549.98
	12	310-100477 145.69	320-100477 195.80	330-100477 278.57	340-100477 660.40	350-100477 768.54
	15	310-100478 217.99	---	---	---	---

30° Elbow (Gasket x Spigot)

	4	---	---	330-100545 139.13	340-100545 167.42	350-100545 175.56
	6	---	320-100546 180.64	330-100546 192.29	340-100546 248.82	350-100546 304.60
	8	---	320-100547 222.58	330-100547 270.40	340-100547 366.24	350-100547 453.43
	10	---	320-100548 313.53	330-100548 397.42	340-100548 608.07	350-100548 756.95
	12	---	320-100549 433.61	330-100549 576.95	340-100549 804.58	350-100549 949.93

30° Elbow (Gasket x Gasket)

	4	---	---	330-100569 139.13	340-100569 167.42	350-100569 175.56
	6	---	320-100570 180.64	330-100570 192.29	340-100570 248.82	350-100570 304.60
	8	---	320-100571 222.58	330-100571 270.40	340-100571 366.24	350-100571 453.43
	10	---	320-100572 313.53	330-100572 397.42	340-100572 608.07	350-100572 756.95
	12	---	320-100573 433.61	330-100573 576.95	340-100573 804.58	350-100573 949.93

Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

45° Elbow (Soc x Soc)

	6	310-100592 41.94	320-100592 52.46	330-100592 59.42	340-100592 216.26	350-100592 225.54
	8	310-100593 61.74	320-100593 87.41	330-100593 92.05	340-100593 294.15	350-100593 351.15
	10	310-100594 89.75	320-100594 134.04	330-100594 189.98	340-100594 455.78	350-100594 549.98
	12	310-100595 145.69	320-100595 195.80	330-100595 278.57	340-100595 660.40	350-100595 768.54
	15	310-100596* 217.99	---	---	---	---

* 15" PIP O.D.

45° Elbow (Gasket x Spigot)

	4	---	---	330-100657 139.13	340-100657 167.42	350-100657 175.56
	6	---	320-100658 141.09	330-100658 192.29	340-100658 248.82	350-100658 304.60
	8	---	320-100659 199.97	330-100659 270.40	340-100659 366.24	350-100659 453.43
	10	---	320-100660 287.06	330-100660 397.42	340-100660 608.07	350-100660 755.13
	12	---	320-100661 408.54	330-100661 576.95	340-100661 804.58	350-100661 949.93

45° Elbow (Gasket x Gasket)

	4	---	---	330-100679 139.13	340-100679 167.42	350-100679 175.56
	6	---	320-100680 141.09	330-100680 192.29	340-100680 248.82	350-100680 304.60
	8	---	320-100681 199.97	330-100681 270.40	340-100681 366.24	350-100681 453.43
	10	---	320-100682 287.06	330-100682 397.42	340-100682 608.07	350-100682 756.95
	12	---	320-100683 433.58	330-100683 576.95	340-100683 804.58	350-100683 949.93

60° Elbow (Soc x Soc)

	4	---	---	330-100701 75.01	---	---
	6	310-100702 79.25	320-100702 102.53	330-100702 114.20	340-100702 294.15	350-100702 318.58
	8	310-100703 108.38	320-100703 157.35	330-100703 187.62	340-100703 408.12	350-100703 462.75
	10	310-100704 169.01	320-100704 245.93	330-100704 297.21	340-100704 620.88	350-100704 762.71
	12	310-100705 241.26	320-100705 342.64	330-100705 454.58	340-100705 899.91	350-100705 1023.18
	15	310-100706* 451.12	---	---	---	---

* 15" PIP O.D.

60° Elbow (Gasket x Spigot)

	4	---	---	330-100767 177.00	340-100767 263.92	350-100767 293.03
	6	---	320-100768 207.48	330-100768 238.94	340-100768 389.47	350-100768 409.26
	8	---	320-100769 314.71	330-100769 385.82	340-100769 555.75	350-100769 596.47
	10	---	320-100770 458.07	330-100770 607.23	340-100770 804.58	350-100770 982.45
	12	---	320-100771 614.26	330-100771 723.83	340-100771 1081.34	350-100771 1242.91

60° Elbow (Gasket x Gasket)

	4	---	---	330-100789 177.00	340-100789 263.92	350-100789 293.03
	6	---	320-100790 207.48	330-100790 238.94	340-100790 389.47	350-100790 409.26
	8	---	320-100791 314.71	330-100791 385.82	340-100791 555.75	350-100791 596.47
	10	---	320-100792 458.07	330-100792 607.23	340-100792 804.58	350-100792 982.45
	12	---	320-100793 614.26	330-100793 723.83	340-100793 1081.34	350-100793 1242.91



Fabricated Fittings

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63 Disc Code 340 Part Number Price Each	CLASS 100 Disc Code 350 Part Number Price Each	CLASS 125 Disc Code 360 Part Number Price Each	CLASS 160 Disc Code 370 Part Number Price Each	CLASS 200 Disc Code 380 Part Number Price Each
--	------	--	---	---	---	---

Coupling (Soc x Soc)

	6	310-100002 22.15	320-100002 26.77	330-100002 30.25	340-100002 36.02	350-100002 44.20
	8	310-100003 38.44	320-100003 46.60	330-100003 50.13	340-100003 66.31	350-100003 84.86
	10	310-100004 45.46	320-100004 76.92	330-100004 92.05	340-100004 105.28	350-100004 184.87
	12	310-100005 69.93	320-100005 120.03	330-100005 148.04	340-100005 168.60	350-100005 277.88
	15	310-100006* 104.91	---	---	---	---

* 15" PIP O.D.

Coupling (Gasket x Spigot)

	4	---	320-100067 40.77	330-100067 52.46	340-100067 58.54	350-100067 70.88
	6	---	320-100068 64.06	330-100068 69.93	340-100068 94.19	350-100068 99.99
	8	---	320-100069 103.72	330-100069 125.84	340-100069 150.00	350-100069 167.42
	10	---	320-100070 137.52	330-100070 167.83	340-100070 219.76	350-100070 277.88
	12	---	320-100071 189.98	330-100071 228.44	340-100071 330.20	350-100071 397.61

Coupling (Gasket x Gasket)

	4	---	320-100089 64.06	330-100089 75.75	340-100089 83.03	350-100089 91.33
	6	---	320-100090 96.71	330-100090 108.38	340-100090 113.89	350-100090 144.16
	8	---	320-100091 144.54	330-100091 157.35	340-100091 170.56	350-100091 190.68
	10	---	320-100092 205.12	330-100092 228.44	340-100092 275.58	350-100092 330.20
	12	---	320-100093 270.40	330-100093 313.53	340-100093 362.76	350-100093 491.79

Reducer Coupling (Soc x Soc)

	6X4	310-100926 30.25	320-100926 33.76	330-100926 38.44	340-100926 40.65	350-100926 51.15
	8X6	310-100928 39.64	320-100928 53.58	330-100928 59.42	340-100928 65.09	350-100928 70.88
	10X8	310-100931 55.93	320-100931 106.44	330-100931 95.56	340-100931 120.91	350-100931 144.16
	12X10	310-100935 97.93	320-100935 145.69	330-100935 181.79	340-100935 222.06	350-100935 237.19
	15X12	310-100940** 184.15	---	---	---	---

** 15" PIP O.D. x IPS

Reducer Coupling (Gasket x Spigot)

	6X4	---	320-101310 96.51	330-101310 114.20	340-101310 133.67	350-101310 147.65
	8X6	---	320-101312 138.65	330-101312 169.01	340-101312 208.09	350-101312 231.38
	10X8	---	320-101315 192.29	330-101315 228.44	340-101315 286.03	350-101315 325.54
	12X10	---	320-101319 272.73	330-101319 328.69	340-101319 462.75	350-101319 522.04

Reducer Coupling (Spigot x Gasket)

	6X4	---	320-101383 90.89	330-101383 102.53	340-101383 111.63	350-101383 127.87
	8X6	---	320-101385 121.25	330-101385 144.54	340-101385 184.87	350-101385 210.40
	10X8	---	320-101388 180.64	330-101388 222.58	340-101388 268.60	350-101388 316.24
	12X10	---	320-101392 270.40	330-101392 310.05	340-101392 436.00	350-101392 511.57

Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
--	------	---	--	--	--	--

Reducer Coupling (Gasket x Gasket)

	6X4	---	320-101456 121.25	330-101456 132.83	340-101456 156.98	350-101456 172.06
	8X6	---	320-101458 174.81	330-101458 192.29	340-101458 252.28	350-101458 275.58
	10X8	---	320-101461 241.26	330-101461 300.71	340-101461 360.39	350-101461 526.69
	12X10	---	320-101465 334.52	330-101465 378.82	340-101465 478.53	350-101465 783.66

Repair Coupling (Gasket x Gasket)

	4	---	3228-040 70.78	3328-040 75.75	3428-040 100.04	3528-040 121.36
	6	---	3228-060 99.16	3328-060 102.53	3428-060 127.95	3528-060 148.20
	8	---	3228-080 151.31	3328-080 157.35	3428-080 183.17	3528-080 199.64
	10	---	3228-100 216.02	3328-100 234.27	3428-100 288.46	3528-100 320.23
	12	---	3228-120 289.41	3328-120 313.53	3428-120 375.58	3528-120 447.24
	14	---	3228-140 415.63	3328-140 437.32	3428-140 474.68	---
	16	---	3228-160 548.04	3328-160 622.56	3428-160 675.27	---

Cross (Soc x Soc x Soc x Soc)

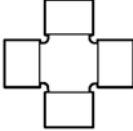
	4X2	---	320-103280 58.25	330-103280 87.41	---	---
	4X3	---	320-103281 64.06	330-103281 90.33	---	---
	6	310-103286 96.71	320-103286 167.83	330-103286 189.98	340-103286 391.80	350-103286 430.18
	6X2	310-103283 66.44	320-103283 72.27	330-103283 96.71	340-103283 287.19	350-103283 289.52
	6X3	310-103284 75.75	320-103284 90.89	330-103284 121.25	340-103284 298.80	350-103284 304.60
	6X4	310-103285 81.59	320-103285 102.53	330-103285 138.65	340-103285 322.06	350-103285 345.33
	8	310-103291 125.84	320-103291 217.99	330-103291 264.58	340-103291 590.63	350-103291 631.35
	8X2	310-103287 85.06	320-103287 108.38	330-103287 121.25	340-103287 368.59	350-103287 374.22
	8X3	310-103288 90.89	320-103288 121.25	330-103288 132.83	340-103288 380.18	350-103288 420.89
	8X4	310-103289 103.72	320-103289 138.65	330-103289 159.64	340-103289 406.92	350-103289 444.12
	8X6	310-103290 114.20	320-103290 169.01	330-103290 200.47	340-103290 474.39	350-103290 509.26
	10	310-103297 203.97	320-103297 325.17	330-103297 456.89	340-103297 976.66	350-103297 1041.43
	10X2	310-103292 103.72	320-103292 150.31	330-103292 178.32	340-103292 570.87	350-103292 619.75
	10X3	310-103293 114.20	320-103293 170.15	330-103293 214.43	340-103293 579.01	350-103293 634.80
	10X4	310-103294 125.84	320-103294 189.98	330-103294 242.43	340-103294 628.99	350-103294 666.22
	10X6	310-103295 139.85	320-103295 210.96	330-103295 282.06	340-103295 702.26	350-103295 742.97
	10X8	310-103296 159.64	320-103296 258.75	330-103296 350.84	340-103296 789.48	350-103296 845.27
	12	310-103304 318.19	320-103304 501.17	330-103304 737.80	340-103304 1446.39	350-103304 1671.94
	12X2	310-103298 148.04	320-103298 198.14	330-103298 289.04	340-103298 725.55	350-103298 731.31
	12X3	310-103299 161.97	320-103299 228.44	330-103299 300.71	340-103299 764.03	350-103299 803.57
	12X4	310-103300 172.48	320-103300 273.16	330-103300 336.83	340-103300 862.69	350-103300 876.67
	12X6	310-103301 181.79	320-103301 284.38	330-103301 386.96	340-103301 947.58	350-103301 965.04
	12X8	310-103302 209.79	320-103302 332.17	330-103302 454.58	340-103302 1058.02	350-103302 1081.34
	12X10	310-103303 250.55	320-103303 412.58	330-103303 576.95	340-103303 1212.65	350-103303 1256.85



Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

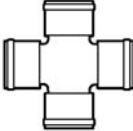
Cross (Soc x Soc x Soc x Soc) (continued)

	15	310-103321* 540.83	---	---	---	---
	15X2	310-103313** 233.09	---	---	---	---
	15X3	310-103314** 262.27	---	---	---	---
	15X4	310-103315** 289.04	---	---	---	---
	15X6	310-103316** 331.03	---	---	---	---
	15X8	310-103317** 361.31	---	---	---	---
	15X10	310-103318** 391.61	---	---	---	---
	15X12	310-103319** 433.61	---	---	---	---

* 15" PIP O.D.

** 15" PIP O.D. x IPS

Cross (Gasket x Gasket x Gasket x Gasket)

	4	---	320-103997 203.97	330-103997 221.46	340-103997 276.84	350-103997 298.99
	6	---	320-104001 237.75	330-104001 298.36	340-104001 497.60	350-104001 631.35
	6X4	---	320-104000 215.63	330-104000 273.89	340-104000 391.80	350-104000 491.79
	8	---	320-104006 389.31	330-104006 445.26	340-104006 772.04	350-104006 959.24
	8X4	---	320-104004 291.38	330-104004 337.99	340-104004 534.78	350-104004 642.96
	8X6	---	320-104005 349.64	330-104005 384.60	340-104005 641.80	350-104005 748.76
	10	---	320-104012 585.13	330-104012 773.98	340-104012 1285.93	350-104012 1432.42
	10X4	---	320-104009 407.94	330-104009 495.37	340-104009 695.27	350-104009 830.18
	10X6	---	320-104010 466.20	330-104010 512.85	340-104010 851.09	350-104010 947.58
	10X8	---	320-104011 524.52	330-104011 670.22	340-104011 1046.43	350-104011 1081.34
	12	---	320-104019 793.75	330-104019 1086.36	340-104019 1791.69	350-104019 2017.25
	12X4	---	320-104015 582.79	330-104015 641.08	340-104015 1019.64	350-104015 1169.65
	12X6	---	320-104016 641.08	330-104016 676.03	340-104016 1169.16	350-104016 1247.56
	12X8	---	320-104017 699.34	330-104017 792.60	340-104017 1319.61	350-104017 1348.72
	12X10	---	320-104018 745.99	330-104018 955.78	340-104018 1546.39	350-104018 1578.94

Surface Reducer (Soc)

	6X2	310-102013 32.62	---	330-102013 46.60	---	---
	6X3	310-102015 32.62	---	330-102015 46.60	---	---
	6X4	310-102016 32.62	---	---	---	---
	8X2	310-102018 44.23	---	330-102018 93.25	---	---
	8X3	310-102020 44.23	---	330-102020 93.25	---	---
	8X4	310-102021 44.23	---	330-102021 93.25	---	---
	8X6	310-102022 44.23	---	3340-585 93.25	---	---
	10X2	310-102024 71.07	---	330-102024 145.69	---	---
	10X3	310-102026 71.07	---	330-102026 145.69	---	---
	10X4	310-102027 71.07	---	330-102027 145.69	---	---
	10X6	310-102028 71.07	---	330-102028 145.69	---	---

Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



	Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
		Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Surface Reducer (Soc) (continued)

	10X8	310-102029 71.07	---	330-102029 145.69	---	---
	12X2	310-102031 87.41	---	330-102031 262.27	---	---
	12X3	310-102033 87.41	---	330-102033 262.27	---	---
	12X4	310-102034 87.41	---	330-102034 262.27	---	---
	12X6	310-102035 87.41	---	330-102035 262.27	---	---
	12X8	310-102036 87.41	---	330-102036 262.27	---	---
	12X10	310-102037 87.41	---	330-102037 262.27	---	---

Cap (Soc)

	6	310-107540 22.15	---	330-107540 43.11	---	---
	8	310-107541 40.77	---	330-107541 55.93	---	---
	10	310-107542 69.93	---	330-107542 89.75	---	---
	12	310-107543 85.59	---	330-107543 172.48	---	---

Cap (Gasket)

	4	---	---	330-107565 78.64	---	---
	6	---	---	330-107566 111.86	---	---
	8	---	---	330-107567 189.98	---	---
	10	---	---	330-107568 306.51	---	---
	12	---	---	330-107569 462.73	---	---

Saddle (Soc)

	6	310-101937 31.47	---	---	---	---
	6X2	310-101789 24.44	---	330-101789 69.93	---	---
	6X3	310-101797 26.77	---	330-101797 81.59	---	---
	6X4	310-101804 30.25	---	330-101804 93.25	---	---
	8	310-101938 46.60	---	---	---	---
	8X2	310-101790 24.44	---	330-101790 69.93	---	---
	8X3	310-101798 26.77	---	330-101798 81.59	---	---
	8X4	310-101805 30.25	---	330-101805 93.25	---	---
	8X6	310-101811 31.47	---	330-101811 104.91	---	---
	10	310-101939 72.27	---	---	---	---
	10X2	310-101791 24.44	---	330-101791 69.93	---	---
	10X3	310-101799 26.77	---	330-101799 81.59	---	---
	10X4	310-101806 30.25	---	330-101806 93.25	---	---
	10X6	310-101812 31.47	---	330-101812 104.91	---	---
	10X8	310-101817 46.60	---	330-101817 116.54	---	---
	12	310-101940 108.12	---	---	---	---
	12X2	310-101792 32.78	---	330-101792 69.93	---	---



Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
	Disc Code: 340 Part Number Price Each	Disc Code: 350 Part Number Price Each	Disc Code: 360 Part Number Price Each	Disc Code: 370 Part Number Price Each	Disc Code: 380 Part Number Price Each

Saddle (Soc) (continued)

	12X3	310-101800 26.77	---	330-101800 81.59	---	---
	12X4	310-101807 30.25	---	330-101807 93.25	---	---
	12X6	310-101813 31.47	---	330-101813 104.91	---	---
	12X8	310-101818 46.60	---	330-101818 116.54	---	---
	12X10	310-101822 72.27	---	330-101822 128.20	---	---

Stub Saddle (Soc)

	6	310-101949 51.25	---	---	---	---
	6X2	310-101884 33.76	---	330-101884 61.74	---	---
	6X3	310-101892 39.64	---	330-101892 67.57	---	---
	6X4	310-101899 45.46	---	330-101899 75.75	---	---
	8	310-101950 69.93	---	---	---	---
	8X2	310-101885 33.76	---	330-101885 61.74	---	---
	8X3	310-101893 39.64	---	330-101893 67.57	---	---
	8X4	310-101900 45.46	---	330-101900 75.75	---	---
	8X6	310-101906 51.25	---	330-101906 92.05	---	---
	10	310-101951 96.71	---	---	---	---
	10X2	310-101886 33.76	---	330-101886 61.74	---	---
	10X3	310-101894 39.64	---	330-101894 67.57	---	---
	10X4	310-101901 45.46	---	330-101901 75.75	---	---
	10X6	310-101907 51.25	---	330-101907 92.05	---	---
	10X8	310-101912 69.93	---	330-101912 106.03	---	---
	12	310-101952 121.25	---	---	---	---
	12X2	310-101887 33.76	---	330-101887 61.74	---	---
	12X3	310-101895 39.64	---	330-101895 67.57	---	---
	12X4	310-101902 45.46	---	330-101902 87.44	---	---
	12X6	310-101908 51.25	---	330-101908 92.05	---	---
	12X8	310-101913 69.93	---	330-101913 106.03	---	---
	12X10	310-101917 96.71	---	330-101917 111.86	---	---

Fabricated Fittings
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Tee, Class 125 Molded



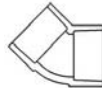
12501-100	10	1	0	361	378.71
12501-120	12	1	0	361	568.02

90° Elbow, Class 125 Molded



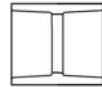
12506-100	10	1	0	361	317.65
12506-120	12	1	0	361	485.84

45° Elbow, Class 125 Molded



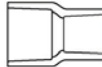
12517-100	10	1	0	361	203.04
12517-120	12	1	0	361	297.73

Coupling, Class 125 Molded



12529-100	10	1	0	361	98.39
12529-120	12	1	0	361	158.24

Reducer Coupling, Class 125 Molded



12529-626	10X6	1	0	361	164.04
12529-628	10X8	1	0	361	102.16
12529-668	12X8	1	0	361	244.08
12529-670	12X10	1	0	361	194.32

Reducer Bushing, Class 125 Molded



12537-626	10X6	1	2	361	155.73
12537-628	10X8	4	0	361	155.73
12537-668	12X8	1	2	361	280.33
12537-670	12X10	1	2	361	278.63



Fabricated Fittings
PVC Schedule 40 & 80 DWV Fabricated Fittings

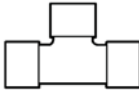
Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

TEE (Soc x Soc x Soc)

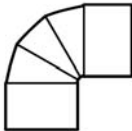
	6	3701-060 116.54	3901-060 202.68
	6X2	3701-528* 100.71	3901-528 151.01
	6X3	3701-530* 105.78	3901-530 158.12
	6X4	3701-532 110.64	3901-532 164.16
	8	3701-080 189.84	3901-080 321.71
	8X2	3701-578* 118.41	3901-578 211.51
	8X3	3701-580* 124.17	3901-580 238.31
	8X4	3701-582 127.55	3901-582 243.62
	8X6	3701-585 138.40	3901-585 252.93
	10	3701-100 369.23	3901-100 501.78
	10X2	3701-621* 192.76	3901-621 298.43
	10X3	3701-623* 196.33	3901-623 325.04
	10X4	3701-624 201.13	3901-624 367.71
	10X6	3701-626 245.85	3901-626 449.32
	10X8	3701-628 329.59	3901-628 470.85
	12	3701-120 490.71	3901-120 691.36
	12X2	3701-661* 257.35	3901-661 369.58
	12X3	3701-663* 261.15	3901-663 430.71
	12X4	3701-664 267.72	3901-664 489.34
	12X6	3701-666 310.95	3901-666 569.33
	12X8	3701-668 371.41	3901-668 626.84
	12X10	3701-670 423.23	3901-670 635.05
	14	3701-140* 964.59	3901-140 1241.67
	14X2	3701-691* 408.13	3901-691 654.45
	14X3	3701-693* 451.72	3901-693 732.20
	14X4	3701-694* 503.61	3901-694 805.84
	14X6	3701-696* 591.03	3901-696 945.67
	14X8	3701-698* 704.67	3901-698 1133.01
	14X10	3701-700* 801.01	3901-700 1191.92
	14X12	3701-702* 947.58	3901-702 1203.49
	16	3701-160 1365.40	3901-160 1956.12
	16X2	3701-751 581.98	3901-751 839.04
	16X3	3701-753 588.36	3901-753 928.06
	16X4	3701-754 624.56	3901-754 999.23
	16X6	3701-756 675.58	3901-756 1080.84
	16X8	3701-758 790.88	3901-758 1266.11
	16X10	3701-760 994.16	3901-760 1417.55

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

TEE (Soc x Soc x Soc) (continued)

	16X12	3701-762 1128.88	3901-762 1797.08
	16X14	3701-764 1339.73	3901-764 1858.28
	18	3701-180 1696.84	3901-180 2111.91
	18X4	3701-784 997.40	3901-784 1159.69
	18X6	3701-786 1013.19	3901-786 1312.28
	18X8	3701-788 1054.77	3901-788 1361.41
	18X10	3701-790 1188.84	3901-790 1375.72
	18X12	3701-792 1266.49	3901-792 1691.18
	18X14	3701-794 1358.41	3901-794 1944.79
	18X16	3701-796 1458.03	3901-796 1987.24
	20	3701-200 2259.68	3901-200 3039.14
	20X4	3701-814 1205.44	3901-814 1610.09
	20X6	3701-816 1275.55	3901-816 1815.75
	20X8	3701-818 1347.84	3901-818 2229.95
	20X10	3701-820 1446.47	3901-820 2303.86
	20X12	3701-822 1531.62	3901-822 2433.54
	20X14	3701-824 1652.83	3901-824 2646.92
	20X16	3701-826 1760.01	3901-826 2695.20
	20X18	3701-828 1941.35	3901-828 2913.97
	24	3701-240 2815.19	3901-240 3645.26
	24X4	3701-904 1659.87	3901-904 1996.06
	24X6	3701-906 1744.75	3901-906 2251.09
	24X8	3701-908 1851.04	3901-908 2435.12
	24X10	3701-910 1955.56	3901-910 2649.68
	24X12	3701-912 2060.67	3901-912 2788.15
	24X14	3701-914 2201.79	3901-914 3091.48
	24X16	3701-916 2328.91	3901-916 3190.04
	24X18	3701-918 2530.18	3901-918 3345.66
	24X20	3701-920 2716.49	3901-920 3499.60

90° ELBOW (Soc x Soc)

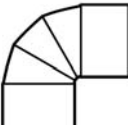
	6	3706-060 115.05	3906-060 148.94
	8	3706-080 159.83	3906-080 250.15
	10	3706-100 252.65	3906-100 493.81
	12	3706-120 388.64	3906-120 720.11
	14	3706-140* 520.49	3906-140 1059.49
	16	3706-160 771.87	3906-160 1317.69
	18	3706-180 1147.99	3906-180 1696.33

Fabricated Fittings **PVC Schedule 40 & 80 DWV Fabricated Fittings**



	Size	SCH 40 LOW PR	SCH 80 LOW PR
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

90° ELBOW (Soc x Soc) (continued)

	20	3706-200 1291.21	3906-200 2000.03
	24	3706-240 1614.71	3906-240 2992.62

11-1/4° ELBOW (Soc x Soc)

	4	3711-040 41.13	3911-040 55.93
	6	3711-060 66.07	3911-060 104.56
	8	3711-080 111.69	3911-080 171.15
	10	3711-100 168.54	3911-100 303.33
	12	3711-120 266.62	3911-120 443.33
	14	3711-140 419.17	3911-140 678.69
	16	3711-160 571.40	3911-160 907.22
	18	3711-180 639.49	3911-180 1171.17
	20	3711-200 848.25	3911-200 1501.41
	24	3711-240 1516.51	3911-240 1718.56

15° ELBOW (Soc x Soc)

	4	3718-040 41.13	3918-040 55.93
	6	3718-060 66.07	3918-060 104.56
	8	3718-080 111.69	3918-080 171.15
	10	3718-100 168.54	3918-100 303.33
	12	3718-120 266.62	3918-120 443.33
	14	3718-140 419.17	3918-140 678.69
	16	3718-160 571.40	3918-160 907.22
	18	3718-180 639.49	3918-180 1171.17
	20	3718-200 848.25	3918-200 1501.41
	24	3718-240 1516.51	3918-240 1718.56

22-1/2° ELBOW (Soc x Soc)

	4	3716-040 41.13	3916-040 55.93
	6	3716-060 66.07	3916-060 104.56
	8	3716-080 111.69	3916-080 171.15
	10	3716-100* 168.54	3916-100 303.33
	12	3716-120* 266.62	3916-120 443.33
	14	3716-140* 419.17	3916-140 678.69
	16	3716-160 571.40	3916-160 907.22
	18	3716-180 686.21	3916-180 1171.17
	20	3716-200 848.25	3916-200 1501.41
	24	3716-240 1516.51	3916-240 1718.56

	Size	SCH 40 DWV	SCH 80 DWV
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

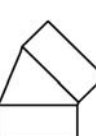
22-1/2° STREET ELL (Spig x Soc)

	6	3742-060 72.67	3942-060 114.98
	8	3742-080 122.85	3942-080 188.25
	10	3742-100* 185.38	3942-100 333.67
	12	3742-120* 293.27	3942-120 487.67
	14	3742-140* 461.07	3942-140 746.57
	16	3742-160 453.78	3942-160 997.94
	18	3742-180 754.83	3942-180 1286.63
	20	3742-200 1149.99	3942-200 1767.57
	24	3742-240 1784.12	3942-240 2022.27

30° ELBOW (Soc x Soc)

	4	3715-040 41.13	3915-040 55.93
	6	3715-060 66.07	3915-060 104.56
	8	3715-080 111.69	3915-080 171.15
	10	3715-100 168.54	3915-100 303.33
	12	3715-120 266.62	3915-120 443.33
	14	3715-140 419.17	3915-140 678.69
	16	3715-160 571.40	3915-160 907.22
	18	3715-180 686.21	3915-180 1171.17
	20	3715-200 848.25	3915-200 1501.41
	24	3715-240 1516.51	3915-240 1718.56

45° ELBOW (Soc x Soc)

	4	3717-040 100.47	3917-040 122.94
	6	3717-060 106.79	3917-060 175.23
	8	3717-080 127.87	3917-080 188.29
	10	3717-100 210.32	3917-100 344.93
	12	3717-120 295.38	3917-120 493.09
	14	3717-140* 512.16	3917-140 708.63
	16	3717-160 632.38	3917-160 917.65
	18	3717-180 729.78	3917-180 1241.33
	20	3717-200 996.44	3917-200 1559.17
	24	3717-240 1324.03	3917-240 1835.55

45° STREET ELL (Spig x Soc)

	4	3727-040 100.47	3927-040 122.94
	6	3727-060 106.79	3927-060 175.23
	8	3727-080 127.87	3927-080 188.29
	10	3727-100* 210.32	3927-100 344.93
	12	3727-120* 295.38	3927-120 493.09
	14	3727-140* 512.16	3927-140 708.63



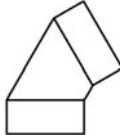
Fabricated Fittings PVC Schedule 40 & 80 DWV Fabricated Fittings

	Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
		Part Number Price Each	Part Number Price Each

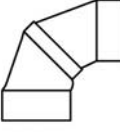
45° STREET ELL (Spig x Soc) (continued)

	16	3727-160 632.38	3927-160 917.65
	18	3727-180 729.78	3927-180 1241.33
	20	3727-200 996.44	3927-200 1559.17
	24	3727-240 1324.03	3927-240 1835.55

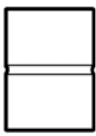
60° ELBOW (Soc x Soc)

	4	3724-040 121.35	---
	6	3724-060* 127.62	3924-060 186.16
	8	3724-080* 182.08	3924-080 312.74
	10	3724-100* 305.13	3924-100 586.19
	12	3724-120* 399.78	3924-120 862.77
	14	3724-140* 732.80	3924-140 1253.71
	16	3724-160 890.94	3924-160 1523.31
	18	3724-180 1144.59	3924-180 1696.33
	20	3724-200 1221.01	3924-200 2000.03
	24	3724-240 1573.16	3924-240 2136.66

90° STREET ELL (Spig x Soc)

	4	---	3909-040 140.14
	6	3709-060* 122.13	3909-060 166.07
	8	3709-080* 168.00	3909-080 273.49
	10	3709-100* 280.72	3909-100 542.07
	12	3709-120* 409.11	3909-120 796.41
	14	3709-140* 565.74	3909-140 1163.83
	16	3709-160 879.91	3909-160 1445.39
	18	3709-180 1272.57	3909-180 1861.40
	20	3709-200 1434.48	3909-200 2196.24
	24	3709-240 1793.78	3909-240 2346.36

COUPLING (Soc x Soc)

	8	3729-080 72.92	3929-080 161.42
	10	3729-100 89.66	3929-100 175.80
	12	3729-120 131.99	3929-120 202.64
	14	3729-140 214.33	3929-140 405.21
	16	3729-160 239.05	3929-160 481.75
	18	3729-180 407.66	3929-180 949.59
	20	3729-200 711.17	3929-200 1170.80
	24	3729-240 987.67	3929-240 2019.72

	Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
		Part Number Price Each	Part Number Price Each

REPAIR COUPLING (Gasket x Gasket)

	4	3728-040 70.67	3928-040 82.57
	6	3728-060 98.31	3928-060 116.36
	8	3728-080 154.75	3928-080 196.84
	10	3728-100 204.17	3928-100 275.43
	12	3728-120 256.14	3928-120 350.02
	14	3728-140 444.46	3928-140 775.04
	16	3728-160 654.84	3928-160 1162.79
	18	3728-180 856.07	3928-180 1511.54
	20	3728-200 1329.37	3928-200 1813.86
	24	3728-240 1802.95	3928-240 2446.61

REDUCER COUPLING (Soc x Soc)

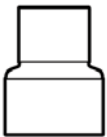
	6X2	3729-528* 106.04	3929-528 183.86
	6X3	3729-530* 104.38	3929-530 135.82
	6X4	3729-532 37.87	3929-532 89.36
	8X2	3729-578 178.37	3929-578 248.39
	8X3	3729-580 165.13	3929-580 217.09
	8X4	3729-582* 93.87	3929-582 171.56
	8X6	3729-585* 80.68	3929-585 157.88
	10X4	3729-624* 211.83	3929-624 403.03
	10X6	3729-626* 197.41	3929-626 321.58
	10X8	3729-628* 138.17	3929-628 171.88
	12X4	3729-664* 398.29	3929-664 579.08
	12X6	3729-666* 302.00	3929-666 477.46
	12X8	3729-668* 265.79	3929-668 414.33
	12X10	3729-670* 201.13	3929-670 254.49
	14X4	3729-694* 640.96	3929-694 783.55
	14X6	3729-696* 620.52	3929-696 699.88
	14X8	3729-698* 449.17	3929-698 688.42
	14X10	3729-700* 379.36	3929-700 581.19
	14X12	3729-702* 336.89	3929-702 371.54
	16X4	3729-754 686.02	3929-754 1151.38
	16X6	3729-756 631.89	3929-756 1079.43
	16X8	3729-758 574.99	3929-758 1019.47
	16X10	3729-760 513.52	3929-760 708.78
	16X12	3729-762 466.20	3929-762 651.57
	16X14	3729-764 404.32	3929-764 549.29
	18X6	3729-786 1141.97	3929-786 1664.12

Fabricated Fittings PVC Schedule 40 & 80 DWV Fabricated Fittings



Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

REDUCER COUPLING (Soc x Soc) (continued)

	18X8	3729-788 968.57	3929-788 1539.96
	18X10	3729-790 903.76	3929-790 1415.22
	18X12	3729-792 846.17	3929-792 1182.77
	18X14	3729-794 780.37	3929-794 1145.33
	18X16	3729-796 582.94	3929-796 978.99
	20X6	3729-816 1430.35	3929-816 2340.06
	20X8	3729-818 1385.24	3929-818 2312.98
	20X10	3729-820 1214.44	3929-820 2295.79
	20X12	3729-822 1197.80	3929-822 2153.01
	20X14	3729-824 1183.01	3929-824 2135.89
	20X16	3729-826 1116.02	3929-826 1710.54
	20X18	3729-828 985.94	3929-828 1179.55
	24X6	3729-906 2876.69	3929-906 3956.64
	24X8	3729-908 2794.27	3929-908 3923.63
	24X10	3729-910 2310.33	3929-910 3910.22
	24X12	3729-912 2234.16	3929-912 3847.04
	24X14	3729-914 2118.48	3929-914 3834.16
	24X16	3729-916 1945.19	3929-916 3686.85
	24X18	3729-918 1722.43	3929-918 2810.95
	24X20	3729-920 1294.84	3929-920 2520.93

ECCENTRIC REDUCER COUPLING (Soc x Soc)

	3X2	3729-338E 33.63	3929-338E 46.85
	4X2	3729-420E ² 45.67	3929-420E ² 119.53
	4X3	3729-422E 42.21	3929-422E 55.31
	6X2	3729-528E ^{3*} 103.09	3929-528E ³ 155.61
	6X3	3729-530E ^{2*} 94.96	3929-530E ² 151.18
	6X4	3729-532E ² 47.48	3929-532E 115.31
	8X3	3729-580E ^{3*} 195.86	3929-580E ³ 219.72
	8X4	3729-582E ^{2*} 97.80	3929-582E ² 199.43
	8X6	3729-585E ¹ 79.06	3929-585E 153.36
	10X4	3729-624E ^{2*} 223.63	3929-624E ³ 337.48
	10X6	3729-626E ¹ 205.62	3929-626E ² 286.43
	10X8	3729-628E ¹ 193.86	3929-628E 264.67
	12X4	3729-664E ^{3*} 417.24	3929-664E ⁴ 516.08
	12X6	3729-666E ^{2*} 342.84	3929-666E ³ 424.73
	12X8	3729-668E ^{2*} 227.35	3929-668E ² 366.94
	12X10	3729-670E ¹ 197.12	3929-670E 234.55

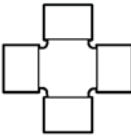
Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)

	14X6	3729-696E ³ 696.46	3929-696E ⁴ 840.68
	14X8	3729-698E ³ 570.52	3929-698E ³ 752.04
	14X10	3729-700E ² 517.91	3929-700E ² 544.46
	14X12	3729-702E 316.62	3929-702E 500.72
	16X6	3729-756E ³ 727.75	3929-756E ⁵ 1553.20
	16X8	3729-758E ³ 717.55	3929-758E ³ 1422.29
	16X10	3729-760E ² 530.60	3929-760E ³ 1034.67
	16X12	3729-762E 504.89	3929-762E ² 918.62
	16X14	3729-764E 448.63	3929-764E 711.53
	18X6	3729-786E ⁴ 1034.39	3929-786E ⁶ 2144.06
	18X8	3729-788E ⁴ 1019.07	3929-788E ⁵ 2052.44
	18X10	3729-790E ³ 946.11	3929-790E ⁴ 1917.95
	18X12	3729-792E ² 853.85	3929-792E ³ 1711.92
	18X14	3729-794E ² 754.93	3929-794E ² 1411.37
	18X16	3729-796E 608.98	3929-796E 1377.17

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six-Step Design

CROSS (Soc x Soc x Soc x Soc)

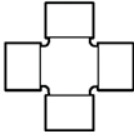
	4	3720-040 256.96	---
	4X2	---	3920-420 128.75
	4X3	---	3920-422 141.68
	6	3720-060 149.72	3920-060 349.19
	6X2	3720-528 112.39	3920-528 180.92
	6X3	3720-530 133.09	3920-530 203.92
	6X4	3720-532 146.74	3920-532 251.77
	8	3720-080 302.39	3920-080 420.56
	8X2	3720-578 194.14	3920-578 228.28
	8X3	3720-580 210.04	3920-580 242.52
	8X4	3720-582 230.75	3920-582 260.17
	8X6	3720-585 290.34	3920-585 337.18
	10	3720-100 492.23	3920-100 899.75
	10X2	3720-621 206.18	3920-621 413.19
	10X3	3720-623 237.47	3920-623 478.12
	10X4	3720-624 272.42	3920-624 490.23
	10X6	3720-626 312.40	3920-626 599.02
	10X8	3720-628 438.59	3920-628 790.47
	12	3720-120 648.92	3920-120 1267.88
	12X2	3720-661 272.48	3920-661 559.38



Fabricated Fittings
PVC Schedule 40 & 80 DWV Fabricated Fittings

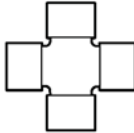
	Size	SCH 40 DWV	SCH 80 DWV
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

CROSS (Soc x Soc x Soc x Soc) (continued)

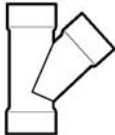
	12X3	3720-663 305.82	3920-663 625.27
	12X4	3720-664 323.31	3920-664 652.46
	12X6	3720-666 395.19	3920-666 757.61
	12X8	3720-668 480.24	3920-668 905.02
	12X10	3720-670 557.41	3920-670 1031.31
	14	3720-140 1077.99	3920-140 2254.40
	14X2	3720-691 531.85	3920-691 849.16
	14X3	3720-693 592.18	3920-693 935.49
	14X4	3720-694 657.46	3920-694 1045.88
	14X6	3720-696 739.54	3920-696 1173.82
	14X8	3720-698 852.00	3920-698 1350.13
	14X10	3720-700 968.07	3920-700 1616.67
	14X12	3720-702 1024.18	3920-702 1894.16
	16	3720-160 1574.71	3920-160 2858.03
	16X2	3720-751 729.81	3920-751 1151.72
	16X3	3720-753 802.09	3920-753 1258.22
	16X4	3720-754 832.74	3920-754 1332.33
	16X6	3720-756 900.67	3920-756 1441.11
	16X8	3720-758 1055.08	3920-758 1688.09
	16X10	3720-760 1256.81	3920-760 1943.99
	16X12	3720-762 1444.37	3920-762 2309.34
	16X14	3720-764 1516.61	3920-764 2723.43
	18	3720-180 2230.98	3920-180 3528.26
	18X4	3720-784 902.92	3920-784 1681.48
	18X6	3720-786 1273.02	3920-786 1921.92
	18X8	3720-788 1442.29	3920-788 2292.78
	18X10	3720-790 1559.93	3920-790 2598.43
	18X12	3720-792 1658.54	3920-792 2882.65
	18X14	3720-794 1747.72	3920-794 3080.84
	18X16	3720-796 2028.41	3920-796 3346.52
	20	3720-200 3795.47	3920-200 5956.54
	20X4	3720-814 1594.17	3920-814 2209.73
	20X6	3720-816 1655.49	3920-816 2390.37
	20X8	3720-818 2056.62	3920-818 2601.24
	20X10	3720-820 2349.43	3920-820 3053.78
	20X12	3720-822 2451.60	3920-822 3380.00
	20X14	3720-824 2666.73	3920-824 3651.53

	Size	SCH 40 DWV	SCH 80 DWV
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

CROSS (Soc x Soc x Soc x Soc) (continued)

	20X16	3720-826 2999.00	3920-826 4060.64
	20X18	3720-828 3244.81	3920-828 4843.02
	24	3720-240 4998.78	3920-240 7220.62
	24X4	3720-904 2037.68	3920-904 2439.46
	24X6	3720-906 2419.31	3920-906 2781.83
	24X8	3720-908 2575.44	3920-908 3630.64
	24X10	3720-910 2753.22	3920-910 3940.81
	24X12	3720-912 3032.13	3920-912 4520.83
	24X14	3720-914 3118.65	3920-914 5306.63
	24X16	3720-916 3456.43	3920-916 5626.53
	24X18	3720-918 3860.25	3920-918 5909.71
	24X20	3720-920 4674.09	3920-920 6293.38

WYE (Soc x Soc x Soc)

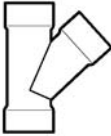
	8	3775-080 209.76	3975-080 350.74
	8X2	3775-578 136.85	3975-578 248.07
	8X3	3775-580 142.23	3975-580 274.40
	8X4	3775-582 148.11	3975-582 281.26
	8X6	3775-585 194.39	3975-585 284.15
	10	3775-100 419.06	3975-100 626.00
	10X2	3775-621 245.03	3975-621 361.17
	10X3	3775-623 256.64	3975-623 376.44
	10X4	3775-624 263.74	3975-624 387.13
	10X6	3775-626 318.00	3975-626 489.19
	10X8	3775-628 389.76	3975-628 532.74
	12	3775-120 552.81	3975-120 947.13
	12X2	3775-661 291.54	3975-661 607.47
	12X3	3775-663 302.76	3975-663 614.74
	12X4	3775-664 313.12	3975-664 625.08
	12X6	3775-666 373.12	3975-666 681.95
	12X8	3775-668 414.57	3975-668 757.75
	12X10	3775-670 487.17	3975-670 890.28
	14	3775-140 1189.69	3975-140 1438.45
	14X2	3775-691 591.88	3975-691 972.38
	14X3	3775-693 620.75	3975-693 987.19
	14X4	3775-694 631.15	3975-694 995.13
	14X6	3775-696 681.23	3975-696 1089.96
	14X8	3775-698 779.57	3975-698 1207.59

Fabricated Fittings
PVC Schedule 40 & 80 DWV Fabricated Fittings



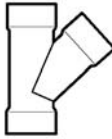
Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

WYE (Soc x Soc x Soc) (continued)

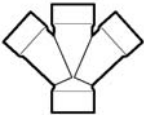
	14X10	3775-700* 833.31	3975-700 1260.87
	14X12	3775-702* 1065.43	3975-702 1336.37
	16	3775-160 1513.68	3975-160 2214.28
	16X2	3775-751 672.53	3975-751 1127.92
	16X3	3775-753 711.52	3975-753 1142.14
	16X4	3775-754 743.78	3975-754 1190.00
	16X6	3775-756* 800.48	3975-756 1280.73
	16X8	3775-758 912.76	3975-758 1349.63
	16X10	3775-760 1096.51	3975-760 1477.49
	16X12	3775-762 1194.15	3975-762 1979.85
	16X14	3775-764 1447.09	3975-764 2107.73
	18	3775-180 1740.56	3975-180 2974.62
	18X4	3775-784 1192.58	3975-784 1538.05
	18X6	3775-786* 1211.79	3975-786 1563.84
	18X8	3775-788 1251.29	3975-788 1685.66
	18X10	3775-790 1331.20	3975-790 1734.58
	18X12	3775-792 1457.91	3975-792 1909.45
	18X14	3775-794 1593.88	3975-794 2319.26
	18X16	3775-796 1689.82	3975-796 2796.19
	20	3775-200 2565.14	3975-200 5072.83
	20X4	3775-814 1381.98	3975-814 1793.96
	20X6	3775-816* 1387.01	3975-816 1940.66
	20X8	3775-818 1489.00	3975-818 2412.35
	20X10	3775-820 1540.94	3975-820 2510.82
	20X12	3775-822 1739.48	3975-822 2764.03
	20X14	3775-824 2023.20	3975-824 3203.15
	20X16	3775-826 2222.05	3975-826 3289.81
	20X18	3775-828 2401.45	3975-828 3438.77
	24	3775-240 3191.86	3975-240 5712.04
	24X4	3775-904 1723.04	3975-904 2554.79
	24X6	3775-906* 1900.94	3975-906 2806.17
	24X8	3775-908 2014.48	3975-908 3248.67
	24X10	3775-910 2165.69	3975-910 3293.49
	24X12	3775-912 2234.85	3975-912 3612.23
	24X14	3775-914 2341.93	3975-914 3809.29
	24X16	3775-916 2474.88	3975-916 4369.00
	24X18	3775-918 2647.92	3975-918 5130.01

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

WYE (Soc x Soc x Soc) (continued)

	24X20	3775-920 2988.49	3975-920 5297.14
---	-------	---------------------	---------------------

DOUBLE WYE (Soc x Soc x Soc x Soc)

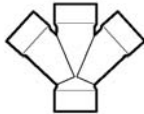
	6	3776-060 155.37	3976-060 198.88
	6X4	3776-532 121.56	3976-532 184.73
	8	3776-080* 299.66	3976-080 383.58
	8X2	3776-578* 163.16	3976-578 219.36
	8X3	3776-580* 174.32	3976-580 227.07
	8X4	3776-582* 181.71	3976-582 258.49
	8X6	3776-585* 229.44	3976-585 330.33
	10	3776-100* 439.52	3976-100 703.25
	10X2	3776-621* 232.25	3976-621 389.52
	10X3	3776-623* 242.66	3976-623 399.37
	10X4	3776-624* 254.81	3976-624 407.68
	10X6	3776-626* 315.23	3976-626 504.35
	10X8	3776-628* 381.69	3976-628 609.32
	12	3776-120* 717.57	3976-120 1150.75
	12X2	3776-661* 314.38	3976-661 642.34
	12X3	3776-663* 324.72	3976-663 648.00
	12X4	3776-664* 331.99	3976-664 653.56
	12X6	3776-666* 395.19	3976-666 768.96
	12X8	3776-668* 504.43	3976-668 934.14
	12X10	3776-670* 645.79	3976-670 1054.87
	14	3776-140* 1272.75	3976-140 1598.38
	14X2	3776-691* 606.52	3976-691 1137.37
	14X3	3776-693* 634.83	3976-693 1170.91
	14X4	3776-694* 661.52	3976-694 1180.98
	14X6	3776-696* 736.45	3976-696 1207.59
	14X8	3776-698* 853.44	3976-698 1278.63
	14X10	3776-700* 901.92	3976-700 1349.63
	14X12	3776-702* 1168.07	3976-702 1520.15
	16	3776-160 1670.46	3976-160 2484.22
	16X2	3776-751 784.36	3976-751 1334.44
	16X3	3776-753 831.25	3976-753 1345.64
	16X4	3776-754 843.55	3976-754 1349.63
	16X6	3776-756* 892.40	3976-756 1427.78



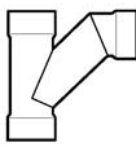
Fabricated Fittings
PVC Schedule 40 & 80 DWV Fabricated Fittings

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

DOUBLE WYE (Soc x Soc x Soc x Soc) (continued)

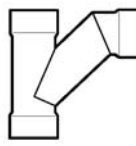
	16X8	3776-758 976.72	3976-758 1562.74
	16X10	3776-760 1196.29	3976-760 1782.95
	16X12	3776-762 1289.27	3976-762 1917.94
	16X14	3776-764 1543.98	3976-764 2280.96
	18	3776-180 2333.55	3976-180 3280.63
	18X4	3776-784 1287.89	3976-784 1727.73
	18X6	3776-786* 1308.65	3976-786 2003.32
	18X8	3776-788 1403.52	3976-788 2055.40
	18X10	3776-790 1708.82	3976-790 2073.48
	18X12	3776-792 1740.68	3976-792 2227.84
	18X14	3776-794 1869.08	3976-794 2534.33
	18X16	3776-796 1918.24	3976-796 2962.29
	20	3776-200 3034.21	3976-200 5298.00
	20X4	3776-814 1460.77	3976-814 2126.39
	20X6	3776-816* 1536.66	3976-816 2261.37
	20X8	3776-818 1562.11	3976-818 2445.94
	20X10	3776-820 2057.14	3976-820 2805.79
	20X12	3776-822 2251.89	3976-822 3113.53
	20X14	3776-824 2459.34	3976-824 3268.93
	20X16	3776-826 2683.66	3976-826 4157.19
	20X18	3776-828 2935.08	3976-828 4420.68
	24	3776-240 3777.89	3976-240 6837.86
	24X4	3776-904 1882.15	3976-904 2764.03
	24X6	3776-906* 2081.00	3976-906 3032.61
	24X8	3776-908 2135.27	3976-908 3319.81
	24X10	3776-910 2246.54	3976-910 3489.24
	24X12	3776-912 2378.29	3976-912 3578.63
	24X14	3776-914 2527.22	3976-914 4817.62
	24X16	3776-916 2749.42	3976-916 6018.28
	24X18	3776-918 2776.77	3976-918 6102.65
	24X20	3776-920 3568.63	3976-920 6434.39

COMBO WYE (Soc x Soc x Soc)

	6	3777-060* 197.67	3977-060 316.37
	6X4	3777-532* 154.00	3977-532 277.92
	8	3777-080* 315.23	3977-080 521.24
	8X2	3777-578* 172.85	3977-578 343.01
	8X3	3777-580* 215.39	3977-580 351.41

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

COMBO WYE (Soc x Soc x Soc) (continued)

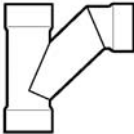
	8X4	3777-582 219.41	3977-582 359.07
	8X6	3777-585 248.63	3977-585 397.77
	10	3777-100* 563.03	3977-100 994.48
	10X2	3777-621* 257.13	3977-621 416.77
	10X3	3777-623* 269.31	3977-623 432.57
	10X4	3777-624* 275.26	3977-624 440.43
	10X6	3777-626* 346.29	3977-626 554.08
	10X8	3777-628* 430.89	3977-628 724.55
	12	3777-120* 817.35	3977-120 1248.39
	12X2	3777-661* 416.68	3977-661 680.56
	12X3	3777-663* 425.48	3977-663 691.80
	12X4	3777-664* 435.06	3977-664 696.16
	12X6	3777-666* 483.43	3977-666 777.87
	12X8	3777-668* 542.36	3977-668 923.48
	12X10	3777-670* 674.80	3977-670 1079.76
	14	3777-140* 1415.75	3977-140 1909.08
	14X2	3777-691* 626.97	3977-691 1048.79
	14X3	3777-693* 641.13	3977-693 1060.88
	14X4	3777-694* 678.06	3977-694 1084.80
	14X6	3777-696* 771.52	3977-696 1234.46
	14X8	3777-698* 848.81	3977-698 1291.93
	14X10	3777-700* 1004.55	3977-700 1469.55
	14X12	3777-702* 1185.38	3977-702 1784.76
	16	3777-160 1662.43	3977-160 2659.93
	16X2	3777-751 814.92	3977-751 1325.36
	16X3	3777-753 830.01	3977-753 1345.57
	16X4	3777-754 849.79	3977-754 1359.59
	16X6	3777-756 898.79	3977-756 1438.08
	16X8	3777-758 988.82	3977-758 1633.82
	16X10	3777-760 1118.77	3977-760 1790.06
	16X12	3777-762 1200.98	3977-762 1921.45
	16X14	3777-764 1474.36	3977-764 2313.36
	18	3777-180 2093.48	3977-180 3631.98
	18X4	3777-784 1276.35	3977-784 1611.27
	18X6	3777-786 1316.11	3977-786 1709.26
	18X8	3777-788 1351.61	3977-788 1883.52
	18X10	3777-790 1438.76	3977-790 2025.79

Fabricated Fittings
PVC Schedule 40 & 80 DWV Fabricated Fittings

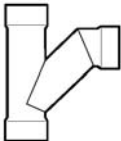


Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

COMBO WYE (Soc x Soc x Soc) (continued)

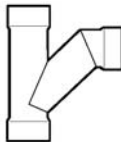
	18X12	3777-792 1495.47	3977-792 2673.08
	18X14	3777-794 1698.01	3977-794 3058.29
	18X16	3777-796 1931.37	3977-796 3288.36
	20	3777-200 2712.71	3977-200 6691.89
	20X4	3777-814 1411.21	3977-814 1782.68
	20X6	3777-816 1528.28	3977-816 1974.18
	20X8	3777-818 1557.25	3977-818 2459.12
	20X10	3777-820 1632.52	3977-820 2748.87
	20X12	3777-822 2051.89	3977-822 3247.02
	20X14	3777-824 2160.07	3977-824 3578.75
	20X16	3777-826 2416.89	3977-826 4557.56
	20X18	3777-828 2469.81	3977-828 6231.77
	24	3777-240 3664.36	3977-240 7126.43
	24X4	3777-904 1881.34	3977-904 2885.79
	24X6	3777-906 2054.36	3977-906 3070.49
	24X8	3777-908 2291.68	3977-908 3201.52
	24X10	3777-910 2453.49	3977-910 3784.07
	24X12	3777-912 2555.56	3977-912 4073.09
	24X14	3777-914 2602.65	3977-914 4859.00
	24X16	3777-916 3009.60	3977-916 5672.76
	24X18	3777-918 3215.08	3977-918 6430.65
	24X20	3777-920 3266.33	3977-920 6825.43

SANITARY TEE (Soc x Soc x Soc)

	6	3790-060 169.97	3990-060 285.86
	6X4	3790-532* 127.34	3990-532 225.95
	8	3790-080* 311.44	3990-080 517.57
	8X2	3790-578* 159.32	3990-578 283.11
	8X3	3790-580* 210.53	3990-580 322.46
	8X4	3790-582* 199.78	3990-582 343.80
	8X6	3790-585* 239.32	3990-585 382.83
	10	3790-100* 556.81	3990-100 983.05
	10X2	3790-621* 244.49	3990-621 381.09
	10X3	3790-623* 248.63	3990-623 391.93
	10X4	3790-624* 266.39	3990-624 426.22
	10X6	3790-626* 342.84	3990-626 539.87
	10X8	3790-628* 419.78	3990-628 695.38
	12	3790-120* 797.33	3990-120 1213.62

Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
	Part Number Price Each	Part Number Price Each

SANITARY TEE (Soc x Soc x Soc) (continued)

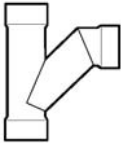
	12X2	3790-661* 410.27	3990-661 644.24
	12X3	3790-663* 414.95	3990-663 654.80
	12X4	3790-664* 427.08	3990-664 681.95
	12X6	3790-666* 465.66	3990-666 763.64
	12X8	3790-668* 518.46	3990-668 907.05
	12X10	3790-670* 653.08	3990-670 1050.83
	14	3790-140* 1404.22	3990-140 1860.47
	14X2	3790-691* 556.37	3990-691 1015.99
	14X3	3790-693* 603.71	3990-693 1031.33
	14X4	3790-694* 609.61	3990-694 1052.04
	14X6	3790-696* 727.02	3990-696 1199.59
	14X8	3790-698* 829.24	3990-698 1261.87
	14X10	3790-700* 996.07	3990-700 1434.56
	14X12	3790-702* 1174.27	3990-702 1724.44
	16	3790-160 1806.57	3990-160 2220.06
	16X2	3790-751 809.62	3990-751 1254.55
	16X3	3790-753 817.55	3990-753 1305.12
	16X4	3790-754 835.94	3990-754 1346.08
	16X6	3790-756 888.59	3990-756 1424.26
	16X8	3790-758 979.97	3990-758 1594.93
	16X10	3790-760 1107.38	3990-760 1762.53
	16X12	3790-762 1188.93	3990-762 1894.79
	16X14	3790-764 1424.99	3990-764 2067.36
	18	3790-180 1850.13	3990-180 3588.76
	18X4	3790-784 985.94	3990-784 1559.91
	18X6	3790-786 1057.42	3990-786 1654.58
	18X8	3790-788 1326.53	3990-788 1845.04
	18X10	3790-790 1509.42	3990-790 1991.28
	18X12	3790-792 1550.57	3990-792 2593.32
	18X14	3790-794 1767.65	3990-794 2667.31
	18X16	3790-796 1908.27	3990-796 3268.85
	20	3790-200 2499.27	3990-200 6588.60
	20X4	3790-814 1043.73	3990-814 1748.97
	20X6	3790-816 1194.28	3990-816 1900.33
	20X8	3790-818 1288.25	3990-818 2414.16
	20X10	3790-820 1453.43	3990-820 2684.02
	20X12	3790-822 1627.40	3990-822 3173.36



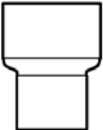
Fabricated Fittings PVC Schedule 40 & 80 DWV Fabricated Fittings

	Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
		Part Number Price Each	Part Number Price Each

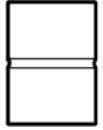
SANITARY TEE (Soc x Soc x Soc) (continued)

	20X14	3790-824 1935.36	3990-824 3442.62
	20X16	3790-826 2231.48	3990-826 4476.45
	20X18	3790-828 2404.57	3990-828 6197.12
	24	3790-240 3270.01	3990-240 7070.49
	24X4	3790-904 1528.33	3990-904 2818.45
	24X6	3790-906 1696.79	3990-906 2955.02
	24X8	3790-908 2251.96	3990-908 3091.56
	24X10	3790-910 2434.87	3990-910 3703.02
	24X12	3790-912 2544.26	3990-912 3988.01
	24X14	3790-914 2595.61	3990-914 4807.60
	24X16	3790-916 2976.74	3990-916 5518.78
	24X18	3790-918 3120.46	3990-918 6346.68
	24X20	3790-920 3233.16	3990-920 6703.52

IPS X SEWER ADAPTER (Soc x Spig)

	4	3729-04013IXS 17.51	---
	6	3729-06013IXS 36.95	---
	8	3729-08013IXS 71.53	---
	10	3729-10013IXS 193.69	---
	12	3729-12013IXS 210.73	---

IPS X SEWER ADAPTER (Soc x Soc)

	4	3729-040IXS 30.11	---
	6	3729-060IXS 55.01	---
	8	3729-080IXS 88.39	---
	10	3729-100IXS 142.93	---
	12	3729-120IXS 211.54	---

IPS X SEWER ADAPTER (Spig x Soc)

	4	3729-04031IXS 22.98	---
	6	3729-06031IXS 53.21	---
	8	3729-08031IXS 87.15	---
	10	3729-10031IXS 135.67	---
	12	3729-12031IXS 201.51	---

CAP (Soc)

	10	3747-100* 116.99	3947-100 228.44
	12	3747-120* 147.74	3947-120 395.49
	14	3747-140* 251.21	3947-140 448.54
	16	3747-160 321.58	3947-160 592.00
	18	3747-180 355.83	3947-180 777.78
	20	3747-200 626.78	3947-200 898.79

	Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
		Part Number Price Each	Part Number Price Each

CAP (Soc) (continued)

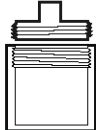
	24	3747-240 926.49	3947-240 1042.91
---	----	--------------------	---------------------

SPIGOT PLUG (Spigot)

	6	3749-060 45.22	3949-060 136.77
	8	3749-080 115.51	3949-080 230.84
	10	3749-100 131.73	3949-100 291.85
	12	3749-120 188.81	3949-120 464.69
	14	3749-140 320.34	---
	16	3749-160 390.34	3949-160 675.96

CLEANOUT ADAPTER WITH PLUG (Spig x Cleanout)

SOLD AS SET ONLY (Non-Pressure Rated)

	2	---	3978-020* 96.63
	3	---	3978-030* 123.80
	4	---	3978-040* 155.58
	5	---	3978-050* 165.38
	6	---	3978-060* 175.20
	8	---	3978-080* 278.69
	10	---	3978-100* 465.43
	12	---	3978-120* 649.82
	14	---	3978-140* 805.83
	16	---	3978-160* 1584.95
	18	---	3978-180* 1897.85
	24	---	3978-240* 2332.21

* HDPE Plug

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Saddle

IPS O.D.x Socket Schedule 40



Non Pressure Rated

3763-528	6X2	1	10	390	35.83
3763-530	6X3	1	10	390	36.68
3763-532	6X4	1	10	390	38.15
3763-578	8X2	1	10	390	52.81
3763-580	8X3	1	10	390	53.33
3763-582	8X4	1	10	390	53.98
3763-585	8X6	1	10	390	55.51
3763-621	10X2	1	5	390	66.74
3763-623	10X3	1	10	390	67.67
3763-624	10X4	1	8	390	67.95
3763-626	10X6	1	5	390	79.52
3763-628	10X8	1	5	390	127.61
3763-661	12X2	1	10	390	78.93
3763-663	12X3	1	10	390	80.39
3763-664	12X4	1	10	390	82.11
3763-666	12X6	1	4	390	95.22

Fabricated Fittings PVC Schedule 40 & 80 DWV Fabricated Fittings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Saddle (continued)

IPS O.D. x Socket Schedule 40

3763-668	12X8	1	5	390	151.80
3763-670	12X10	1	4	390	219.51
3763-691	14X2	1	10	390	101.16
3763-693	14X3	1	8	390	168.11
3763-694	14X4	1	5	390	115.48
3763-696	14X6	1	10	390	117.80
3763-698	14X8	1	4	390	180.77
3763-700	14X10	1	3	390	232.54
3763-702	14X12	1	4	390	256.32
3763-751	16X2	1	5	390	107.66
3763-753	16X3	1	5	390	109.14
3763-754	16X4	1	10	390	110.80
3763-756	16X6	1	3	390	126.94
3763-758	16X8	1	3	390	188.67
3763-760	16X10	1	0	390	239.80
3763-762	16X12	1	0	390	265.75
3763-764	16X14	1	0	390	276.25
3763-781	18X2	1	5	390	157.82
3763-783	18X3	1	5	390	160.89
3763-784	18X4	1	10	390	163.35
3763-786	18X6	1	4	390	173.93
3763-788	18X8	1	0	390	253.79
3763-790	18X10	1	0	390	281.34
3763-792	18X12	1	0	390	289.11
3763-794	18X14	1	0	390	436.77
3763-796	18X16	1	0	390	570.18
3763-811	20X2	1	5	390	158.19
3763-813	20X3	1	4	390	160.36
3763-814	20X4	1	4	390	168.19
3763-816	20X6	1	0	390	175.66
3763-818	20X8	1	5	390	253.46
3763-820	20X10	1	0	390	281.35
3763-822	20X12	1	0	390	401.12
3763-824	20X14	1	0	390	437.67
3763-826	20X16	1	0	390	572.27
3763-828	20X18	1	0	390	648.56
3763-901	24X2	1	5	390	150.91
3763-903	24X3	1	5	390	166.80
3763-904	24X4	1	5	390	168.65
3763-906	24X6	1	5	390	178.92
3763-908	24X8	1	5	390	255.81
3763-910	24X10	1	0	390	284.56
3763-912	24X12	1	0	390	402.54
3763-914	24X14	1	0	390	450.77
3763-916	24X16	1	0	390	506.61
3763-918	24X18	1	0	390	682.74
3763-920	24X20	1	0	390	764.43

Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

3963-528	6X2	1	5	400	60.22
3963-530	6X3	1	5	400	60.76
3963-532	6X4	1	5	400	61.28
3963-578	8X2	1	4	400	85.07
3963-580	8X3	1	8	400	86.11
3963-582	8X4	1	5	400	87.03
3963-585	8X6	1	5	400	89.06
3963-621	10X2	1	5	400	78.77
3963-623	10X3	1	5	400	79.88
3963-624	10X4	1	8	400	80.22
3963-626	10X6	1	5	400	93.28
3963-628	10X8	1	5	400	149.49
3963-661	12X2	1	10	400	93.06

Saddle (continued)

IPS O.D. x Socket Schedule 80

3963-663	12X3	1	8	400	93.61
3963-664	12X4	1	5	400	94.40
3963-666	12X6	1	6	400	109.48
3963-668	12X8	1	2	400	172.28
3963-670	12X10	1	4	400	210.86
3963-691	14X2	1	5	400	114.61
3963-693	14X3	1	8	400	115.68
3963-694	14X4	1	5	400	116.24
3963-696	14X6	1	2	400	132.32
3963-698	14X8	1	4	400	202.85
3963-700	14X10	1	3	400	259.77
3963-702	14X12	1	4	400	286.83
3963-751	16X2	1	8	400	120.69
3963-753	16X3	1	8	400	121.74
3963-754	16X4	1	5	400	122.43
3963-756	16X6	1	10	400	139.54
3963-758	16X8	1	3	400	208.08
3963-760	16X10	1	0	400	264.96
3963-762	16X12	1	0	400	294.28
3963-764	16X14	1	0	400	306.66
3963-781	18X2	1	8	400	177.31
3963-783	18X3	1	4	400	178.38
3963-784	18X4	1	0	400	179.19
3963-786	18X6	1	5	400	189.65
3963-788	18X8	1	5	400	278.65
3963-790	18X10	1	0	400	308.91
3963-792	18X12	1	0	400	440.55
3963-794	18X14	1	0	400	479.48
3963-796	18X16	1	0	400	627.41
3963-811	20X2	1	0	400	179.33
3963-813	20X3	1	4	400	179.75
3963-814	20X4	1	4	400	181.91
3963-816	20X6	1	0	400	190.82
3963-818	20X8	1	0	400	275.64
3963-820	20X10	1	5	400	305.68
3963-822	20X12	1	0	400	436.02
3963-824	20X14	1	0	400	475.54
3963-826	20X16	1	0	400	623.04
3963-828	20X18	1	0	400	707.43
3963-901	24X2	1	5	400	182.47
3963-903	24X3	1	5	400	183.44
3963-904	24X4	1	5	400	184.28
3963-906	24X6	1	5	400	192.29
3963-908	24X8	1	5	409	259.52
3963-910	24X10	1	5	400	307.00
3963-912	24X12	1	0	409	407.26
3963-914	24X14	1	0	400	473.88
3963-916	24X16	1	0	400	648.61
3963-918	24X18	1	0	400	731.41
3963-920	24X20	1	0	400	823.20

Stub Saddle

IPS O.D. x Socket Schedule 40



Non Pressure Rated

3765-528	6X2	1	8	390	38.53
3765-530	6X3	1	4	390	39.44
3765-532	6X4	1	10	390	41.03
3765-578	8X2	1	6	390	56.79
3765-580	8X3	1	4	390	57.34
3765-582	8X4	1	8	390	58.04
3765-585	8X6	1	4	390	59.69
3765-621	10X2	1	5	390	71.75
3765-623	10X3	1	5	390	72.77
3765-624	10X4	1	4	390	92.22



Fabricated Fittings

PVC Schedule 40 & 80 DWV Fabricated Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Stub Saddle (continued)

IPS O.D x Socket Schedule 40

3765-626	10X6	1	2	390	85.51
3765-628	10X8	1	2	390	137.21
3765-661	12X2	1	6	390	84.86
3765-663	12X3	1	5	390	86.44
3765-664	12X4	1	2	390	88.28
3765-666	12X6	1	2	390	102.32
3765-668	12X8	1	2	390	163.23
3765-670	12X10	1	2	390	236.03
3765-691	14X2	1	10	390	108.77
3765-693	14X3	1	2	390	110.00
3765-694	14X4	1	5	390	111.38
3765-696	14X6	1	3	390	126.67
3765-698	14X8	1	0	390	193.11
3765-700	14X10	1	0	390	250.04
3765-702	14X12	1	0	390	275.62
3765-751	16X2	1	0	390	115.76
3765-753	16X3	1	5	390	117.35
3765-754	16X4	1	5	390	119.13
3765-756	16X6	1	2	390	136.48
3765-758	16X8	1	0	390	202.87
3765-760	16X10	1	0	390	257.85
3765-762	16X12	1	0	390	285.75
3765-764	16X14	1	0	390	297.04
3765-781	18X2	1	4	390	169.68
3765-783	18X3	1	10	390	133.45
3765-784	18X4	1	10	390	175.64
3765-786	18X6	1	2	390	187.02
3765-788	18X8	1	0	390	272.88
3765-790	18X10	1	0	390	302.51
3765-792	18X12	1	0	390	310.86
3765-794	18X14	1	0	390	469.63
3765-796	18X16	1	0	390	612.58
3765-811	20X2	1	0	390	170.09
3765-813	20X3	1	2	390	172.43
3765-814	20X4	1	2	390	180.85
3765-816	20X6	1	0	390	188.89
3765-818	20X8	1	0	390	272.54
3765-820	20X10	1	0	390	302.52
3765-822	20X12	1	0	390	431.33
3765-824	20X14	1	0	390	470.62
3765-826	20X16	1	0	390	615.34
3765-828	20X18	1	0	390	697.38
3765-901	24X2	1	4	390	162.25
3765-903	24X3	1	2	390	179.34
3765-904	24X4	1	4	390	181.35
3765-906	24X6	1	3	390	192.39
3765-908	24X8	1	0	390	275.06
3765-910	24X10	1	0	390	305.96
3765-912	24X12	1	0	390	432.83
3765-914	24X14	1	0	390	484.71
3765-916	24X16	1	0	390	544.75
3765-918	24X18	1	0	390	734.11
3765-920	24X20	1	0	390	821.97

Stub Saddle

IPS O.D.x Socket Schedule 80



Non Pressure Rated

3965-528	6X2	1	10	400	64.76
3965-530	6X3	1	3	400	65.32
3965-532	6X4	1	10	400	65.91
3965-578	8X2	1	5	409	85.99
3965-580	8X3	1	4	400	92.59
3965-582	8X4	1	6	400	93.58
3965-585	8X6	1	4	400	95.77

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Stub Saddle (continued)

IPS O.D.x Socket Schedule 80

3965-621	10X2	1	6	400	84.71
3965-623	10X3	1	6	409	80.75
3965-624	10X4	1	4	400	86.26
3965-626	10X6	1	4	400	100.29
3965-628	10X8	1	4	400	160.74
3965-661	12X2	1	2	400	100.06
3965-663	12X3	1	2	400	101.13
3965-664	12X4	1	2	400	101.51
3965-666	12X6	1	2	400	117.73
3965-668	12X8	1	2	400	185.25
3965-670	12X10	1	2	400	271.75
3965-691	14X2	1	4	400	123.25
3965-693	14X3	1	0	400	124.40
3965-694	14X4	1	5	400	124.98
3965-696	14X6	1	2	400	142.27
3965-700	14X10	1	0	400	279.33
3965-702	14X12	1	0	400	308.41
3965-751	16X2	1	5	400	129.77
3965-753	16X3	1	4	400	130.89
3965-754	16X4	1	3	400	131.63
3965-756	16X6	1	2	400	150.03
3965-758	16X8	1	3	400	223.75
3965-760	16X10	1	3	400	284.92
3965-762	16X12	1	0	400	316.43
3965-764	16X14	1	0	400	329.76
3965-781	18X2	1	2	400	190.64
3965-783	18X3	1	0	400	191.80
3965-784	18X4	1	0	400	192.67
3965-786	18X6	1	2	400	203.93
3965-788	18X8	1	0	400	299.62
3965-790	18X10	1	0	400	332.16
3965-792	18X12	1	0	400	473.71
3965-794	18X14	1	0	400	515.58
3965-796	18X16	1	0	400	674.63
3965-811	20X2	1	0	400	192.82
3965-813	20X3	1	2	400	193.27
3965-814	20X4	1	0	400	195.59
3965-816	20X6	1	0	400	205.17
3965-818	20X8	1	0	400	296.39
3965-820	20X10	1	0	400	328.69
3965-822	20X12	1	0	400	468.84
3965-824	20X14	1	0	400	511.33
3965-826	20X16	1	0	400	669.96
3965-828	20X18	1	0	400	760.68
3965-901	24X2	1	5	400	196.20
3965-903	24X3	1	5	400	197.24
3965-904	24X4	1	5	400	198.15
3965-906	24X6	1	3	400	206.78
3965-908	24X8	1	0	400	296.86
3965-910	24X10	1	0	400	330.12
3965-912	24X12	1	0	409	437.93
3965-914	24X14	1	0	400	509.55
3965-916	24X16	1	0	400	697.43
3965-918	24X18	1	0	400	786.46
3965-920	24X20	1	0	400	885.16

Fabricated Fittings
PVC Schedule 40 & 80 Low Pressure Fabricated Fittings



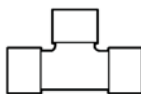
Size	SCH 40 LOW PR	SCH 80 LOW PR
	Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

TEE (Soc x Soc x Soc)

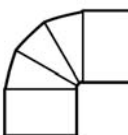
	6	3701-060 116.54	3901-060 202.68
	6X2	3701-528* 100.71	3901-528 151.01
	6X3	3701-530* 105.78	3901-530 158.12
	6X4	3701-532 110.64	3901-532 164.16
	8	3701-080 189.84	3901-080 321.71
	8X2	3701-578* 118.41	3901-578 211.51
	8X3	3701-580* 124.17	3901-580 238.31
	8X4	3701-582 127.55	3901-582 243.62
	8X6	3701-585 138.40	3901-585 252.93
	10	3701-100 369.23	3901-100 501.78
	10X2	3701-621* 192.76	3901-621 298.43
	10X3	3701-623* 196.33	3901-623 325.04
	10X4	3701-624 201.13	3901-624 367.71
	10X6	3701-626 245.85	3901-626 449.32
	10X8	3701-628 329.59	3901-628 470.85
	12	3701-120 490.71	3901-120 691.36
	12X2	3701-661* 257.35	3901-661 369.58
	12X3	3701-663* 261.15	3901-663 430.71
	12X4	3701-664 267.72	3901-664 489.34
	12X6	3701-666 310.95	3901-666 569.33
	12X8	3701-668 371.41	3901-668 626.84
	12X10	3701-670 423.23	3901-670 635.05
	14	3701-140* 964.59	3901-140 1241.67
	14X2	3701-691* 408.13	3901-691 654.45
	14X3	3701-693* 451.72	3901-693 732.20
	14X4	3701-694* 503.61	3901-694 805.84
	14X6	3701-696* 591.03	3901-696 945.67
	14X8	3701-698* 704.67	3901-698 1133.01
	14X10	3701-700* 801.01	3901-700 1191.92
	14X12	3701-702* 947.58	3901-702 1203.49
	16	3701-160 1365.40	3901-160 1956.12
	16X2	3701-751 581.98	3901-751 839.04
	16X3	3701-753 588.36	3901-753 928.06
	16X4	3701-754 624.56	3901-754 999.23
	16X6	3701-756 675.58	3901-756 1080.84
	16X8	3701-758 790.88	3901-758 1266.11
	16X10	3701-760 994.16	3901-760 1417.55

Size	SCH 40 LOW PR	SCH 80 LOW PR
	Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

TEE (Soc x Soc x Soc) (continued)

	16X12	3701-762 1128.88	3901-762 1797.08
	16X14	3701-764 1339.73	3901-764 1858.28
	18	3701-180 1696.84	3901-180 2111.91
	18X4	3701-784 997.40	3901-784 1159.69
	18X6	3701-786 1013.19	3901-786 1312.28
	18X8	3701-788 1054.77	3901-788 1361.41
	18X10	3701-790 1188.84	3901-790 1375.72
	18X12	3701-792 1266.49	3901-792 1691.18
	18X14	3701-794 1358.41	3901-794 1944.79
	18X16	3701-796 1458.03	3901-796 1987.24
	20	3701-200 2259.68	3901-200 3039.14
	20X4	3701-814 1205.44	3901-814 1610.09
	20X6	3701-816 1275.55	3901-816 1815.75
	20X8	3701-818 1347.84	3901-818 2229.95
	20X10	3701-820 1446.47	3901-820 2303.86
	20X12	3701-822 1531.62	3901-822 2433.54
	20X14	3701-824 1652.83	3901-824 2646.92
	20X16	3701-826 1760.01	3901-826 2695.20
	20X18	3701-828 1941.35	3901-828 2913.97
	24	3701-240 2815.19	3901-240 3645.26
	24X4	3701-904 1659.87	3901-904 1996.06
	24X6	3701-906 1744.75	3901-906 2251.09
	24X8	3701-908 1851.04	3901-908 2435.12
	24X10	3701-910 1955.56	3901-910 2649.68
	24X12	3701-912 2060.67	3901-912 2788.15
	24X14	3701-914 2201.79	3901-914 3091.48
	24X16	3701-916 2328.91	3901-916 3190.04
	24X18	3701-918 2530.18	3901-918 3345.66
	24X20	3701-920 2716.49	3901-920 3499.60

90° ELBOW (Soc x Soc)

	6	3706-060 115.05	3906-060 148.94
	8	3706-080 159.83	3906-080 250.15
	10	3706-100 252.65	3906-100 493.81
	12	3706-120 388.64	3906-120 720.11
	14	3706-140* 520.49	3906-140 1059.49
	16	3706-160 771.87	3906-160 1317.69
	18	3706-180 1147.99	3906-180 1696.33

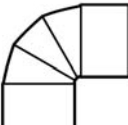


Fabricated Fittings

PVC Schedule 40 & 80 Low Pressure Fabricated Fittings

	Size	SCH 40 LOW PR	SCH 80 LOW PR
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

90° ELBOW (Soc x Soc) (continued)

	20	3706-200 1291.21	3906-200 2000.03
	24	3706-240 1614.71	3906-240 2992.62

11-1/4° ELBOW (Soc x Soc)

	4	3711-040 41.13	3911-040 55.93
	6	3711-060 66.07	3911-060 104.56
	8	3711-080 111.69	3911-080 171.15
	10	3711-100 168.54	3911-100 303.33
	12	3711-120 266.62	3911-120 443.33
	14	3711-140 419.17	3911-140 678.69
	16	3711-160 571.40	3911-160 907.22
	18	3711-180 639.49	3911-180 1171.17
	20	3711-200 848.25	3911-200 1501.41
	24	3711-240 1516.51	3911-240 1718.56

15° ELBOW (Soc x Soc)

	4	3718-040 41.13	3918-040 55.93
	6	3718-060 66.07	3918-060 104.56
	8	3718-080 111.69	3918-080 171.15
	10	3718-100 168.54	3918-100 303.33
	12	3718-120 266.62	3918-120 443.33
	14	3718-140 419.17	3918-140 678.69
	16	3718-160 571.40	3918-160 907.22
	18	3718-180 639.49	3918-180 1171.17
	20	3718-200 848.25	3918-200 1501.41
	24	3718-240 1516.51	3918-240 1718.56

22-1/2° ELBOW (Soc x Soc)

	4	3716-040 41.13	3916-040 55.93
	6	3716-060 66.07	3916-060 104.56
	8	3716-080 111.69	3916-080 171.15
	10	3716-100* 168.54	3916-100 303.33
	12	3716-120* 266.62	3916-120 443.33
	14	3716-140* 419.17	3916-140 678.69
	16	3716-160 571.40	3916-160 907.22
	18	3716-180 686.21	3916-180 1171.17
	20	3716-200 848.25	3916-200 1501.41
	24	3716-240 1516.51	3916-240 1718.56

	Size	SCH 40 DWV	SCH 80 DWV
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

22-1/2° STREET ELL (Spig x Soc)

	6	3742-060 72.67	3942-060 114.98
	8	3742-080 122.85	3942-080 188.25
	10	3742-100* 185.38	3942-100 333.67
	12	3742-120* 293.27	3942-120 487.67
	14	3742-140* 461.07	3942-140 746.57
	16	3742-160 453.78	3942-160 997.94
	18	3742-180 754.83	3942-180 1286.63
	20	3742-200 1149.99	3942-200 1767.57
	24	3742-240 1784.12	3942-240 2022.27

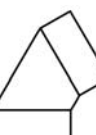
30° ELBOW (Soc x Soc)

	4	3715-040 41.13	3915-040 55.93
	6	3715-060 66.07	3915-060 104.56
	8	3715-080 111.69	3915-080 171.15
	10	3715-100 168.54	3915-100 303.33
	12	3715-120 266.62	3915-120 443.33
	14	3715-140 419.17	3915-140 678.69
	16	3715-160 571.40	3915-160 907.22
	18	3715-180 686.21	3915-180 1171.17
	20	3715-200 848.25	3915-200 1501.41
	24	3715-240 1516.51	3915-240 1718.56

45° ELBOW (Soc x Soc)

	6	3717-060 106.79	3917-060 175.23
	8	3717-080 127.87	3917-080 188.29
	10	3717-100 210.32	3917-100 344.93
	12	3717-120 295.38	3917-120 493.09
	14	3717-140* 512.16	3917-140 708.63
	16	3717-160 632.38	3917-160 917.65
	18	3717-180 729.78	3917-180 1241.33
	20	3717-200 996.44	3917-200 1559.17
	24	3717-240 1324.03	3917-240 1835.55

60° ELBOW (Soc x Soc)

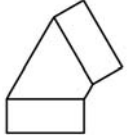
	6	3724-060* 127.62	3924-060 186.16
	8	3724-080* 182.08	3924-080 312.74
	10	3724-100* 305.13	3924-100 586.19
	12	3724-120* 399.78	3924-120 862.77
	14	3724-140* 732.80	3924-140 1253.71
	16	3724-160 890.94	3924-160 1523.31
	18	3724-180 1144.59	3924-180 1696.33

Fabricated Fittings
PVC Schedule 40 & 80 Low Pressure Fabricated Fittings

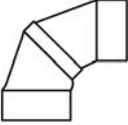


	Size	SCH 40 DWV Disc Code: 390	SCH 80 DWV Disc Code: 400
		Part Number Price Each	Part Number Price Each

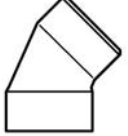
60° ELBOW (Soc x Soc) (continued)

	20	3724-200 1221.01	3924-200 2000.03
	24	3724-240 1573.16	3924-240 2136.66

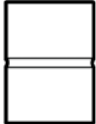
90° STREET ELL (Spig x Soc)

	4	---	3909-040 140.14
	6	3709-060* 122.13	3909-060 166.07
	8	3709-080* 168.00	3909-080 273.49
	10	3709-100* 280.72	3909-100 542.07
	12	3709-120* 409.11	3909-120 796.41
	14	3709-140* 565.74	3909-140 1163.83
	16	3709-160 879.91	3909-160 1445.39
	18	3709-180 1272.57	3909-180 1861.40
	20	3709-200 1434.48	3909-200 2196.24
	24	3709-240 1793.78	3909-240 2346.36

45° STREET ELL (Spig x Soc)

	4	3727-040 100.47	3927-040 122.94
	6	3727-060 106.79	3927-060 175.23
	8	3727-080 127.87	3927-080 188.29
	10	3727-100* 210.32	3927-100 344.93
	12	3727-120* 295.38	3927-120 493.09
	14	3727-140* 512.16	3927-140 708.63
	16	3727-160 632.38	3927-160 917.65
	18	3727-180 729.78	3927-180 1241.33
	20	3727-200 996.44	3927-200 1559.17
	24	3727-240 1324.03	3927-240 1835.55

COUPLING (Soc x Soc)

	8	3729-080 72.92	3929-080 161.42
	10	3729-100 89.66	3929-100 175.80
	12	3729-120 131.99	3929-120 202.64
	14	3729-140 214.33	3929-140 405.21
	16	3729-160 239.05	3929-160 481.75
	18	3729-180 407.66	3929-180 949.59
	20	3729-200 711.17	3929-200 1170.80
	24	3729-240 987.67	3929-240 2019.72

	Size	SCH 40 LOW PR Disc Code: 390	SCH 80 LOW PR Disc Code: 400
		Part Number Price Each	Part Number Price Each

REPAIR COUPLING (Gasket x Gasket)

	4	3728-040 70.67	3928-040 82.57
	6	3728-060 98.31	3928-060 116.36
	8	3728-080 154.75	3928-080 196.84
	10	3728-100 204.17	3928-100 275.43
	12	3728-120 256.14	3928-120 350.02
	14	3728-140 444.46	3928-140 775.04
	16	3728-160 654.84	3928-160 1162.79
	18	3728-180 856.07	3928-180 1511.54
	20	3728-200 1329.37	3928-200 1813.86
	24	3728-240 1802.95	3928-240 2446.61

REDUCER COUPLING (Soc x Soc)

	6X2	3729-528* 106.04	3929-528 183.86
	6X3	3729-530* 104.38	3929-530 135.82
	6X4	3729-532 37.87	3929-532 89.36
	8X2	3729-578 178.37	3929-578 248.39
	8X3	3729-580 165.13	3929-580 217.09
	8X4	3729-582* 93.87	3929-582 171.56
	8X6	3729-585* 80.68	3929-585 157.88
	10X4	3729-624* 211.83	3929-624 403.03
	10X6	3729-626* 197.41	3929-626 321.58
	10X8	3729-628* 138.17	3929-628 171.88
	12X4	3729-664* 398.29	3929-664 579.08
	12X6	3729-666* 302.00	3929-666 477.46
	12X8	3729-668* 265.79	3929-668 414.33
	12X10	3729-670* 201.13	3929-670 254.49
	14X4	3729-694* 640.96	3929-694 783.55
	14X6	3729-696* 620.52	3929-696 699.88
	14X8	3729-698* 449.17	3929-698 688.42
	14X10	3729-700* 379.36	3929-700 581.19
	14X12	3729-702* 336.89	3929-702 371.54
	16X4	3729-754 686.02	3929-754 1151.38
	16X6	3729-756 631.89	3929-756 1079.43
	16X8	3729-758 574.99	3929-758 1019.47
	16X10	3729-760 513.52	3929-760 708.78
	16X12	3729-762 466.20	3929-762 651.57
	16X14	3729-764 404.32	3929-764 549.29
	18X6	3729-786 1141.97	3929-786 1664.12



Fabricated Fittings

PVC Schedule 40 & 80 Low Pressure Fabricated Fittings

	Size	SCH 40 LOW PR	SCH 80 LOW PR
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

REDUCER COUPLING (Soc x Soc) (continued)

	18X8	3729-788 968.57	3929-788 1539.96
	18X10	3729-790 903.76	3929-790 1415.22
	18X12	3729-792 846.17	3929-792 1182.77
	18X14	3729-794 780.37	3929-794 1145.33
	18X16	3729-796 582.94	3929-796 978.99
	20X6	3729-816 1430.35	3929-816 2340.06
	20X8	3729-818 1385.24	3929-818 2312.98
	20X10	3729-820 1214.44	3929-820 2295.79
	20X12	3729-822 1197.80	3929-822 2153.01
	20X14	3729-824 1183.01	3929-824 2135.89
	20X16	3729-826 1116.02	3929-826 1710.54
	20X18	3729-828 985.94	3929-828 1179.55
	24X6	3729-906 2876.69	3929-906 3956.64
	24X8	3729-908 2794.27	3929-908 3923.63
	24X10	3729-910 2310.33	3929-910 3910.22
	24X12	3729-912 2234.16	3929-912 3847.04
	24X14	3729-914 2118.48	3929-914 3834.16
	24X16	3729-916 1945.19	3929-916 3686.85
	24X18	3729-918 1722.43	3929-918 2810.95
	24X20	3729-920 1294.84	3929-920 2520.93

ECCENTRIC REDUCER COUPLING (Soc x Soc)

	3X2	3729-338E 33.63	3929-338E 46.85
	4X2	3729-420E ² 45.67	3929-420E ² 119.53
	4X3	3729-422E 42.21	3929-422E 55.31
	6X2	3729-528E ^{3*} 103.09	3929-528E ³ 155.61
	6X3	3729-530E ^{2*} 94.96	3929-530E ² 151.18
	6X4	3729-532E ² 47.48	3929-532E 115.31
	8X3	3729-580E ^{3*} 195.86	3929-580E ³ 219.72
	8X4	3729-582E ^{2*} 97.80	3929-582E ² 199.43
	8X6	3729-585E ¹ 79.06	3929-585E 153.36
	10X4	3729-624E ^{2*} 223.63	3929-624E ³ 337.48
	10X6	3729-626E ¹ 205.62	3929-626E ² 286.43
	10X8	3729-628E ¹ 193.86	3929-628E 264.67
	12X4	3729-664E ^{3*} 417.24	3929-664E ⁴ 516.08
	12X6	3729-666E ^{2*} 342.84	3929-666E ³ 424.73
	12X8	3729-668E ^{2*} 227.35	3929-668E ² 366.94
	12X10	3729-670E ¹ 197.12	3929-670E 234.55

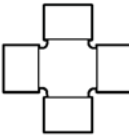
	Size	SCH 40 LOW PR	SCH 80 LOW PR
		Disc Code: 390 Part Number Price Each	Disc Code: 400 Part Number Price Each

ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)

	14X6	3729-696E ³ 696.46	3929-696E ⁴ 840.68
	14X8	3729-698E ³ 570.52	3929-698E ³ 752.04
	14X10	3729-700E ² 517.91	3929-700E ² 544.46
	14X12	3729-702E 316.62	3929-702E 500.72
	16X6	3729-756E ³ 727.75	3929-756E ⁵ 1553.20
	16X8	3729-758E ³ 717.55	3929-758E ³ 1422.29
	16X10	3729-760E ² 530.60	3929-760E ³ 1034.67
	16X12	3729-762E 504.89	3929-762E ² 918.62
	16X14	3729-764E 448.63	3929-764E 711.53
	18X6	3729-786E ⁴ 1034.39	3929-786E ⁶ 2144.06
	18X8	3729-788E ⁴ 1019.07	3929-788E ⁵ 2052.44
	18X10	3729-790E ³ 946.11	3929-790E ⁴ 1917.95
	18X12	3729-792E ² 853.85	3929-792E ³ 1711.92
	18X14	3729-794E ² 754.93	3929-794E ² 1411.37
	18X16	3729-796E 608.98	3929-796E 1377.17

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six-Step Design

CROSS (Soc x Soc x Soc x Soc)

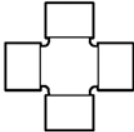
	4X2	---	3920-420 128.75
	4X3	---	3920-422 141.68
	6	3720-060 149.72	3920-060 349.19
	6X2	3720-528 112.39	3920-528 180.92
	6X3	3720-530 133.09	3920-530 203.92
	6X4	3720-532 146.74	3920-532 251.77
	8	3720-080 302.39	3920-080 420.56
	8X2	3720-578 194.14	3920-578 228.28
	8X3	3720-580 210.04	3920-580 242.52
	8X4	3720-582 230.75	3920-582 260.17
	8X6	3720-585 290.34	3920-585 337.18
	10	3720-100 492.23	3920-100 899.75
	10X2	3720-621 206.18	3920-621 413.19
	10X3	3720-623 237.47	3920-623 478.12
	10X4	3720-624 272.42	3920-624 490.23
	10X6	3720-626 312.40	3920-626 599.02
	10X8	3720-628 438.59	3920-628 790.47
	12	3720-120 648.92	3920-120 1267.88
	12X2	3720-661 272.48	3920-661 559.38
	12X3	3720-663 305.82	3920-663 625.27

Fabricated Fittings
PVC Schedule 40 & 80 Low Pressure Fabricated Fittings



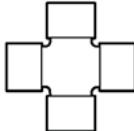
	Size	SCH 40 LOW PR	SCH 80 LOW PR
		Disc Code: 390	Disc Code: 400
		Part Number Price Each	Part Number Price Each

CROSS (Soc x Soc x Soc x Soc) (continued)

	12X4	3720-664 323.31	3920-664 652.46
	12X6	3720-666 395.19	3920-666 757.61
	12X8	3720-668 480.24	3920-668 905.02
	12X10	3720-670 557.41	3920-670 1031.31
	14	3720-140 1077.99	3920-140 2254.40
	14X2	3720-691 531.85	3920-691 849.16
	14X3	3720-693 592.18	3920-693 935.49
	14X4	3720-694 657.46	3920-694 1045.88
	14X6	3720-696 739.54	3920-696 1173.82
	14X8	3720-698 852.00	3920-698 1350.13
	14X10	3720-700 968.07	3920-700 1616.67
	14X12	3720-702 1024.18	3920-702 1894.16
	16	3720-160 1574.71	3920-160 2858.03
	16X2	3720-751 729.81	3920-751 1151.72
	16X3	3720-753 802.09	3920-753 1258.22
	16X4	3720-754 832.74	3920-754 1332.33
	16X6	3720-756 900.67	3920-756 1441.11
	16X8	3720-758 1055.08	3920-758 1688.09
	16X10	3720-760 1256.81	3920-760 1943.99
	16X12	3720-762 1444.37	3920-762 2309.34
	16X14	3720-764 1516.61	3920-764 2723.43
	18	3720-180 2230.98	3920-180 3528.26
	18X4	3720-784 902.92	3920-784 1681.48
	18X6	3720-786 1273.02	3920-786 1921.92
	18X8	3720-788 1442.29	3920-788 2292.78
	18X10	3720-790 1559.93	3920-790 2598.43
	18X12	3720-792 1658.54	3920-792 2882.65
	18X14	3720-794 1747.72	3920-794 3080.84
	18X16	3720-796 2028.41	3920-796 3346.52
	20	3720-200 3795.47	3920-200 5956.54
	20X4	3720-814 1594.17	3920-814 2209.73
	20X6	3720-816 1655.49	3920-816 2390.37
	20X8	3720-818 2056.62	3920-818 2601.24
	20X10	3720-820 2349.43	3920-820 3053.78
	20X12	3720-822 2451.60	3920-822 3380.00
	20X14	3720-824 2666.73	3920-824 3651.53
	20X16	3720-826 2999.00	3920-826 4060.64

	Size	SCH 40 LOW PR	SCH 80 LOW PR
		Disc Code: 390	Disc Code: 400
		Part Number Price Each	Part Number Price Each

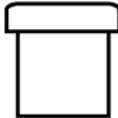
CROSS (Soc x Soc x Soc x Soc) (continued)

	20X18	3720-828 3244.81	3920-828 4843.02
	24	3720-240 4998.78	3920-240 7220.62
	24X4	3720-904 2037.68	3920-904 2439.46
	24X6	3720-906 2419.31	3920-906 2781.83
	24X8	3720-908 2575.44	3920-908 3630.64
	24X10	3720-910 2753.22	3920-910 3940.81
	24X12	3720-912 3032.13	3920-912 4520.83
	24X14	3720-914 3118.65	3920-914 5306.63
	24X16	3720-916 3456.43	3920-916 5626.53
	24X18	3720-918 3860.25	3920-918 5909.71
	24X20	3720-920 4674.09	3920-920 6293.38

CAP (Soc)

	10	3747-100* 116.99	3947-100 228.44
	12	3747-120* 147.74	3947-120 395.49
	14	3747-140* 251.21	3947-140 448.54
	16	3747-160 321.58	3947-160 592.00
	18	3747-180 355.83	3947-180 777.78
	20	3747-200 626.78	3947-200 898.79
	24	3747-240 926.49	3947-240 1042.91

SPIGOT PLUG (Spigot)

	6	3749-060 45.22	3949-060 136.77
	8	3749-080 115.51	3949-080 230.84
	10	3749-100 131.73	3949-100 291.85
	12	3749-120 188.81	3949-120 464.69
	14	3749-140 320.34	---
	16	3749-160 390.34	3949-160 675.96



TECHNICAL INFORMATION

MATERIALS

THERMOPLASTICS

UPVC — All PVC referenced in this publication is unplasticized PVC, commonly referred to as UPVC.

PVC — Poly Vinyl Chloride

PVC is one of the most specified thermoplastics for piping system components, including valves, fittings, flanges and many specialty products. PVC has excellent chemical and corrosion resistance to a broad range of fluids including water, deionized water, most mineral acids, bases, salts and paraffinic hydrocarbon solutions. PVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters or polar solvents such as ketones. Spears® PVC materials conform to ASTM Cell Classification 12454-B (formerly designated as Type I, Grade 1). The maximum recommended service temperature of PVC products is 60°C (140°F).

CPVC — Chlorinated Poly Vinyl Chloride

Chlorinated PVC is used for higher temperature applications than PVC, especially for handling hot corrosive liquids. With similar chemical and corrosion resistance to PVC, increased chlorine content gives CPVC superior thermal resistance. CPVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® CPVC materials conform to ASTM Cell Classification 23447-B (formerly designated as Type IV, Grade 1). The maximum recommended service temperature of CPVC products is 93°C (200°F).

ELASTOMERS

EPR (EPDM) Ethylene propylene rubber

Used in O-ring seals, EPR is recommended for water, chlorinated water, dilute acids and alkalines, alcohols, and has excellent resistance to ozone. EPR is not recommended for petroleum oils, di-ester lubricants, strong acids, or strong alkalines. The maximum recommended service temperature of EPR is 149°C (300°F).

FKM — Fluorocarbon elastomer

Used in O-ring seals, FKM exhibits a very broad range of chemical resistance, including petroleum oils, di-ester based lubricants, silicate fluids and greases, halogenated hydrocarbons and mineral acids. FKM is not recommended for ketones, amines, anhydrous ammonia, hot hydrofluoric or chlorosulfonic acids or automotive brake fluids. The maximum recommended service temperature of FKM is 204°C (400°F).

NITRILE (Buna-N) — Nitrile elastomer

Used in O-ring seals, nitrile elastomers are recommended for petroleum oils and fluids, silicone oils and greases, Di-ester based lubricants, ethylene glycol based fluids and cold water. Nitrile is not recommended for phosphate ester hydraulic fluids, halogenated hydrocarbons, strong acids, ketone, ozone or automotive brake fluids. The maximum recommended service temperature of nitrile is 135°C (275°F).

IMPORTANT

SPECIFICATION STANDARDS ORIGIN

Not all metric fitting sizes are the same. Today's global markets have varying standards, norms and interpretations of metric sizing. Identification of the standards origin for which fittings are being specified is essential in assuring that the proper fitting is obtained for each application.

METRIC SIZE DIAMETERS: ACTUAL (O.D.) vs. NOMINAL (I.D.)

Pipe and fitting sizes are specified according to a diameter. It is important to know if a specification of size is an actual O.D. (**d**), or a nominal diameter (**DN**) which is based on pipe I.D.

Where applicable, Spears® metric socket fittings in this price schedule have size columns to indicate both actual "**d**" and nominal "**DN**". It is always best to identify the actual pipe O.D. being used in order to select the proper fitting.

THREADS

Spears® metric thread fittings use BSP (British Standard Pipe) threads designated in inch-sizes, which also conform to ISO 7/1 metric threads. ASTM Iron Pipe Size (IPS) threads use NPT (National Pipe Thread) threads which are also designated as inch size, conforming to ASTM F 1498. BSP threads are not compatible with NPT threads.

SPEARS® METRIC FITTINGS

PN16 PVC AND CPVC METRIC FITTINGS (PG 190/192)

Injection Molded.

Size Range:	20mm through 63mm socket, actual "d" 1/2" through 2" threaded
Sockets:	ISO 727
Threads - BSP:	ISO 7/1
Laying Lengths:	ISO 264
Pressure Rating:	PN16 = 16 BAR at 23°C (232 psi at 73°F)

PN10 (CLASS 10/12) PVC METRIC SOCKET FITTINGS (PG 190)

Injection Molded.

Size Range:	160mm and 225mm socket, actual "d" 73°F
Sockets:	ISO 727 diameters (ASTM D 2467 socket length)
Pressure Rating:	160mm: PN12 = 12 BAR at 23°C (174 psi at 73°F) 225mm: PN10 = 10 BAR at 23°C (145 psi at 73°F)



PVC ASTM SCHEDULE 40 SOCKET X BSP ADAPTER FITTINGS (WHITE & GRAY) (PG 195/6)

Injection molded.

Size Range:	3/4" through 3" socket x threaded, nominal
Sockets:	Iron Pipe Size (IPS) to ASTM D 2466
Threads - BSP:	ISO 7/1
Pressure Rating:	Designed for use with corresponding size and pressure of ASTM D 1785 Schedule 40 pipe with 50% derating of threaded system.

PVC TRANSITION UNIONS (PG 197)

Injection molded; specially designed for transitions between ASTM IPS (Iron Pipe Size) systems and either ISO (International Standards Organization) metric, or JIS (Japanese Industrial Standards) metric systems.

Size Range:	ASTM IPS (inch): 1/2" through 4", nominal — connect to — ISO Metric (mm): 20mm through 110mm socket, actual "d" 1/2" through 4" BSP threaded — or to — JIS Metric (mm): 16mm through 100mm socket, nominal "DN"
Sockets:	ASTM IPS (inch): ASTM D 2467 ISO Metric (mm): ISO 727 diameters (ASTM D 2467 socket length) JIS Metric (mm): JIS K6741 diameters (ASTM D 2467 socket length)
Threads:	NPT: ASTM F 1498 BSP: ISO 7/1
Pressure Rating:	16.2 BAR at 23°C (235 psi at 73°F)

PVC & CPVC METRIC VALVES

TRUE UNION BALL VALVES & BALL CHECK VALVES (PG 238/239 & 228/229)

Size Range:	20mm through 110mm socket, actual "d" 1/2" through 2" BSP threaded
Sockets:	ISO 727 diameters (ASTM D 2467 socket length)
Threads - BSP:	ISO 7/1
Pressure Rating:	20mm - 62mm 16.2 BAR at 23°C (235 psi at 73°F) 75mm - 110mm 10.3 BAR at 23°C (150 psi at 73°F)

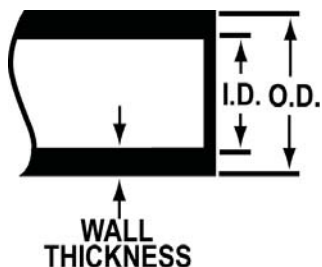
GATE VALVES (PG 208/209)

Size Range:	20mm through 63mm socket, actual "d" 1/2" through 2" BSP threaded
Sockets:	ISO 727 diameters (ASTM 2467 socket length)
Threads - BSP:	ISO 7/1
Pressure Rating:	13.8 BAR at 23°C (200 psi at 73°F)



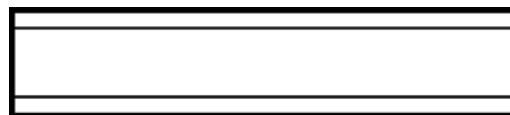
Metric Fittings & Valves PVC & CPVC Metric Fittings, Unions & Valves

SCHEDULE 40 & SCHEDULE 80 PIPE DIMENSIONS
ASTM STANDARD D 1785



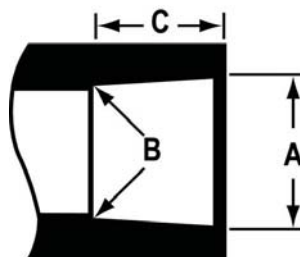
Nominal Pipe Size (inch)	Mean Outside Diameter (inch)	O.D. Tolerance (inch)	Minimum Wall Thickness (inch)	
			Schedule 40	Schedule 80
1/2	0.840	± 0.004	0.109	0.147
3/4	1.050	± 0.004	0.113	0.154
1	1.315	± 0.005	0.133	0.179
1-1/4	1.660	± 0.005	0.140	0.191
1-1/2	1.900	± 0.006	0.145	0.200
2	2.375	± 0.006	0.154	0.218
2-1/2	2.875	± 0.007	0.203	0.276
3	3.500	± 0.008	0.216	0.300
4	4.500	± 0.009	0.237	0.337
6	6.625	± 0.011	0.280	0.420
8	8.625	± 0.015	0.322	0.500
10	10.750	± 0.015	0.365	0.593
12	12.750	± 0.015	0.406	0.687

ASTM PIPE PRESSURE RATINGS



Inch	mm O.D.	Schedule 40		Schedule 80	
		psi	BAR	psi	BAR
1/2	21.34	600	41.3	850	58.6
3/4	26.67	480	33.1	690	47.5
1	33.40	450	31.0	630	43.4
1-1/4	42.16	370	25.5	520	35.8
1-1/2	48.26	330	22.7	470	32.4
2	60.32	280	19.3	400	27.5
2-1/2	73.02	300	20.6	420	28.9
3	88.90	260	17.9	370	25.5
4	114.30	220	15.1	320	22.0
6	168.28	180	12.4	280	19.3
8	219.08	160	11.0	250	17.2
10	273.05	140	9.7	230	15.8
12	323.85	130	8.9	230	15.8

SCHEDULE 40 & SCHEDULE 80 BASIC SOCKET DIMENSIONS
ASTM STANDARDS D 2466 & D 2467

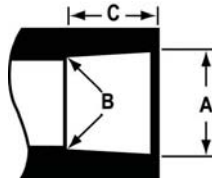


Nominal Size (inch)	Diameter			Schedule 40 Socket Length Minimum C	Schedule 80 Socket Length Minimum C
	Entrance A	Bottom B	Tolerance (inch)		
1/2	0.848	0.836	± 0.004	0.688	0.875
3/4	1.058	1.046	± 0.004	0.719	1.000
1	1.325	1.310	± 0.005	0.875	1.125
1-1/4	1.670	1.655	± 0.005	0.938	1.250
1-1/2	1.912	1.894	± 0.006	1.094	1.375
2	2.387	2.369	± 0.006	1.156	1.500
2-1/2	2.889	2.868	± 0.007	1.750	1.750
3	3.516	3.492	± 0.008	1.875	1.875
4	4.518	4.491	± 0.009	2.000	2.250
6	6.647	6.614	± 0.011	3.000	3.000
8	8.655	8.610	± 0.015	4.000	4.000
10	10.780	10.735	± 0.015	5.000	5.000
12	12.780	12.735	± 0.015	6.000	6.000

Metric Fittings & Valves
PVC & CPVC Metric Fittings, Unions & Valves

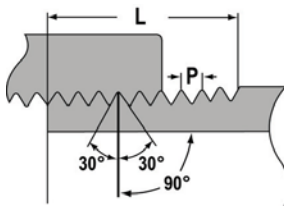


PVC METRIC FABRICATED FITTINGS BASIC SOCKET DIMENSIONS



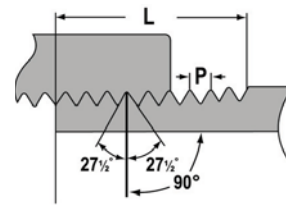
Size	Socket Entrance A		Tolerance ±		Socket Bottom B		Tolerance ±		C Socket Depth (Minimum)	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
110mm	4.346	110.39	0.015	0.38	4.316	109.63	0.015	0.38	2.500	63.50
125mm	4.934	125.32	0.016	0.41	4.930	125.22	0.016	0.41	2.750	69.85
160mm	6.319	160.50	0.020	0.51	6.270	159.26	0.020	0.51	3.500	88.90
200mm	7.900	200.66	0.026	0.66	7.848	199.34	0.026	0.66	4.250	107.95
225mm	8.870	225.30	0.029	0.74	8.829	224.26	0.029	0.74	4.750	120.65
250mm	9.875	250.83	0.032	0.81	9.811	249.20	0.032	0.81	5.250	133.35
280mm	11.059	280.90	0.035	0.89	10.992	279.20	0.035	0.89	5.750	146.05
315mm	12.441	316.00	0.039	0.99	12.363	314.02	0.039	0.99	6.500	165.10

**AMERICAN NATIONAL STANDARD TAPER PIPE THREADS
(NPT)
ANSI STANDARD B1.20.1
ASTM STANDARDS D 2464, F 437, F 1498**



Nominal Size (inch)	Threads per Inch	Effective Thread Length L inches	Pitch of Thread P inches
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500

**BSP ISO 7/1
PARALLEL THREADS**



Nominal Size (inch)	Threads per Inch	Effective Thread Length L mm	Pitch of Thread P mm
1/2	14	13.152	1.8143
3/4	14	14.514	1.8143
1	11	16.714	2.3091
1-1/4	11	19.050	2.3091
1-1/2	11	19.050	2.3091
2	11	23.378	2.3091
2-1/2	11	26.698	2.3091
3	11	29.873	2.3091
4	11	35.791	2.3091

STANDARDS COMPARISON

JIS K6741 mm		DIN 8062 mm		ASTM D 1785			NPT — ANSI B1.20.1 Tapered Thread		BSP — ISO 7/1 Parallel Thread	
Nominal	Actual O.D.	Nominal	Actual O.D.	Nominal		Actual O.D. mm	Designation	Threads per inch	Designation	Threads per 25.4mm
				inches	inches					
16	22	15	20	1/2	.840	21.34	1/2	14	1/2	14
20	26	20	25	3/4	1.050	26.67	3/4	14	3/4	14
25	32	25	32	1	1.315	33.40	1	11-1/2	1	11
30	38	32	40	1-1/4	1.660	42.16	1-1/4	11-1/2	1-1/4	11
40	48	40	50	1-1/2	1.900	48.26	1-1/2	11-1/2	1-1/2	11
50	60	50	63	2	2.375	60.32	2	11-1/2	2	11
75	89	80	90	3	3.500	88.90	3	8	3	11
100	114	100	110	4	4.500	114.30	4	8	4	11



Metric Fittings & Valves

PN16 PVC Metric Fittings & PN16 CPVC Metric Fittings

PN16 PVC Metric Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC TRANSITION COUPLING

JIS Socket (mm) x ASTM Socket (in)

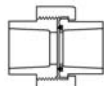


PN 16 - 232 psi Pressure Rating at 23°C (73°F)

8229-016	16 DN X 1/2	25	150	197	5.98
8229-020	20 DN X 3/4	25	150	197	8.09
8229-025	25 DN X 1	20	160	197	8.32
8229-030	30 DN X 1-1/4	20	0	197	12.67
8229-040	40 DN X 1-1/2	10	0	197	13.66
8229-050	50 DN X 2	10	0	197	14.67

PVC UNION FKM

Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

657-020	20 d	10	60	190	12.26
657-025	25 d	10	60	190	15.58
657-032	32 d	10	40	190	17.77

PVC UNION FKM (continued)

Socket

657-040	40 d	5	20	190	35.31
657-050	50 d	5	0	190	39.99
657-063	63 d	5	0	190	54.21

PVC UNION EPDM

Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

697-020	20 d	10	60	190	12.08
697-025	25 d	10	60	190	15.38
697-032	32 d	10	40	190	17.60
697-040	40 d	5	20	190	34.89
697-050	50 d	5	0	190	39.48
697-063	63 d	5	0	190	53.57

PN16 CPVC Metric Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC TRANSITION COUPLING

JIS Socket (mm) x ASTM Socket (in)

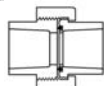


PN 16 - 232 psi Pressure Rating at 23°C (73°F)

8229-016C	16 DN X 1/2	25	150	197	6.38
8229-020C	20 DN X 3/4	25	150	197	8.92
8229-025C	25 DN X 1	20	160	197	12.01
8229-030C	30 DN X 1-1/4	20	0	197	17.99
8229-040C	40 DN X 1-1/2	10	0	197	22.64
8229-050C	50 DN X 2	10	0	197	26.32

CPVC UNION FKM

Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

657-020C	20 d	10	60	192	27.38
657-025C	25 d	10	60	192	28.60
657-032C	32 d	10	40	192	34.33
657-040C	40 d	5	20	192	69.46
657-050C	50 d	5	0	192	70.73
657-063C	63 d	5	0	192	117.24

CPVC UNION EPDM

Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

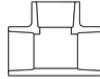
697-020C	20 d	10	60	192	27.29
697-025C	25 d	10	40	192	28.26
697-032C	32 d	10	40	192	33.86
697-040C	40 d	5	20	192	68.57
697-050C	50 d	5	0	192	69.87
697-063C	63 d	5	0	192	115.80

Metric Fittings & Valves
Class 10/12 PVC & CPVC Metric Fittings & Class 150 Flanges



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC TEE
Socket



PN 10

6201-060	160 d	4	0	190	225.66
6201-080	225 d	2	0	190	523.37
6201-160040	160 d X 4	2	0	190	225.66
601-280	280 d	1	0	191	1729.11

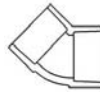
PVC 90° ELL
Socket



PN 10

6206-060	160 d	4	0	190	134.19
6206-080	225 d	2	0	190	369.86
606-280	280 d	1	0	191	1655.26

PVC 45° ELL
Socket



PN 10

6217-060	160 d	5	0	190	161.26
6217-080	225 d	2	0	190	349.63
617-280	280 d	2	0	191	921.33

PVC REDUCER BUSHING
Spigot x Socket



PN 10

637-225160	225 X 160 d	3	0	190	216.89
------------	--------------------	---	---	-----	--------

PVC CAP
Socket



PN 10

6247-060	160 d	4	0	190	261.68
----------	--------------	---	---	-----	--------

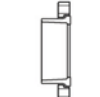
CPVC WYE
Socket



PN 10

6275-160110C	160 d X 110 d	5	0	192	635.33
--------------	----------------------	---	---	-----	--------

PVC FLANGE* Van Stone Style
ASTM Socket x Multi-bolt Pattern Ring

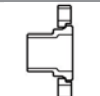


150 psi

M854-020	2	10	0	080	30.14
M854-060	6	5	0	080	102.36
M854-080	8	2	0	080	166.68

* Hubs fit 2", 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC FLANGE* Van Stone Style
Spigot x Multi-bolt Pattern Ring



150 psi

M856-020	2	10	0	080	30.37
M856-060	6	4	0	080	103.20
M856-080	8	2	0	080	167.94

* Spigots fit 2", 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC FLANGE* Van Stone Style
ASTM Socket x Table D&E Drilling



150 psi

854-030DE	3"/80 nom.	10	0	080	51.44
854-040DE	4"/110 nom.	5	0	080	65.07

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Spigot x Table D&E Drilling



150 psi

856-030DE	3"/80 nom.	10	0	080	51.85
856-040DE	4"/110 nom.	10	0	080	65.61

* Spigots fit 3" or 4" ASTM IPS fitting sockets. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Socket x DIN PN 10/16 Drilling



150 psi

854-030DIN	3"/80 nom.	10	0	080	51.44
854-040DIN	4"/110 nom.	5	0	080	65.07

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Spigot x DIN PN 10/16 Drilling



150 psi

856-030DIN	3"/80 nom.	10	0	080	51.85
856-040DIN	4"/110 nom.	5	0	080	65.61

* Spigots fit 3" or 4" ASTM IPS fitting sockets. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

PVC FLANGE* Van Stone Style
Metric Socket x Multi Pattern Ring



150 psi

6254-160	160 d	5	0	190	102.36
6254-200	200 d	2	0	190	166.68
6254-225	225 d	2	0	190	166.68
6254-280	280 d	2	0	191	215.79

* Hubs are manufactured to fit 160mm - 225mm and 280 mm O.D. Pipe. Rings are manufactured to accept bolt patterns for ANSI Class 150, B.S. 4504 NP10, B.S. 4504 NP16 (except 225mm), B.S. 10 Table D (except 280mm) and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.



Metric Fittings & Valves

PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC WHITE TEE

ASTM Socket x FBSP



SCH 40

302-007	3/4	50	0	195	1.64
302-010	1	50	0	195	3.04
302-131	1X3/4	50	0	195	3.04
302-211	1-1/2X1	25	0	195	6.31
302-249	2X1	10	0	195	7.94

PVC WHITE 90° ELL

ASTM Socket x FBSP



SCH 40

307-007	3/4	50	0	195	.92
307-010	1	50	0	195	1.72
307-131	1X3/4	50	0	195	2.64
307-211	1-1/2X1	25	0	195	6.39

HDPE BLACK 90° STREET ELL

MBSP x FBSP



N.P.R.

M312-010	1	50	0	195	3.69
----------	---	----	---	-----	------

PVC WHITE RISER EXTENSION

MBSP x FBSP



SCH 40

334-007	3/4	50	400	195	1.98
334-010	1	50	0	195	2.47

PVC WHITE FEMALE ADAPTER

ASTM Socket x FBSP



SCH 40

335-010	1	50	0	195	1.06
335-012	1-1/4	25	0	195	1.64
335-015	1-1/2	25	0	195	1.88
335-020	2	10	0	195	2.53

PVC WHITE MALE ADAPTER

MBSP x ASTM Socket



SCH 40

336-005	1/2	50	300	195	.58
336-007	3/4	50	400	195	.64
336-010	1	50	300	195	1.16
336-012	1-1/4	25	200	195	1.41
336-015	1-1/2	25	0	195	1.88
336-020	2	25	0	195	2.47
336-030	3	10	0	195	10.67
336-131	1X3/4	50	400	195	3.54

PVC WHITE FEMALE ADAPTER

ASTM Spigot x FBSP



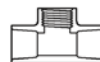
SCH 40

378-010	1	50	0	195	1.62
378-015	1-1/2	20	0	195	2.62
378-020	2	20	0	195	3.85

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC GRAY TEE

Socket

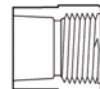


SCH 40

302-010G	1	50	0	196	3.40
302-012G	1-1/4	25	0	196	5.40
302-211G	1-1/2X1	25	0	196	6.99
302-249G	2X1	10	0	196	8.82

PVC GRAY FEMALE ADAPTER

ASTM Socket x FBSP

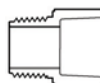


SCH 40

335-010G	1	50	0	196	1.19
335-012G	1-1/4	25	0	196	1.81
335-015G	1-1/2	25	0	196	2.12
335-020G	2	10	0	196	2.83
335-025G	2-1/2	5	0	196	7.13

PVC GRAY MALE ADAPTER

MBSP x ASTM Socket

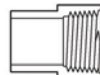


SCH 40

336-010G	1	50	300	196	1.27
336-012G	1-1/4	25	200	196	1.54
336-015G	1-1/2	25	0	196	2.12
336-020G	2	25	0	196	2.74
336-025G	2-1/2	5	0	196	8.09
336-030G	3	10	0	196	11.87
336-040G	4	5	0	196	15.11

PVC GRAY FEMALE ADAPTER

ASTM Spigot x FBSP



378-010G	1	50	0	196	1.71
378-015G	1-1/2	25	0	196	2.92
378-020G	2	20	0	196	4.28

PVC GRAY TAKE-OFF ADAPTER

Spigot x MBSP



SCH 40

361-005G	1/2	50	300	196	1.02
361-007G	3/4	50	400	196	1.16
361-010G	1	50	0	196	2.00
361-012G	1-1/4	25	100	196	2.47
361-015G	1-1/2	25	0	196	3.31
361-020G	2	25	0	196	4.07

PVC GRAY REDUCING TAKE-OFF ADAPTER

Spigot/Socket x MBSP



SCH 40

361-168G	1-1/4X1X1	25	100	196	2.47
361-212G	1-1/2X1-1/4X1-1/4	25	0	196	3.31
361-251G	2X1-1/2X1-1/2	25	0	196	4.07

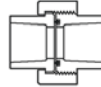
Metric Fittings & Valves PVC Transition Unions



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal

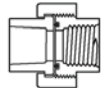


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8657-020	20 d X 1/2	10	60	197	11.01
8657-025	25 d X 3/4	10	40	197	14.02
8657-032	32 d X 1	10	40	197	16.00
8657-040	40 d X 1-1/4	10	0	197	31.78
8657-050	50 d X 1-1/2	10	0	197	35.99
8657-063	63 d X 2	5	0	197	48.81
8657-090	90 d X 3	5	0	197	90.85
8657-110	110 d X 4	4	0	197	126.54

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

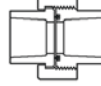


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8658-020	20 d X 1/2	10	60	197	13.45
8658-025	25 d X 3/4	20	80	197	18.80
8658-032	32 d X 1	15	90	197	25.01
8658-040	40 d X 1-1/4	10	0	197	47.76
8658-050	50 d X 1-1/2	10	0	197	59.12
8658-063	63 d X 2	5	0	197	90.96
8658-090	90 d X 3	5	0	197	214.72
8658-110	110 d X 4	4	0	197	246.77

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal

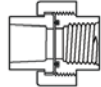


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8697-020	20 d X 1/2	20	240	197	10.87
8697-025	25 d X 3/4	10	60	197	13.85
8697-032	32 d X 1	15	90	197	15.84
8697-040	40 d X 1-1/4	10	0	197	31.40
8697-050	50 d X 1-1/2	10	0	197	35.55
8697-063	63 d X 2	5	0	197	48.21
8697-090	90 d X 3	5	0	197	89.72
8697-110	110 d X 4	4	0	197	124.08

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

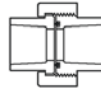


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8698-020	20 d X 1/2	20	160	197	13.26
8698-025	25 d X 3/4	20	80	197	18.56
8698-032	32 d X 1	15	90	197	24.69
8698-040	40 d X 1-1/4	10	0	197	46.94
8698-050	50 d X 1-1/2	10	0	197	58.38
8698-063	63 d X 2	5	0	197	89.84
8698-090	90 d X 3	5	0	197	212.03
8698-110	110 d X 4	4	0	197	243.45

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



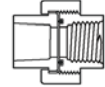
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8257-016	16 DN X 1/2	20	160	197	11.01
8257-020	20 DN X 3/4	10	40	197	14.02
8257-025	25 DN X 1	15	90	197	16.00
8257-030	30 DN X 1-1/4	10	0	197	31.78
8257-040	40 DN X 1-1/2	10	0	197	35.99
8257-050	50 DN X 2	5	0	197	48.81
8257-075	75 DN X 3	5	0	197	90.85
8257-100	100 DN X 4	4	0	197	126.54

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

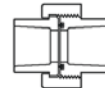


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8258-016	16 DN X 1/2	20	160	197	13.45
8258-020	20 DN X 3/4	20	80	197	18.80
8258-025	25 DN X 1	15	90	197	25.01
8258-030	30 DN X 1-1/4	10	0	197	47.76
8258-040	40 DN X 1-1/2	10	0	197	59.12
8258-050	50 DN X 2	5	0	197	90.96
8258-075	75 DN X 3	5	0	197	214.72
8258-100	100 DN X 4	4	0	197	246.77

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal

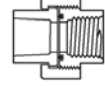


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8297-016	16 DN X 1/2	20	160	197	10.87
8297-020	20 DN X 3/4	20	80	197	13.85
8297-025	25 DN X 1	15	90	197	15.84
8297-030	30 DN X 1-1/4	10	0	197	31.40
8297-040	40 DN X 1-1/2	10	0	197	35.55
8297-050	50 DN X 2	5	0	197	48.21
8297-075	75 DN X 3	5	0	197	89.72
8297-100	100 DN X 4	4	0	197	124.08

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

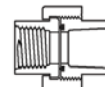


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8298-016	16 DN X 1/2	20	160	197	13.26
8298-020	20 DN X 3/4	20	80	197	18.56
8298-025	25 DN X 1	15	90	197	24.69
8298-030	30 DN X 1-1/4	10	0	197	46.94
8298-040	40 DN X 1-1/2	10	0	197	58.38
8298-050	50 DN X 2	5	0	197	89.84
8298-075	75 DN X 3	5	0	197	212.03
8298-100	100 DN X 4	4	0	197	243.45

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Soc with FKM O-ring Seal

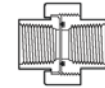


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8359-005	1/2	20	160	197	13.45
8359-007	3/4	20	80	197	18.80
8359-010	1	15	90	197	25.01
8359-012	1-1/4	10	0	197	47.76
8359-015	1-1/2	10	0	197	59.12
8359-020	2	5	0	197	90.96
8359-030	3	5	0	197	214.72
8359-040	4	4	0	197	246.77

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8358-005	1/2	20	160	197	12.82
8358-007	3/4	20	80	197	17.91
8358-010	1	15	90	197	23.84
8358-012	1-1/4	10	0	197	45.48
8358-015	1-1/2	10	0	197	56.31
8358-020	2	5	0	197	86.64
8358-030	3	5	0	197	219.76
8358-040	4	4	0	197	258.26



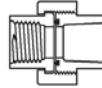
Metric Fittings & Valves PVC Transition Unions & True Union Ball Valves (Regular Style)

PVC Transition Unions

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Soc with EPDM O-ring Seal



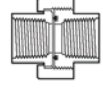
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8399-005	1/2	10	60	197	13.26
8399-007	3/4	20	80	197	18.56
8399-010	1	15	90	197	24.69
8399-012	1-1/4	10	0	197	47.17
8399-015	1-1/2	10	0	197	58.38
8399-020	2	5	0	197	89.84
8399-030	3	5	0	197	212.03
8399-040	4	4	0	197	243.45

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Transition Union

BSP Thread (in.) x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8398-005	1/2	10	60	197	12.63
8398-007	3/4	10	40	197	17.68
8398-010	1	10	40	197	23.54
8398-012	1-1/4	5	20	197	44.92
8398-015	1-1/2	5	0	197	55.60
8398-020	2	5	0	197	89.33
8398-030	3	5	0	197	217.04
8398-040	4	4	0	197	253.84

True Union Ball Valves (Regular Style)



Pressure Rating @ 73°F (23°C), Water
2-1/2" - 4" PN 10

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Rated for Vacuum Service

PTFE Seats

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC EPDM

2324-025	75MM	1	0	238	323.80
2324-030	90MM	1	0	238	426.91
2324-040	110MM	1	0	238	721.29

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC FKM

2334-025	75MM	1	0	238	438.75
2334-030	90MM	1	0	238	474.35
2334-040	110MM	1	0	238	801.42

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded EPDM

2325-025	2-1/2	1	0	238	323.80
2325-030	3	1	0	238	426.91
2325-040	4	1	0	238	721.29

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded FKM

2335-025	2-1/2	1	0	238	438.75
2335-030	3	1	0	238	474.35
2335-040	4	1	0	238	801.42

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC EPDM

2324-025C	75MM	1	0	239	542.01
-----------	------	---	---	-----	--------

CPVC True Union Ball Valve (Regular Style) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC EPDM

2324-030C	90MM	1	0	239	633.75
2324-040C	110MM	1	0	239	1148.37

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC FKM

2334-025C	75MM	1	0	239	602.21
2334-030C	90MM	1	0	239	704.19
2334-040C	110MM	1	0	239	1275.97

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded EPDM

2325-025C	2-1/2	1	0	239	542.15
2325-030C	3	1	0	239	633.75
2325-040C	4	1	0	239	1148.37

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded FKM

2335-025C	2-1/2	1	0	239	602.21
2335-030C	3	1	0	239	704.19
2335-040C	4	1	0	239	1275.97

Metric Fittings & Valves
PVC & CPVC True Union 2000 Industrial Ball Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" PN 16

Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)

Pressure Deratings Apply
 Rated for Vacuum Service
 PTFE Seats
 Locking Handle

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC
EPDM

1824-005	20 d	1	18	238	49.69
1824-007	25 d	1	18	238	58.80
1824-010	32 d	1	12	238	70.02
1824-012	40 d	1	8	238	96.86
1824-015	50 d	1	8	238	116.67
1824-020	63 d	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC
FKM

1834-005	20 d	1	18	238	55.27
1834-007	25 d	1	18	238	65.41
1834-010	32 d	1	12	238	77.99
1834-012	40 d	1	8	238	123.64
1834-015	50 d	1	8	238	129.52
1834-020	63 d	1	4	238	169.54

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded
EPDM

1825-005	1/2	1	18	238	49.69
1825-007	3/4	1	18	238	58.80
1825-010	1	1	12	238	70.02
1825-012	1-1/4	1	8	238	96.86
1825-015	1-1/2	1	8	238	116.67
1825-020	2	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded
FKM

1835-005	1/2	1	18	238	55.27
1835-007	3/4	1	18	238	65.41
1835-010	1	1	12	238	77.99
1835-012	1-1/4	1	8	238	123.64
1835-015	1-1/2	1	8	238	129.52
1835-020	2	1	4	238	169.54

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC
EPDM

1828-005	16 DN	1	18	238	49.69
1828-007	20 DN	1	18	238	58.80
1828-010	25 DN	1	12	238	70.02
1828-012	30 DN	1	8	238	96.86
1828-015	40 DN	1	8	238	116.67
1828-020	50 DN	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC
FKM

1838-005	16 DN	1	18	238	55.27
1838-007	20 DN	1	18	238	65.41
1838-010	25 DN	1	12	238	77.99
1838-012	30 DN	1	8	238	123.64
1838-015	40 DN	1	8	238	129.52
1838-020	50 DN	1	4	238	169.54

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC
EPDM

1824-005C	20 d	1	18	239	65.63
1824-007C	25 d	1	18	239	82.65
1824-010C	32 d	1	12	239	98.40
1824-012C	40 d	1	8	239	156.43
1824-015C	50 d	1	8	239	165.21
1824-020C	63 d	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC
FKM

1834-005C	20 d	1	18	239	72.93
1834-007C	25 d	1	18	239	91.86
1834-010C	32 d	1	12	239	109.33
1834-012C	40 d	1	8	239	173.86
1834-015C	50 d	1	8	239	183.57
1834-020C	63 d	1	4	239	254.00

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded
EPDM

1825-005C	1/2	1	18	239	65.63
1825-007C	3/4	1	18	239	82.65
1825-010C	1	1	12	239	98.40
1825-012C	1-1/4	1	8	239	156.43
1825-015C	1-1/2	1	8	239	165.21
1825-020C	2	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded
FKM

1835-005C	1/2	1	18	239	72.93
1835-007C	3/4	1	18	239	91.86
1835-010C	1	1	12	239	109.33
1835-012C	1-1/4	1	8	239	173.86
1835-015C	1-1/2	1	8	239	183.57
1835-020C	2	1	4	239	254.00



Metric Fittings & Valves
PVC & CPVC True Union 2000 Industrial Ball Valves & PVC & CPVC True Union 2000 Standard Ball Valves

PVC & CPVC True Union 2000 Industrial Ball Valves

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC					
EPDM					
1828-005C	16 DN	1	18	239	65.63
1828-007C	20 DN	1	18	239	82.65
1828-010C	25 DN	1	12	239	98.40
1828-012C	30 DN	1	8	239	156.43
1828-015C	40 DN	1	8	239	165.21
1828-020C	50 DN	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC					
FKM					
1838-005C	16 DN	1	18	239	72.93
1838-007C	20 DN	1	18	239	91.86
1838-010C	25 DN	1	12	239	109.02
1838-012C	30 DN	1	8	239	173.86
1838-015C	40 DN	1	8	239	183.57
1838-020C	50 DN	1	4	239	254.00

PVC & CPVC True Union 2000 Standard Ball Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" PN 16

Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)

Pressure Deratings Apply
 PE Seats

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC					
EPDM					
3624-005	20 d	1	18	238	39.77
3624-007	25 d	1	18	238	47.03
3624-010	32 d	1	18	238	56.02
3624-012	40 d	1	12	238	77.48
3624-015	50 d	1	8	238	93.35
3624-020	63 d	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded					
FKM					
3635-005	1/2	1	18	238	44.23
3635-007	3/4	1	18	238	52.32
3635-010	1	1	18	238	62.40
3635-015	1-1/2	1	8	238	103.62
3635-012	1-1/4	1	12	238	98.91
3635-020	2	1	8	238	135.62

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC					
FKM					
3634-005	20 d	1	18	238	44.23
3634-007	25 d	1	18	238	52.32
3634-010	32 d	1	18	238	62.40
3634-012	40 d	1	12	238	98.91
3634-015	50 d	1	8	238	103.62
3634-020	63 d	1	8	238	135.62

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC					
EPDM					
3628-005	16 DN	1	18	238	39.77
3628-007	20 DN	1	18	238	47.03
3628-010	25 DN	1	18	238	56.02
3628-012	30 DN	1	12	238	77.48
3628-015	40 DN	1	8	238	93.35
3628-020	50 DN	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded					
EPDM					
3625-005	1/2	1	18	238	39.77
3625-007	3/4	1	18	238	47.03
3625-010	1	1	18	238	56.02
3625-012	1-1/4	1	12	238	77.48
3625-015	1-1/2	1	8	238	93.35
3625-020	2	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC					
FKM					
3638-005	16 DN	1	18	238	44.23
3638-007	20 DN	1	18	238	52.32
3638-010	25 DN	1	18	238	62.40
3638-012	30 DN	1	12	238	98.91
3638-015	40 DN	1	8	238	103.62
3638-020	50 DN	1	8	238	135.62

Metric Fittings & Valves
PVC & CPVC True Union 2000 Standard Ball Valves



CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC

EPDM

3624-005C	20 d	1	18	239	52.48
3624-007C	25 d	1	18	239	66.13
3624-010C	32 d	1	18	239	78.73
3624-012C	40 d	1	12	239	125.16
3624-015C	50 d	1	8	239	132.16
3624-020C	63 d	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC

FKM

3634-005C	20 d	1	18	239	58.36
3634-007C	25 d	1	18	239	73.49
3634-010C	32 d	1	18	239	87.47
3634-012C	40 d	1	12	239	139.11
3634-015C	50 d	1	8	239	146.85
3634-020C	63 d	1	8	239	203.21

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded

EPDM

3625-005C	1/2	1	18	239	52.48
3625-007C	3/4	1	18	239	66.13
3625-010C	1	1	18	239	78.41
3625-012C	1-1/4	1	12	239	125.16
3625-015C	1-1/2	1	8	239	132.16
3625-020C	2	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded

FKM

3635-005C	1/2	1	18	239	58.36
3635-007C	3/4	1	18	239	73.49
3635-010C	1	1	18	239	87.47
3635-012C	1-1/4	1	12	239	139.11
3635-015C	1-1/2	1	8	239	146.85
3635-020C	2	1	8	239	203.21

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC

EPDM

3628-005C	16 DN	1	18	239	52.48
3628-007C	20 DN	1	18	239	66.13
3628-010C	25 DN	1	18	239	87.47
3628-012C	30 DN	1	12	239	125.16
3628-015C	40 DN	1	8	239	132.16
3628-020C	50 DN	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC

FKM

3638-005C	16 DN	1	18	239	58.36
3638-007C	20 DN	1	18	239	73.49
3638-010C	25 DN	1	18	239	87.47
3638-012C	30 DN	1	12	239	139.11
3638-015C	40 DN	1	8	239	146.85
3638-020C	50 DN	1	8	239	203.21



Metric Fittings & Valves

PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves



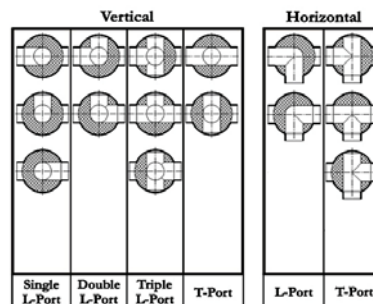
Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Vertical 3-Way or Horizontal Diverter No Branch Shut-off)

All Standard Carton Quantities are one
All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Additional Specialty Valves Available



Ball port options viewed from top of valve

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port EPDM					
5024L1-005	20 d	1	12	238	102.54
5024L1-007	25 d	1	8	238	122.29
5024L1-010	32 d	1	8	238	148.27
5024L1-012	40 d	1	8	238	171.86
5024L1-015	50 d	1	8	238	200.95
5024L1-020	63 d	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port FKM					
5034L1-005	20 d	1	12	238	111.22
5034L1-007	25 d	1	8	238	131.63
5034L1-010	32 d	1	8	238	163.35
5034L1-012	40 d	1	8	238	193.32
5034L1-015	50 d	1	8	238	220.00
5034L1-020	63 d	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port EPDM					
5025L1-005	1/2	1	12	238	102.54
5025L1-007	3/4	1	8	238	122.29
5025L1-010	1	1	8	238	148.27
5025L1-012	1-1/4	1	8	238	171.86
5025L1-015	1-1/2	1	8	238	200.95
5025L1-020	2	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port FKM					
5035L1-005	1/2	1	12	238	111.22
5035L1-007	3/4	1	8	238	131.63
5035L1-010	1	1	8	238	163.35
5035L1-012	1-1/4	1	8	238	193.32
5035L1-015	1-1/2	1	8	238	220.00
5035L1-020	2	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port EPDM					
5028L1-005	16 DN	1	12	238	102.54
5028L1-007	20 DN	1	8	238	122.29
5028L1-010	25 DN	1	8	238	148.27
5028L1-012	30 DN	1	8	238	171.86
5028L1-015	40 DN	1	8	238	200.95
5028L1-020	50 DN	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port FKM					
5038L1-005	16 DN	1	12	238	111.22
5038L1-007	20 DN	1	8	238	131.63
5038L1-010	25 DN	1	8	238	163.35
5038L1-012	32 DN	1	8	238	193.32
5038L1-015	40 DN	1	8	238	220.00
5038L1-020	50 DN	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port EPDM					
5024T1-005	20 d	1	12	238	102.54
5024T1-007	25 d	1	8	238	122.29
5024T1-010	32 d	1	8	238	148.27
5024T1-012	40 d	1	8	238	171.86
5024T1-015	50 d	1	8	238	200.95
5024T1-020	63 d	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port FKM					
5034T1-005	20 d	1	12	238	111.22
5034T1-007	25 d	1	8	238	131.63
5034T1-010	32 d	1	8	238	163.35
5034T1-012	40 d	1	8	238	193.32
5034T1-015	50 d	1	8	238	220.00
5034T1-020	63 d	1	0	238	287.39

Metric Fittings & Valves
PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves



PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with T1 Port
EPDM

5025T1-005	1/2	1	12	238	102.54
5025T1-007	3/4	1	8	238	122.29
5025T1-010	1	1	8	238	148.27
5025T1-012	1-1/4	1	8	238	171.86
5025T1-015	1-1/2	1	8	238	200.95
5025T1-020	2	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with T1 Port
FKM

5035T1-005	1/2	1	12	238	111.22
5035T1-007	3/4	1	8	238	131.63
5035T1-010	1	1	8	238	163.35
5035T1-012	1-1/4	1	8	238	193.32
5035T1-015	1-1/2	1	8	238	220.00
5035T1-020	2	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with T1 Port
EPDM

5028T1-005	16 DN	1	12	238	102.54
5028T1-007	20 DN	1	8	238	122.29
5028T1-010	25 DN	1	8	238	148.27
5028T1-012	30 DN	1	8	238	171.86
5028T1-015	40 DN	1	8	238	200.95
5028T1-020	50 DN	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with T1 Port
FKM

5038T1-005	16 DN	1	12	238	111.22
5038T1-007	20 DN	1	8	238	131.63
5038T1-010	25 DN	1	8	238	163.35
5038T1-012	32 DN	1	8	238	193.32
5038T1-015	40 DN	1	8	238	220.00
5038T1-020	50 DN	1	0	238	287.39

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with L1 Port
EPDM

5024L1-005C	20 d	1	12	239	157.82
5024L1-007C	25 d	1	8	239	188.12
5024L1-010C	32 d	1	8	239	228.12
5024L1-012C	40 d	1	8	239	264.35
5024L1-015C	50 d	1	8	239	309.22
5024L1-020C	63 d	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with L1 Port
FKM

5034L1-005C	20 d	1	12	239	170.98
5034L1-007C	25 d	1	8	239	202.49
5034L1-010C	32 d	1	8	239	251.35
5034L1-012C	40 d	1	8	239	296.38
5034L1-015C	50 d	1	8	239	338.44
5034L1-020C	63 d	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with L1 Port
EPDM

5025L1-005C	1/2	1	12	239	157.82
5025L1-007C	3/4	1	8	239	188.12
5025L1-010C	1	1	8	239	228.12
5025L1-012C	1-1/4	1	8	239	264.35
5025L1-015C	1-1/2	1	8	239	309.22
5025L1-020C	2	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with L1 Port
FKM

5035L1-005C	1/2	1	12	239	170.98
5035L1-007C	3/4	1	8	239	202.49
5035L1-010C	1	1	8	239	251.35
5035L1-012C	1-1/4	1	8	239	306.06
5035L1-015C	1-1/2	1	8	239	338.44
5035L1-020C	2	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with L1 Port
EPDM

5028L1-005C	16 DN	1	12	239	157.82
5028L1-007C	20 DN	1	8	239	188.12
5028L1-010C	25 DN	1	8	239	228.12
5028L1-012C	30 DN	1	8	239	264.35
5028L1-015C	40 DN	1	8	239	309.22
5028L1-020C	50 DN	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with L1 Port
FKM

5038L1-005C	16 DN	1	12	239	170.98
5038L1-007C	20 DN	1	8	239	202.49
5038L1-010C	25 DN	1	8	239	251.35
5038L1-012C	32 DN	1	8	239	296.38
5038L1-015C	40 DN	1	8	239	338.44
5038L1-020C	50 DN	1	0	239	442.12



Metric Fittings & Valves

PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves & PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with T1 Port
EPDM

5024T1-005C	20 d	1	12	239	157.82
5024T1-007C	25 d	1	8	239	188.12
5024T1-010C	32 d	1	8	239	228.12
5024T1-012C	40 d	1	8	239	264.35
5024T1-015C	50 d	1	8	239	309.22
5024T1-020C	63 d	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with T1 Port
FKM

5034T1-005C	20 d	1	12	239	170.98
5034T1-007C	25 d	1	8	239	202.49
5034T1-010C	32 d	1	8	239	251.35
5034T1-012C	40 d	1	8	239	296.38
5034T1-015C	50 d	1	8	239	338.44
5034T1-020C	63 d	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with T1 Port
EPDM

5025T1-005C	1/2	1	12	239	157.82
5025T1-007C	3/4	1	8	239	188.12
5025T1-010C	1	1	8	239	228.12
5025T1-012C	1-1/4	1	8	239	264.35
5025T1-015C	1-1/2	1	8	239	309.22
5025T1-020C	2	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with T1 Port
FKM

5035T1-005C	1/2	1	12	239	170.98
5035T1-007C	3/4	1	8	239	202.49
5035T1-010C	1	1	8	239	251.35
5035T1-012C	1-1/4	1	8	239	296.38
5035T1-015C	1-1/2	1	8	239	338.44
5035T1-020C	2	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with T1 Port
EPDM

5028T1-005C	16 DN	1	720	239	157.82
5028T1-007C	20 DN	1	8	239	188.12
5028T1-010C	25 DN	1	8	239	228.12
5028T1-012C	30 DN	1	8	239	264.35
5028T1-015C	40 DN	1	8	239	309.22
5028T1-020C	50 DN	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with T1 Port
FKM

5038T1-005C	16 DN	1	12	239	170.98
5038T1-007C	20 DN	1	8	239	202.49
5038T1-010C	25 DN	1	8	239	251.35
5038T1-012C	32 DN	1	8	239	296.38
5038T1-015C	40 DN	1	8	239	338.44
5038T1-020C	50 DN	1	0	239	442.12

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves



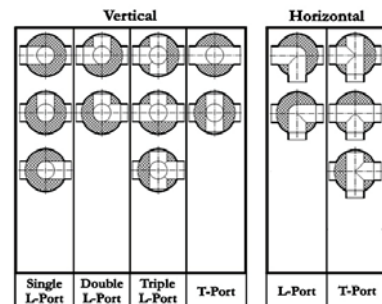
Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Vertical 3-Way or Horizontal Diverter (No Branch Shut-off)

All Standard Carton Quantities are one
All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Additional Specialty Valves Available



Ball port options viewed from top of valve

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with L1 Port
EPDM

4724L1-005	20 d	1	12	238	102.03
4724L1-007	25 d	1	8	238	119.68
4724L1-010	32 d	1	8	238	145.49

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with L1 Port
EPDM

4724L1-012	40 d	1	8	238	175.99
4724L1-015	50 d	1	8	238	203.52
4724L1-020	63 d	1	4	238	249.61

Metric Fittings & Valves
PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves



PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 port FKM					
4734L1-005	20 d	1	12	238	110.51
4734L1-007	25 d	1	8	238	130.43
4734L1-010	32 d	1	8	238	161.98
4734L1-012	40 d	1	8	238	207.36
4734L1-015	50 d	1	8	238	223.11
4734L1-020	63 d	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port EPDM					
4725L1-005	1/2	1	12	238	102.03
4725L1-007	3/4	1	8	238	119.68
4725L1-010	1	1	8	238	145.49
4725L1-012	1-1/4	1	8	238	175.99
4725L1-015	1-1/2	1	8	238	203.52
4725L1-020	2	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port FKM					
4735L1-005	1/2	1	12	238	110.51
4735L1-007	3/4	1	8	238	130.43
4735L1-010	1	1	8	238	161.98
4735L1-012	1-1/4	1	8	238	207.36
4735L1-015	1-1/2	1	8	238	223.11
4735L1-020	2	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 port EPDM					
4728L1-005	16 DN	1	12	238	102.03
4728L1-007	20 DN	1	8	238	119.68
4728L1-010	25 DN	1	8	238	145.49
4728L1-012	32 DN	1	8	238	175.99
4728L1-015	40 DN	1	8	238	203.52
4728L1-020	50 DN	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port FKM					
4738L1-005	16 DN	1	12	238	110.51
4738L1-007	20 DN	1	8	238	130.43
4738L1-010	25 DN	1	8	238	161.98
4738L1-012	30 DN	1	8	238	207.36
4738L1-015	40 DN	1	8	238	223.11
4738L1-020	50 DN	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L2 Port EPDM					
4724L2-005	20 d	1	12	238	203.20
4724L2-007	25 d	1	8	238	220.86
4724L2-010	32 d	1	8	238	246.69
4724L2-012	40 d	1	8	238	277.17
4724L2-015	50 d	1	8	238	304.71
4724L2-020	63 d	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L2 Port FKM					
4734L2-005	20 d	1	12	238	211.68
4734L2-007	25 d	1	8	238	231.60
4734L2-010	32 d	1	8	238	263.12
4734L2-012	40 d	1	8	238	308.53
4734L2-015	50 d	1	8	238	324.26
4734L2-020	63 d	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L2 Port EPDM					
4725L2-005	1/2	1	12	238	203.20
4725L2-007	3/4	1	8	238	220.86
4725L2-010	1	1	8	238	246.69
4725L2-012	1-1/4	1	8	238	277.17
4725L2-015	1-1/2	1	8	238	304.71
4725L2-020	2	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L2 Port FKM					
4735L2-005	1/2	1	720	238	211.68
4735L2-007	3/4	1	8	238	231.60
4735L2-010	1	1	8	238	263.12
4735L2-012	1-1/4	1	8	238	308.53
4735L2-015	1-1/2	1	8	238	324.26
4735L2-020	2	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L2 Port EPDM					
4728L2-005	16 DN	1	12	238	203.20
4728L2-007	20 DN	1	8	238	220.86
4728L2-010	25 DN	1	8	238	246.69
4728L2-012	30 DN	1	8	238	277.17
4728L2-015	40 DN	1	8	238	304.71
4728L2-020	50 DN	1	4	238	350.76



Metric Fittings & Valves

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L2 Port FKM					
4738L2-005	16 DN	1	12	238	211.68
4738L2-007	20 DN	1	8	238	231.60
4738L2-010	25 DN	1	8	238	263.12
4738L2-012	30 DN	1	8	238	308.53
4738L2-015	40 DN	1	8	238	324.26
4738L2-020	50 DN	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L3 Port EPDM					
4724L3-005	20 d	1	12	238	203.20
4724L3-007	25 d	1	8	238	220.86
4724L3-010	32 d	1	8	238	246.69
4724L3-012	40 d	1	8	238	277.17
4724L3-015	50 d	1	8	238	304.71
4724L3-020	63 d	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L3 Port FKM					
4734L3-005	20 d	1	12	238	211.68
4734L3-007	25 d	1	8	238	231.60
4734L3-010	32 d	1	8	238	263.12
4734L3-012	40 d	1	8	238	308.53
4734L3-015	50 d	1	8	238	324.26
4734L3-020	63 d	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L3 Port EPDM					
4725L3-005	1/2	1	12	238	203.20
4725L3-007	3/4	1	8	238	220.86
4725L3-010	1	1	8	238	246.69
4725L3-012	1-1/4	1	8	238	277.17
4725L3-015	1-1/2	1	8	238	304.71
4725L3-020	2	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L3 Port FKM					
4735L3-005	1/2	1	12	238	211.68
4735L3-007	3/4	1	8	238	231.60
4735L3-010	1	1	8	238	263.12
4735L3-012	1-1/4	1	8	238	308.53
4735L3-015	1-1/2	1	8	238	324.26
4735L3-020	2	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L3 Port EPDM					
4728L3-005	16 DN	1	12	238	203.20
4728L3-007	20 DN	1	8	238	220.86
4728L3-010	25 DN	1	8	238	246.69
4728L3-012	30 DN	1	8	238	277.17
4728L3-015	40 DN	1	8	238	304.71
4728L3-020	50 DN	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L3 Port FKM					
4738L3-005	16 DN	1	12	238	211.68
4738L3-007	20 DN	1	8	238	231.60
4738L3-010	25 DN	1	8	238	263.12
4738L3-012	30 DN	1	8	238	308.53
4738L3-015	40 DN	1	8	238	324.26
4738L3-020	50 DN	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port EPDM					
4724T1-005	20 d	1	12	238	102.03
4724T1-007	25 d	1	8	238	119.68
4724T1-010	32 d	1	8	238	145.49
4724T1-012	40 d	1	8	238	175.99
4724T1-015	50 d	1	8	238	203.52
4724T1-020	63 d	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port FKM					
4734T1-005	20 d	1	12	238	110.51
4734T1-007	25 d	1	8	238	130.43
4734T1-010	32 d	1	8	238	161.98
4734T1-012	40 d	1	8	238	207.36
4734T1-015	50 d	1	8	238	223.83
4734T1-020	63 d	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with T1 Port EPDM					
4725T1-005	1/2	1	12	238	102.03
4725T1-007	3/4	1	8	238	119.68
4725T1-010	1	1	8	238	145.49
4725T1-012	1-1/4	1	8	238	175.99
4725T1-015	1-1/2	1	8	238	203.52
4725T1-020	2	1	4	238	249.61

Metric Fittings & Valves
PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves



PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**BSP Threaded with T1 Port
FKM**

4735T1-005	1/2	1	12	238	110.51
4735T1-007	3/4	1	8	238	130.43
4735T1-010	1	1	8	238	161.98
4735T1-012	1-1/4	1	8	238	207.36
4735T1-015	1-1/2	1	8	238	223.11
4735T1-020	2	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**JIS SOC with T1 Port
EPDM**

4728T1-005	16 DN	1	12	238	102.03
4728T1-007	20 DN	1	8	238	119.68
4728T1-010	25 DN	1	8	238	145.49
4728T1-012	30 DN	1	8	238	175.99
4728T1-015	40 DN	1	8	238	203.52
4728T1-020	50 DN	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**JIS SOC with T1 Port
FKM**

4738T1-005	16 DN	1	12	238	110.51
4738T1-007	20 DN	1	8	238	130.43
4738T1-010	25 DN	1	8	238	161.98
4738T1-012	30 DN	1	8	238	207.36
4738T1-015	40 DN	1	8	238	223.11
4738T1-020	50 DN	1	4	238	289.81

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**DIN SOC with L1 Port
EPDM**

4724L1-005C	20 d	1	12	239	156.94
4724L1-007C	25 d	1	8	239	184.15
4724L1-010C	32 d	1	8	239	223.81
4724L1-012C	40 d	1	8	239	270.75
4724L1-015C	50 d	1	8	239	313.00
4724L1-020C	63 d	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**DIN SOC with L1 Port
FKM**

4734L1-005C	20 d	1	12	239	169.93
4734L1-007C	25 d	1	8	239	200.60
4734L1-010C	32 d	1	8	239	249.27
4734L1-012C	40 d	1	8	239	319.07
4734L1-015C	50 d	1	8	239	343.15
4734L1-020C	63 d	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**BSP Threaded with L1 Port
EPDM**

4725L1-005C	1/2	1	12	239	156.94
4725L1-007C	3/4	1	8	239	184.15
4724L1-010C	32 d	1	8	239	223.81
4725L1-012C	1-1/4	1	8	239	270.75
4725L1-015C	1-1/2	1	8	239	313.00
4725L1-020C	2	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**BSP Threaded with L1 Port
FKM**

4735L1-005C	1/2	1	12	239	169.93
4735L1-007C	3/4	1	8	239	200.60
4735L1-010C	1	1	8	239	249.27
4735L1-012C	1-1/4	1	8	239	319.07
4735L1-015C	1-1/2	1	8	239	343.15
4735L1-020C	2	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**JIS SOC with L1 Port
EPDM**

4728L1-005C	16 DN	1	12	239	156.94
4728L1-007C	20 DN	1	8	239	184.15
4728L1-010C	25 DN	1	8	239	223.81
4728L1-012C	32 DN	1	8	239	270.75
4728L1-015C	40 DN	1	8	239	313.00
4728L1-020C	50 DN	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**JIS SOC with L1 Port
FKM**

4738L1-005C	16 DN	1	12	239	169.93
4738L1-007C	20 DN	1	8	239	200.60
4738L1-010C	25 DN	1	8	239	249.27
4738L1-012C	30 DN	1	8	239	319.07
4738L1-015C	40 DN	1	8	239	343.15
4738L1-020C	50 DN	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**DIN SOC with L2 Port
EPDM**

4724L2-005C	20 d	1	12	239	312.67
4724L2-007C	25 d	1	8	239	339.86
4724L2-010C	32 d	1	8	239	379.52
4724L2-012C	40 d	1	8	239	426.29
4724L2-015C	50 d	1	8	239	468.76
4724L2-020C	63 d	1	4	239	539.61



Metric Fittings & Valves

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with L2 Port FKM

4734L2-005C	20 d	1	12	239	325.66
4734L2-007C	25 d	1	8	239	356.32
4734L2-010C	32 d	1	8	239	404.81
4734L2-012C	40 d	1	8	239	474.64
4734L2-015C	50 d	1	8	239	498.89
4734L2-020C	63 d	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with L2 Port EPDM

4725L2-005C	1/2	1	12	239	312.67
4725L2-007C	3/4	1	8	239	339.86
4725L2-010C	1	1	8	239	379.52
4725L2-012C	1-1/4	1	8	239	426.29
4725L2-015C	1-1/2	1	8	239	468.76
4725L2-020C	2	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with L2 Port FKM

4735L2-005C	1/2	1	12	239	325.66
4735L2-007C	3/4	1	8	239	356.32
4735L2-010C	1	1	8	239	404.81
4735L2-012C	1-1/4	1	8	239	474.62
4735L2-015C	1-1/2	1	8	239	498.89
4735L2-020C	2	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with L2 Port EPDM

4728L2-005C	16 DN	1	12	239	312.67
4728L2-007C	20 DN	1	8	239	339.86
4728L2-010C	25 DN	1	8	239	379.52
4728L2-012C	30 DN	1	8	239	426.29
4728L2-015C	40 DN	1	8	239	468.76
4728L2-020C	50 DN	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with L2 Port FKM

4738L2-005C	16 DN	1	12	239	325.66
4738L2-007C	20 DN	1	8	239	356.32
4738L2-010C	25 DN	1	8	239	404.81
4738L2-012C	30 DN	1	8	239	474.62
4738L2-015C	40 DN	1	8	239	498.89
4738L2-020C	50 DN	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with L3 Port EPDM

4724L3-005C	20 d	1	12	239	312.67
4724L3-007C	25 d	1	8	239	339.86
4724L3-010C	32 d	1	8	239	379.52
4724L3-012C	40 d	1	8	239	426.29
4724L3-015C	50 d	1	8	239	468.76
4724L3-020C	63 d	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC with L3 Port FKM

4734L3-005C	20 d	1	12	239	325.66
4734L3-007C	25 d	1	8	239	356.32
4734L3-010C	32 d	1	8	239	404.81
4734L3-012C	40 d	1	8	239	474.62
4734L3-015C	50 d	1	8	239	498.89
4734L3-020C	63 d	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with L3 Port EPDM

4725L3-005C	1/2	1	12	239	312.67
4725L3-007C	3/4	1	8	239	339.86
4725L3-010C	1	1	8	239	379.52
4725L3-012C	1-1/4	1	8	239	426.29
4725L3-015C	1-1/2	1	8	239	468.76
4725L3-020C	2	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded with L3 Port FKM

4735L3-005C	1/2	1	12	239	325.66
4735L3-007C	3/4	1	8	239	356.32
4735L3-010C	1	1	8	239	404.81
4735L3-012C	1-1/4	1	8	239	474.62
4735L3-015C	1-1/2	1	8	239	498.89
4735L3-020C	2	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC with L1 Port EPDM

4728L3-005C	16 DN	1	12	239	312.60
4728L3-007C	20 DN	1	8	239	339.86
4728L3-010C	25 DN	1	8	239	379.52
4728L3-012C	30 DN	1	8	239	426.29
4728L3-015C	40 DN	1	8	239	468.76
4728L3-020C	50 DN	1	4	239	539.61

Metric Fittings & Valves
PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves



CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**JIS SOC with L3 Port
FKM**

4738L3-005C	16 DN	1	12	239	325.66
4738L3-007C	20 DN	1	8	239	356.32
4738L3-010C	25 DN	1	8	239	404.81
4738L3-012C	30 DN	1	8	239	474.62
4738L3-015C	40 DN	1	8	239	498.89
4738L3-020C	50 DN	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**DIN SOC with T1 Port
EPDM**

4724T1-005C	20 d	1	12	239	156.94
4724T1-007C	25 d	1	8	239	184.15
4724T1-010C	32 d	1	8	239	219.19
4724T1-012C	40 d	1	8	239	270.75
4724T1-015C	50 d	1	8	239	313.00
4724T1-020C	63 d	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**DIN SOC with T1 Port
FKM**

4734T1-005C	20 d	1	12	239	169.93
4734T1-007C	25 d	1	8	239	216.71
4734T1-010C	32 d	1	8	239	249.27
4734T1-012C	40 d	1	8	239	319.07
4734T1-015C	50 d	1	8	239	343.15
4734T1-020C	63 d	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**BSP Threaded with T1 Port
EPDM**

4725T1-005C	1/2	1	12	239	156.94
4725T1-007C	3/4	1	8	239	184.15
4725T1-010C	1	1	8	239	223.81
4725T1-012C	1-1/4	1	8	239	270.75
4725T1-015C	1-1/2	1	8	239	313.00
4725T1-020C	2	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**BSP Threaded with T1 Port
FKM**

4735T1-005C	1/2	1	12	239	169.93
4735T1-007C	3/4	1	8	239	200.60
4735T1-010C	1	1	8	239	249.27
4735T1-012C	1-1/4	1	8	239	314.48
4735T1-015C	1-1/2	1	8	239	343.15
4735T1-020C	2	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**JIS SOC with T1 Port
EPDM**

4728T1-005C	16 DN	1	12	239	156.94
4728T1-007C	20 DN	1	8	239	184.15
4728T1-010C	25 DN	1	8	239	223.81
4728T1-012C	30 DN	1	8	239	270.75
4728T1-015C	40 DN	1	8	239	313.00
4728T1-020C	50 DN	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

**JIS SOC with T1 Port
FKM**

4738T1-005C	16 DN	1	12	239	169.93
4738T1-007C	20 DN	1	8	239	200.60
4738T1-010C	25 DN	1	8	239	249.27
4738T1-012C	30 DN	1	8	239	319.07
4738T1-015C	40 DN	1	8	239	343.15
4738T1-020C	50 DN	1	4	239	445.86



Metric Fittings & Valves

PVC & CPVC True Union 2000 Industrial Ball Check Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing on Additional Specialty Valves Available

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC

EPDM

4524-005	20 d	1	18	228	56.36
4524-007	25 d	1	18	228	67.20
4524-010	32 d	1	18	228	79.93
4524-012	40 d	1	12	228	116.72
4524-015	50 d	1	8	228	134.05
4524-020	63 d	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC

FKM

4534-005	20 d	1	18	228	63.52
4534-007	25 d	1	18	228	70.93
4534-010	32 d	1	18	228	89.09
4534-012	40 d	1	12	228	131.00
4534-015	50 d	1	8	228	148.78
4534-020	63 d	1	8	228	203.51

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded

EPDM

4525-005	1/2	1	18	228	56.36
4525-007	3/4	1	18	228	67.20
4525-010	1	1	18	228	79.93
4525-012	1-1/4	1	12	228	116.72
4525-015	1-1/2	1	8	228	134.05
4525-020	2	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded

FKM

4535-005	1/2	1	18	228	63.52
4535-007	3/4	1	18	228	70.93
4535-010	1	1	18	228	89.09
4535-012	1-1/4	1	12	228	131.00
4535-015	1-1/2	1	8	228	148.78
4535-020	2	1	8	228	203.51

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC

EPDM

4528-005	16 DN	1	18	228	56.36
4528-007	20 DN	1	18	228	67.20

PVC True Union 2000 Ball Check Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC

EPDM

4528-010	25 DN	1	18	228	79.93
4528-012	30 DN	1	12	228	116.72
4528-015	40 DN	1	8	228	134.05
4528-020	50 DN	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

JIS SOC

FKM

4538-005	16 DN	1	18	228	63.52
4538-007	20 DN	1	18	228	70.93
4538-010	25 DN	1	18	228	89.09
4538-012	30 DN	1	12	228	131.00
4538-015	40 DN	1	8	228	148.78
4538-020	50 DN	1	8	228	203.51

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC

EPDM

4524-005C	20 d	1	18	229	83.31
4524-007C	25 d	1	18	229	99.71
4524-010C	32 d	1	18	229	117.65
4524-012C	40 d	1	12	229	202.63
4524-015C	50 d	1	8	229	202.63
4524-020C	63 d	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC

FKM

4534-005C	20 d	1	18	229	92.74
4534-007C	25 d	1	18	229	110.81
4534-010C	32 d	1	18	229	130.71
4534-012C	40 d	1	12	229	224.94
4534-015C	50 d	1	8	229	224.94
4534-020C	63 d	1	8	229	301.56

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded

EPDM

4525-005C	1/2	1	18	229	83.31
4525-007C	3/4	1	18	229	99.71
4525-010C	1	1	18	229	117.65
4525-012C	1-1/4	1	12	229	202.63



PVC & CPVC True Union 2000 Industrial Ball Check Valves

CPVC True Union 2000 Ball Check Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
4525-015C	1-1/2	1	8	229	202.63
4525-020C	2	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded FKM					
4535-005C	1/2	1	18	229	92.74
4535-007C	3/4	1	18	229	110.81
4535-010C	1	1	18	229	130.71
4535-012C	1-1/4	1	12	229	224.94
4535-015C	1-1/2	1	8	229	224.94
4535-020C	2	1	8	229	301.56

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC EPDM					
4528-005C	16 DN	1	18	229	83.31
4528-007C	20 DN	1	18	229	99.71
4528-010C	25 DN	1	18	229	117.65
4528-012C	30 DN	1	12	229	202.63
4528-015C	40 DN	1	8	229	202.63
4528-020C	50 DN	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC FKM					
4538-005C	16 DN	1	18	229	92.74
4538-007C	20 DN	1	18	229	110.81
4538-010C	25 DN	1	18	229	130.71
4538-012C	30 DN	1	12	229	224.94
4538-015C	40 DN	1	8	229	224.94
4538-020C	50 DN	1	8	229	301.56

PVC & CPVC Gate Valves



Pressure Rating @ 73°F (23°C), Water
 1/2" - 2" PN 16

Maximum Service Temperature
 PVC = 140°F (60°C)
 CPVC = 200°F (93°C)

Pressure Deratings Apply

All Valves assembled with Silicone-Free, Water Soluble Lubricant

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC Buna-N					
2014-005	20 d	12	0	208	24.19
2014-007	25 d	12	0	208	29.58
2014-010	32 d	12	0	208	35.06
2014-012	40 d	6	0	208	48.48
2014-015	50 d	6	0	208	61.86
2014-020	63 d	6	0	208	79.45

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC EPDM					
2024-005	20 d	12	0	208	26.55
2024-007	25 d	12	0	208	32.56
2024-010	32 d	12	0	208	38.61
2024-012	40 d	6	0	208	53.35
2024-015	50 d	6	0	208	68.73
2024-020	63 d	6	0	208	87.47

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC FKM					
2034-005	20 d	12	0	208	29.24
2034-007	25 d	12	0	208	34.27
2034-010	32 d	12	0	208	42.51
2034-012	40 d	6	0	208	58.65

PVC Gate Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC FKM					
2034-015	50 d	6	0	208	74.84
2034-020	63 d	6	0	208	96.16

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded Buna-N					
2015-005	1/2	12	0	208	24.19
2015-007	3/4	12	0	208	29.58
2015-010	1	12	0	208	35.06
2015-012	1-1/4	6	0	208	48.48
2015-015	1-1/2	6	0	208	61.86
2015-020	2	6	0	208	79.45

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
2025-005	1/2	12	0	208	26.55
2025-007	3/4	12	0	208	32.56
2025-010	1	12	0	208	38.61
2025-012	1-1/4	6	0	208	53.35
2025-015	1-1/2	6	0	208	68.73
2025-020	2	6	0	208	87.47



Metric Fittings & Valves PVC & CPVC Gate Valves

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded FKM

2035-005	1/2	12	0	208	29.24
2035-007	3/4	12	0	208	34.27
2035-010	1	12	0	208	42.51
2035-012	1-1/4	6	0	208	58.65
2035-015	1-1/2	6	0	208	74.84
2035-020	2	6	0	208	96.16

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC EPDM

2024-005C	20 d	12	0	209	78.63
2024-007C	25 d	12	0	209	85.04
2024-010C	32 d	12	0	209	93.25
2024-012C	40 d	6	0	209	163.79
2024-015C	50 d	6	0	209	179.51
2024-020C	63 d	6	0	209	207.06

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

DIN SOC FKM

2034-005C	20 d	12	0	209	86.54
2034-007C	25 d	12	0	209	93.56
2034-010C	32 d	12	0	209	102.54
2034-012C	40 d	6	0	209	180.17
2034-015C	50 d	6	0	209	197.47
2034-020C	63 d	6	0	209	227.77

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded EPDM

2025-005C	1/2	12	0	209	78.63
2025-007C	3/4	12	0	209	85.04
2025-010C	1	12	0	209	93.25
2025-012C	1-1/4	6	0	209	163.79
2025-015C	1-1/2	6	0	209	179.51
2025-020C	2	6	0	209	207.06

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

BSP Threaded FKM

2035-005C	1/2	12	0	209	86.54
2035-007C	3/4	12	0	209	93.56
2035-010C	1	12	0	209	102.54
2035-012C	1-1/4	6	0	209	180.17
2035-015C	1-1/2	6	0	209	197.47
2035-020C	2	6	0	209	227.77

Metric Fittings & Valves PVC & CPVC Diaphragm Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

No Lubricants in Media Contact Area

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC					
EPDM					
2724-005	20 d	1	12	274	138.17
2724-007	25 d	1	8	274	156.82
2724-010	32 d	1	8	274	193.27
2724-012	40 d	1	4	274	289.32
2724-015	50 d	1	4	274	304.11
2724-020	63 d	1	0	274	359.78

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC					
FKM					
2734-005	20 d	1	12	274	153.52
2734-007	25 d	1	8	274	174.26
2734-010	32 d	1	8	274	212.38
2734-012	40 d	1	4	274	344.00
2734-015	50 d	1	4	274	351.93
2734-020	63 d	1	0	274	426.36

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded					
EPDM					
2725-005	1/2	1	12	274	138.17
2725-007	3/4	1	8	274	156.82
2725-010	1	1	8	274	180.39
2725-012	1-1/4	1	4	274	289.32
2725-015	1-1/2	1	4	274	304.11
2725-020	2	1	0	274	359.78

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded					
FKM					
2735-005	1/2	1	12	274	153.52
2735-007	3/4	1	8	274	174.26
2735-010	1	1	8	274	212.38
2735-012	1-1/4	1	4	274	344.00
2735-015	1-1/2	1	4	274	351.93
2735-020	2	1	0	274	426.36

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC					
EPDM					
2728-005	16 DN	1	12	274	138.17
2728-007	20 DN	1	8	274	156.82
2728-010	25 DN	1	8	274	193.27
2728-012	32 DN	1	4	274	289.32
2728-015	40 DN	1	4	274	304.11
2728-020	50 DN	1	0	274	359.78

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC					
FKM					
2738-005	16 DN	1	12	274	153.52
2738-007	20 DN	1	8	274	174.26
2738-010	25 DN	1	8	274	212.38
2738-012	32 DN	1	4	274	344.00
2738-015	40 DN	1	4	274	351.93
2738-020	50 DN	1	0	274	426.36

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC					
EPDM					
2724-005C	20 d	1	12	276	244.62
2724-007C	25 d	1	8	276	272.25
2724-010C	32 d	1	8	276	314.22
2724-012C	40 d	1	4	276	471.96
2724-015C	50 d	1	4	276	485.93
2724-020C	63 d	1	0	276	517.58

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC					
FKM					
2734-005C	20 d	1	12	276	313.51
2734-007C	25 d	1	8	276	334.25
2734-010C	32 d	1	8	276	406.44
2734-012C	40 d	1	4	276	561.55
2734-015C	50 d	1	4	276	568.38
2734-020C	63 d	1	0	276	648.78

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded					
EPDM					
2725-005C	1/2	1	12	276	244.62
2725-007C	3/4	1	8	276	272.25
2725-010C	1	1	8	276	314.22
2725-012C	1-1/4	1	4	276	471.96
2725-015C	1-1/2	1	4	276	485.93
2725-020C	2	1	0	276	517.58

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded					
FKM					
2735-005C	1/2	1	12	276	313.51
2735-007C	3/4	1	8	276	334.25
2735-010C	1	1	8	276	406.44
2735-012C	1-1/4	1	4	276	561.55
2735-015C	1-1/2	1	4	276	568.38
2735-020C	2	1	0	276	648.78



Metric Fittings & Valves PVC & CPVC Diaphragm Valves & PVC Irrigation Manifold Systems

PVC & CPVC Diaphragm Valves

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC EPDM					
2728-005C	16 DN	1	12	276	244.62
2728-007C	20 DN	1	8	276	272.25
2728-010C	25 DN	1	8	276	314.22
2728-012C	32 DN	1	4	276	471.96
2728-015C	40 DN	1	4	276	485.93
2728-020C	50 DN	1	0	276	517.58

CPVC Diaphragm Valves

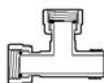
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC FKM					
2738-005C	16 DN	1	12	276	313.51
2738-007C	20 DN	1	8	276	334.25
2738-010C	25 DN	1	8	276	406.44
2738-012C	32 DN	1	4	276	561.55
2738-015C	40 DN	1	4	276	568.46
2738-020C	50 DN	1	0	276	648.78

PVC Irrigation Manifold Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Manifold Tee

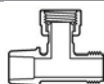
Swivel x MBSP x Swivel with O-ring Seal



MA0101-010BT	1	25	0	019	9.91
--------------	---	----	---	-----	------

PVC Manifold Tee

Soc (Spig) x MBSP x Swivel with O-ring Seal For Solvent Cement Connection



MA0109-010BT	1	25	0	019	8.81
--------------	---	----	---	-----	------

Manifold 90° Street El

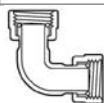
MBSP x Swivel with O-ring Seal



MA0602-010BT	1	25	0	019	8.46
--------------	---	----	---	-----	------

Manifold 90° El

Swivel x Swivel with O-ring Seal



MA0603-010	1	20	0	019	9.34
------------	---	----	---	-----	------

Manifold Cross

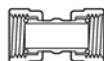
Swivel x MBSP x Swivel x Swivel with O-ring Seal



MA2004-010BT	1	25	0	019	13.15
--------------	---	----	---	-----	-------

Manifold Coupling

Swivel x Swivel with O-ring Seal



MA2903-010	1	25	200	019	7.01
------------	---	----	-----	-----	------

Manifold Coupling

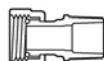
Swivel x MBSP with O-ring Seal



MA2907-010BT	1	25	200	019	5.12
--------------	---	----	-----	-----	------

PVC Manifold Coupling

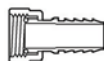
Swivel x Soc (Spig) with O-ring Seal For Solvent Cement Connection



MA2908-010	1 (1-1/4)	25	0	019	5.12
------------	-----------	----	---	-----	------

Manifold Insert Coupling

Swivel x Barbed Insert with O-ring Seal



MA3505-010	1	25	200	019	5.43
------------	---	----	-----	-----	------

Manifold Cap

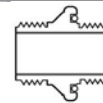
with O-ring Seal



MA4800-010	1	50	600	019	2.14
------------	---	----	-----	-----	------

Manifold Nipple

MBSP x MBSP with O-ring Seal



MA8306-010BT	1	25	200	019	2.29
--------------	---	----	-----	-----	------

Manifold Replacement O-ring

For All 1" Cap/Swivel Connectors & For 3/4" Nipple End



MA-214	1 & 3/4	50	500	901	.49
--------	---------	----	-----	-----	-----

Manifold Replacement O-ring

For 1" Nipple & For 1" Nippled Coupling End



MA-218	1	50	500	901	.53
--------	---	----	-----	-----	-----

Pipe CPVC Industrial Pipe



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC Schedule 40 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C-10	1/8	10	0	745	3.38
PD-400-002C-10	1/4	10	0	745	4.23
PD-400-003C-10	3/8	10	0	745	5.97
PD-400-005C-10	1/2	10	0	745	1.78
PD-400-007C-10	3/4	10	0	745	2.37
PD-400-010C-10	1	10	0	745	3.46
PD-400-012C-10	1-1/4	10	0	745	4.68
PD-400-015C-10	1-1/2	10	0	745	5.61
PD-400-020C-10	2	10	0	745	7.52
PD-400-025C-10	2-1/2	10	0	745	11.88
PD-400-030C-10	3	10	0	745	15.52
PD-400-040C-10	4	10	0	745	22.11
PD-400-060C-10	6	10	0	745	40.80
PD-400-080C-10	8	10	0	745	66.44
PD-400-100C-10	10	10	0	745	113.62
PD-400-120C-10	12	10	0	745	150.09
PD-400-140C-10	14	10	0	945	343.30
PD-400-160C-10	16	10	0	945	448.15
PD-400-180C-10	18	10	0	945	584.66
PD-400-200C-10	20	10	0	945	686.11
PD-400-240C-10	24	10	0	945	955.60

20' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C	1/8	20	0	745	3.38
PD-400-002C	1/4	20	0	745	4.23
PD-400-003C	3/8	20	0	745	5.97
PD-400-005C	1/2	20	0	745	1.78
PD-400-007C	3/4	20	0	745	2.37
PD-400-010C	1	20	0	745	3.46
PD-400-012C	1-1/4	20	0	745	4.68
PD-400-015C	1-1/2	20	0	745	5.61
PD-400-020C	2	20	0	745	7.52
PD-400-025C	2-1/2	20	0	745	11.88
PD-400-030C	3	20	0	745	15.52
PD-400-040C	4	20	0	745	22.11
PD-400-060C	6	20	0	745	40.80
PD-400-080C	8	20	0	745	66.44
PD-400-100C	10	20	0	745	113.62
PD-400-120C	12	20	0	745	150.09
PD-400-140C	14	20	0	945	361.37
PD-400-160C	16	20	0	945	471.74
PD-400-180C	18	20	0	945	615.43
PD-400-200C	20	20	0	945	722.22
PD-400-240C	24	20	0	945	1005.89

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC Schedule 40 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

20' Lengths, Price Per Foot

ASTM D-1784 ASTM F-441		Schedule 40 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	910	0.405	0.068	2850/285	5700/285	.056
1/4"	790	0.540	0.088	2850/285	5700/285	.096
3/8"	620	0.675	0.091	2850/285	5700/285	.128
1/2"	600	0.840	0.109	2430/243	4860/243	.185
3/4"	480	1.050	0.113	1540/154	3080/154	.246
1"	450	1.315	0.133	2520/252	5040/252	.362
1-1/4"	370	1.660	0.140	1230/123	2460/123	.489
1-1/2"	330	1.900	0.145	1720/172	3440/172	.585
2"	280	2.375	0.154	1230/123	2460/123	.783
2-1/2"	300	2.875	0.203	540/54	1080/54	1.237
3"	260	3.500	0.216	460/46	920/46	1.619
4"	220	4.500	0.237	340/34	680/34	2.306
6"	180	6.625	0.280	170/17	340/17	4.603
8"	160	8.625	0.322	90/9	180/9	6.136
10"	140	10.750	0.365	110/11	220/11	8.886
12"	130	12.750	0.406	80/8	160/8	11.751

CPVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C-10	1/8	10	0	745	4.19
PD-800-002C-10	1/4	10	0	745	4.83
PD-800-003C-10	3/8	10	0	745	6.58
PD-800-005C-10	1/2	10	0	745	2.08
PD-800-007C-10	3/4	10	0	745	2.83
PD-800-010C-10	1	10	0	745	4.17
PD-800-012C-10	1-1/4	10	0	745	5.74
PD-800-015C-10	1-1/2	10	0	745	6.97
PD-800-020C-10	2	10	0	745	9.65
PD-800-025C-10	2-1/2	10	0	745	14.72
PD-800-030C-10	3	10	0	745	19.73
PD-800-040C-10	4	10	0	745	28.84
PD-800-060C-10	6	10	0	745	56.13
PD-800-080C-10	8	10	0	745	93.08
PD-800-100C-10	10	10	0	745	168.81
PD-800-120C-10	12	10	0	745	232.06
PD-800-140C-10	14	10	0	945	536.15
PD-800-160C-10	16	10	0	945	689.51
PD-800-180C-10	18	10	0	945	868.12
PD-800-200C-10	20	10	0	945	1093.46
PD-800-240C-10	24	10	0	945	1551.43

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C	1/8	20	0	745	4.19
PD-800-002C	1/4	20	0	745	4.83
PD-800-003C	3/8	20	0	745	6.58
PD-800-005C	1/2	20	0	745	2.08
PD-800-007C	3/4	20	0	745	2.83
PD-800-010C	1	20	0	745	4.17
PD-800-012C	1-1/4	20	0	745	5.74
PD-800-015C	1-1/2	20	0	745	6.97
PD-800-020C	2	20	0	745	9.65
PD-800-025C	2-1/2	20	0	745	14.72
PD-800-030C	3	20	0	745	19.73
PD-800-040C	4	20	0	745	28.84
PD-800-060C	6	20	0	745	56.13
PD-800-080C	8	20	0	745	93.08
PD-800-100C	10	20	0	745	168.81
PD-800-120C	12	20	0	745	232.06
PD-800-140C	14	20	0	945	564.37
PD-800-160C	16	20	0	945	725.80
PD-800-180C	18	20	0	945	913.81



Pipe CPVC Industrial Pipe

CPVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

20' Lengths, Price Per Foot

PD-800-200C	20	20	0	945	1151.01
PD-800-240C	24	20	0	945	1633.08

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

ASTM D-1784 ASTM F-441		Schedule 80 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	.069
1/4"	1130	0.540	0.119	2850/285	5700/285	.117
3/8"	920	0.675	0.126	2850/285	5700/285	.162
1/2"	850	0.840	0.147	2430/243	4860/243	.231
3/4"	690	1.050	0.154	1540/154	3080/154	.314
1"	630	1.315	0.179	2520/252	5040/252	.462
1-1/4"	520	1.660	0.191	1230/123	2460/123	.636
1-1/2"	470	1.900	0.200	1720/172	3440/172	.773
2"	400	2.375	0.218	1230/123	2460/123	1.071
2-1/2"	420	2.875	0.276	540/54	1080/54	1.631
3"	370	3.500	0.300	460/46	920/46	2.187
4"	320	4.500	0.337	340/34	680/34	3.198
6"	280	6.625	0.432	170/17	340/17	6.106
8"	250	8.625	0.500	90/9	180/9	9.322
10"	230	10.750	0.593	110/11	220/11	14.095
12"	230	12.750	0.687	80/8	160/8	19.392

Pipe CPVC CTS Hot & Cold Water Distribution Pipe



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC CTS Pipe - SDR 11

10' Lengths, Price Per Foot

List Price Per Foot

CTS-005	1/2	500	0	034	.92
CTS-007	3/4	250	0	034	1.65
CTS-010	1	150	0	034	3.39
CTS-012	1-1/4	100	0	034	5.03
CTS-015	1-1/2	100	0	034	6.67
CTS-020	2	50	0	034	11.29

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:

CTS-005 Weight per Foot .090 lbs; per Bag Weight 45 lbs.
 CTS-007 Weight per Foot .149 lbs; per Bag Weight 37.25 lbs.
 CTS-010 Weight per Foot .239 lbs; per Bag Weight 35.85 lbs.
 CTS-012 Weight per Foot .353 lbs; per Bag Weight 35.3 lbs.
 CTS-015 Weight per Foot .489 lbs; per Bag Weight 48.9 lbs.
 CTS-020 Weight per Foot .810 lbs; per Bag Weight 40.5 lbs.

CPVC CTS Pipe - SDR 11

20' Lengths, Price Per Foot

List Price Per Foot

CTS-005-20	1/2	1000	0	034	.92
CTS-007-20	3/4	500	0	034	1.65
CTS-010-20	1	300	0	034	3.39
CTS-012-20	1-1/4	200	0	034	5.03
CTS-015-20	1-1/2	200	0	034	6.67
CTS-020-20	2	100	0	034	11.29

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:

CTS-005 Weight per Foot .090 lbs; per Bag Weight 90 lbs.
 CTS-007 Weight per Foot .149 lbs; per Bag Weight 74.51 lbs.
 CTS-010 Weight per Foot .239 lbs; per Bag Weight 71.7 lbs.
 CTS-012 Weight per Foot .353 lbs; per Bag Weight 70.6 lbs.
 CTS-015 Weight per Foot .489 lbs; per Bag Weight 97.8 lbs.
 CTS-020 Weight per Foot .830 lbs; per Bag Weight 83 lbs.

CPVC CTS Coiled Pipe - SDR 11

100 ft. Coil, Price Per Foot



List Price Per Foot

CTS-005-100	1/2	100	0	034	1.08
CTS-007-100	3/4	100	0	034	1.96
CTS-010-100	1	100	0	034	3.86

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

CPVC CTS Coiled Pipe - SDR 11 (continued)

100 ft. Coil, Price Per Foot

- Pipe sold in coil quantities only - no broken coils
- No return on Coiled Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS COILED PIPE WEIGHTS:

CTS-005-100 Weight per Foot .090 lbs; per Coil Weight 9 lbs.
 CTS-007-100 Weight per Foot .149 lbs; per Coil Weight 14.9 lbs.
 CTS-010-100 Weight per Foot .239 lbs; per Coil Weight 23.9 lbs.

WARNING:

Banded coils will expand when opened. Exercise caution to avoid injury during banding removal.



Pipe Schedule 80 PVC Industrial Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

PD-800-001-10	1/8	10	0	744	1.97
PD-800-002-10	1/4	10	0	744	2.94
PD-800-003-10	3/8	10	0	744	4.08
PD-800-005-10	1/2	10	0	744	1.23
PD-800-007-10	3/4	10	0	744	1.66
PD-800-010-10	1	10	0	744	2.44
PD-800-012-10	1-1/4	10	0	744	3.37
PD-800-015-10	1-1/2	10	0	744	3.82
PD-800-020-10	2	10	0	744	5.29
PD-800-025-10	2-1/2	10	0	744	8.92
PD-800-030-10	3	10	0	744	10.82
PD-800-040-10	4	10	0	744	15.83
PD-800-060-10	6	10	0	744	30.23
PD-800-080-10	8	10	0	744	45.85
PD-800-100-10	10	10	0	744	68.03
PD-800-120-10	12	10	0	744	93.53
PD-800-140-10	14	10	0	947	121.80
PD-800-160-10	16	10	0	947	145.75
PD-800-180-10	18	10	0	947	203.76
PD-800-200-10	20	10	0	947	256.70
PD-800-240-10	24	10	0	947	322.07

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001	1/8	20	0	744	1.97
PD-800-002	1/4	20	0	744	2.94
PD-800-003	3/8	20	0	744	4.08
PD-800-005	1/2	20	0	744	1.23
PD-800-007	3/4	20	0	744	1.66
PD-800-010	1	20	0	744	2.44
PD-800-012	1-1/4	20	0	744	3.37
PD-800-015	1-1/2	20	0	744	3.82
PD-800-020	2	20	0	744	5.29
PD-800-025	2-1/2	20	0	744	8.92
PD-800-030	3	20	0	744	10.82
PD-800-040	4	20	0	744	15.83
PD-800-060	6	20	0	744	30.23
PD-800-080	8	20	0	744	45.85
PD-800-100	10	20	0	744	68.03
PD-800-120	12	20	0	744	93.53
PD-800-140	14	20	0	947	128.21
PD-800-160	16	20	0	947	145.75
PD-800-180	18	20	0	947	214.48
PD-800-200	20	20	0	947	270.21
PD-800-240	24	20	0	947	339.02

* Pipe sold in individual lengths or lift quantities. No cut lengths.

* No return on Pipe

* Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

* See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

PVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

20' Lengths, Price Per Foot

ASTM D-1784 ASTM D-1785		Schedule 80 PVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	0.063
1/4"	1130	0.540	0.119	2850/285	5700/285	0.105
3/8"	920	0.675	0.126	2850/285	5700/285	0.146
1/2"	850	0.840	0.147	2430/243	4860/243	0.213
3/4"	690	1.050	0.154	1540/154	3080/154	0.289
1"	630	1.315	0.179	2520/252	5040/252	0.124
1-1/4"	520	1.660	0.191	1230/123	2460/123	0.586
1-1/2"	470	1.900	0.200	1720/172	3440/172	0.717
2"	400	2.375	0.218	1230/123	2460/123	0.984
2-1/2"	420	2.875	0.276	540/54	1080/54	1.500
3"	370	3.500	0.300	460/46	920/46	2.010
4"	320	4.500	0.337	340/34	680/34	2.938
6"	280	6.625	0.432	170/17	340/17	5.610
8"	250	8.625	0.500	90/9	180/9	8.522
10"	230	10.750	0.593	110/11	220/11	12.635
12"	230	12.750	0.687	80/8	160/8	17.384

Pipe
PVC White Schedule 40 Pipe



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Schedule 40 Pipe Plain End

20' Lengths, Price Per Foot



List Price Per Foot

PD-400-005	1/2	20	0	947	1.12
PD-400-007	3/4	20	0	947	1.37
PD-400-010	1	20	0	947	2.18
PD-400-015	1-1/2	20	0	947	3.29
PD-400-012	1-1/4	20	0	947	2.90
PD-400-020	2	20	0	947	4.52
PD-400-025	2-1/2	20	0	947	7.62
PD-400-030	3	20	0	947	8.90
PD-400-040	4	20	0	947	12.46
PD-400-060	6	20	0	947	22.53
PD-400-080	8	20	0	947	39.95
PD-400-100	10	20	0	947	54.37
PD-400-120	12	20	0	947	78.75
PD-400-140	14	20	0	947	99.58
PD-400-160	16	20	0	947	105.07



Pipe Schedule 40 Clear Pipe & Schedule 80 Clear Pipe

Schedule 40 Clear Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Clear Schedule 40 Pipe 10' Lengths, Price Per Foot



List Price Per Foot

PL-002	1/4	190	0	038	1.02
PL-003	3/8	100	0	038	1.38
PL-005	1/2	90	0	038	2.06
PL-007	3/4	100	0	038	2.77
PL-010	1	90	0	038	4.09
PL-012	1-1/4	30	0	038	5.55
PL-015	1-1/2	50	0	038	6.64
PL-020	2	10	0	038	8.95

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Clear Schedule 40 Pipe (continued) 10' Lengths, Price Per Foot

PL-025	2-1/2	10	0	038	14.14
PL-030	3	10	0	038	18.46
PL-040	4	10	0	038	27.80
PL-060	6	10	0	038	50.82
PL-080	8	10	0	038	76.21
PL-100	10	10	0	038	122.68
PL-120	12	10	0	038	162.05

Schedule 80 Clear Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

PVC Clear Schedule 80 Pipe 10' Lengths, Price Per Foot



List Price Per Foot

PD-800-002L-10	1/4	190	0	742	1.29
PD-800-003L-10	3/8	100	0	742	1.79
PD-800-005L-10	1/2	90	0	742	2.62
PD-800-007L-10	3/4	100	0	742	3.54
PD-800-010L-10	1	90	0	742	5.21
PD-800-012L-10	1-1/4	90	0	742	7.18
PD-800-015L-10	1-1/2	50	0	742	8.73
PD-800-020L-10	2	50	0	742	12.07
PD-800-025L-10	2-1/2	40	0	742	18.40
PD-800-030L-10	3	30	0	742	24.67
PD-800-040L-10	4	10	0	742	36.06
PD-800-060L-10	6	10	0	742	68.88

Pipe Clear Ultra Violet Resistant (UVR) PVC Pipe



Designed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe. This specialty pipe can be joined with Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Produced in both Thin Walled UVR pipe down to 0.135" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Use Spears® PVC Clear Solvent Cements and Primers for joining.

UV Resistant Clear Pipe Dimensions & Pressure Ratings

Thin Walled UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
2"	2.375	2.173	0.091	0.456	80
3"	3.500	3.210	0.135	0.966	80
4"	4.500	4.134	0.172	1.569	80
6"	6.625	6.251	0.172	2.391	70
8"	8.625	8.251	0.172	3.134	53
10"	10.750	10.376	0.172	3.923	43
12"	12.750	12.376	0.172	4.666	36

De-rating Factors @ Elevated Temperature

Operating Temp °F	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Schedule 40 UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
1/2"	0.840	0.602	0.109	0.170	300
3/4"	1.050	0.804	0.113	0.226	240
1"	1.315	1.029	0.133	0.333	220
1-1/4"	1.660	1.360	0.140	0.450	180
1-1/2"	1.900	1.590	0.145	0.537	170
2"	2.375	2.047	0.154	0.720	140
2-1/2"	2.875	2.445	0.203	1.136	150
3"	3.500	3.042	0.216	1.488	130
3-1/2"	4.000	3.521	0.226	1.789	120
4"	4.500	3.998	0.237	2.118	110
6"	6.625	6.031	0.280	3.733	90

Maximum Service Temperature = 140 °F

The temperature de-rating factors shown in table at left can be multiplied by the pressure ratings listed for each pipe size to determine the maximum pressure rating of the pipe at the specified elevated Operating temperatures.

* Pressure Rating @ 73 °F

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Thin Walled Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

PL091-020UVR-10	2	10	0	038	4.75
PL135-030UVR-10	3	10	0	038	10.06
PL172-040UVR-10	4	20	0	038	17.38
PL172-060UVR-10	6	10	0	038	27.45
PL172-080UVR-10	8	10	0	038	35.96
PL172-100UVR-10	10	10	0	038	51.04
PL172-120UVR-10	12	10	0	038	60.71

See application information above
Custom lengths available, contact Spears®

Schedule 40 Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

PL400-005UVR-10	1/2	90	0	038	1.73
PL400-007UVR-10	3/4	100	0	038	2.32
PL400-010UVR-10	1	90	0	038	2.44
PL400-012UVR-10	1-1/4	30	0	038	4.66
PL400-015UVR-10	1-1/2	50	0	038	5.58
PL400-020UVR-10	2	10	0	038	7.51
PL400-025UVR-10	2-1/2	80	0	038	11.86
PL400-030UVR-10	3	10	0	038	15.50
PL400-035UVR-10	3-1/2	10	0	038	19.69

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Schedule 40 Clear UVR PVC Pipe (continued)

10' Lengths, Price Per Foot

PL400-040UVR-10	4	50	0	038	23.33
PL400-060UVR-10	6	10	0	038	42.66

See application information above
Custom lengths available, contact Spears®



Pipe
Low Extractable PVC Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

Spears® Low-Extractable Schedule 80 Pipe

15' Lengths, Price Per Foot



List Price Per Foot

LXT-005	1/2	300	0	064	4.81
LXT-007	3/4	255	0	064	6.52
LXT-010	1	150	0	064	9.60
LXT-012	1-1/4	120	0	064	13.28
LXT-015	1-1/2	105	0	064	16.07
LXT-020	2	75	0	064	22.29
LXT-030	3	45	0	064	45.47
LXT-040	4	30	0	064	66.47
LXT-060	6	15	0	064	154.11

See Spears® Low-Extractable Schedule 80 Pipe Chart for additional information.

Pipe
LabWaste™ CPVC Corrosive Waste Drainage System Pipe



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

LabWaste™ CPVC Pipe
10' Lengths, Price Per Foot



List Price Per Foot, may be cut to desired length

LW-015	1-1/2	10	0	161	7.26
LW-020	2	10	0	161	9.82
LW-030	3	10	0	161	17.76
LW-040	4	10	0	161	25.21
LW-060	6	10	0	161	45.51
LW-080	8	10	0	157	87.92
LW-100	10	10	0	157	142.35
LW-120	12	10	0	157	188.06
LW-140	14	10	0	158	229.34
LW-160	16	10	0	158	299.31
20' length available upon request					



Pipe
FlameGuard® CPVC Fire Sprinkler Pipe

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------

FlameGuard® CPVC Fire Sprinkler Pipe

SDR 13.5 10' Lengths, Price Per Foot

--

List Price Per Foot

CP-007-10	3/4	260	0	071	1.92
CP-010-10	1	170	0	071	2.96
CP-012-10	1-1/4	90	0	071	4.63
CP-015-10	1-1/2	70	0	071	6.40
CP-020-10	2	50	0	071	9.57
CP-025-10	2-1/2	40	0	071	14.60
CP-030-10	3	30	0	071	22.19

Pipe

SDR 13.5, 15' Lengths, Price Per Foot

--

List Price Per Foot

CP-007	3/4	390	0	071	1.92
CP-010	1	255	0	071	2.96
CP-012	1-1/4	135	0	071	4.63
CP-015	1-1/2	105	0	071	6.40
CP-020	2	75	0	071	9.57
CP-025	2-1/2	60	0	071	14.60
CP-030	3	45	0	071	22.19

Pipe PVC & CPVC Round Seamless Duct & PVC & CPVC Cold Rolled Fabricated Duct



PVC & CPVC Round Seamless Duct

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

10 ft.PVC Duct - Plain End

Price Per Foot

PD-430-060-10	6	10	0	748	13.00
PD-430-080-10	8	10	0	748	16.37
PD-430-100-10	10	10	0	748	20.51
PD-430-120-10	12	10	0	748	24.39
PD-430-140-10	14	10	0	948	88.12
PD-430-160-10	16	10	0	948	100.68
PD-430-180-10	18	10	0	948	148.98
PD-430-200-10	20	10	0	948	187.03
PD-430-240-10	24	10	0	948	237.45

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft. PVC Duct - Plain End

Price Per Foot

PD-430-060	6	20	0	748	13.00
PD-430-080	8	20	0	748	16.37
PD-430-100	10	20	0	748	20.51
PD-430-120	12	20	0	748	24.39
PD-430-140	14	20	0	948	88.12
PD-430-160	16	20	0	948	100.68
PD-430-180	18	20	0	948	148.98
PD-430-200	20	20	0	948	187.03
PD-430-240	24	20	0	948	237.45

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

10 ft.CPVC Duct - Plain End

Price Per Foot

PD-430-060C-10	6	10	0	749	26.09
PD-430-080C-10	8	10	0	749	34.22
PD-430-100C-10	10	10	0	749	42.83
PD-430-120C-10	12	10	0	749	50.93
PD-430-140C-10	14	10	0	949	329.74
PD-430-160C-10	16	10	0	949	399.11

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft.CPVC Duct - Plain End

Price Per Foot

PD-430-060C	6	20	0	749	26.09
PD-430-080C	8	20	0	749	34.22
PD-430-100C	10	20	0	749	42.83
PD-430-120C	12	20	0	749	50.93
PD-430-140C	14	20	0	949	329.74
PD-430-160C	16	20	0	949	399.11
PD-430-180C	18	20	0	949	458.73
PD-430-200C	20	20	0	949	628.86
PD-430-240C	24	20	0	949	742.95

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

PVC & CPVC Cold Rolled Fabricated Duct

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

4' PVC Cold Rolled Duct - Plain End

Price Per Foot

PD-430-260	26X4	4	0	434	434.63
PD-430-280	28X4	4	0	434	517.75
PD-430-300	30X4	4	0	434	635.16
PD-430-320	32X4	4	0	434	684.18
PD-430-360	36X4	4	0	434	774.33
PD-430-380	38X4	4	0	434	840.62
PD-430-400	40X4	4	0	434	861.79
PD-430-420	42X4	4	0	434	1457.89
PD-430-460	46X4	4	0	434	1070.85
PD-430-480	48X4	4	0	434	1150.28

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

4' CPVC Cold Rolled Duct - Plain End

Price Per Foot

PD-430-260C	26X4	4	0	435	1299.24
PD-430-280C	28X4	4	0	435	1495.12
PD-430-300C	30X4	4	0	435	1659.65
PD-430-320C	32X4	4	0	435	1713.17
PD-430-360C	36X4	4	0	435	1831.13

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

4' CPVC Cold Rolled Duct - Plain End (continued)

Price Per Foot

PD-430-380C	38X4	4	0	435	2026.00
PD-430-400C	40X4	4	0	435	2122.95
PD-430-420C	42X4	4	0	435	2226.37
PD-430-460C	46X4	4	0	435	2504.78
PD-430-480C	48X4	4	0	435	2886.56

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and



Solvent Cements & Thread Sealants Blue 75™ Thread Sealant

Formulated, Designed & Tested for Plastic Piping Products

While many thread sealants and pipe joint compounds claim to be suitable for use with plastics, several have been found to produce stress cracking due to chemical incompatibility. Improper application of TFE tape sealants can result in over-stressed threaded connections and potential joint failures. Research has proven Spears® BLUE 75™ thread sealant to be the superior choice for reliable joint make-up of all Spears® thermoplastic piping products.

- Non-Hardening, Lubricating Anti-Seize Formulation
- Safe, Non-Toxic, Lead & Silicone Free
- Non-Corrosive, Non-Conductive
- Convenient Packaging Availability
- Specially Designed for Spears® Threaded Fittings & Valves
- Suitable for Use in Connecting other Metallic Fittings or Valves to PVC or CPVC Fittings or Valves
- NSF® Certified for use with potable water

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	-----------	-------------	--------------	---------------



Blue 75™ Thread Sealant

SB75-005	1/4 Pint	24	0	895	10.46
SB75-010	1/2 Pint	24	0	895	16.66
SB75-020	Pint	12	0	895	26.94
SB75-030	Quart	12	0	895	48.41

Solvent Cements & Thread Sealants

Spears® Low VOC Solvent Cements & Primers & PVC Low VOC Cements



Essential solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

PVC Low VOC Cements

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

PVC-00 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4". Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-05 CLEAR: Medium bodied, fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter in industrial, plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-00 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC00C-005	1/4 Pint	24	0	705	6.55
PVC00C-010	1/2 Pint	24	0	705	9.52
PVC00C-020	Pint	12	0	705	14.67
PVC00C-030	Quart	12	0	705	24.75
PVC00C-040	Gallon	6	0	705	80.35

PVC-05 Clear Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC05C-005	1/4 Pint	24	0	705	7.39
PVC05C-010	1/2 Pint	24	0	705	10.69
PVC05C-020	Pint	12	0	705	18.76
PVC05C-030	Quart	12	0	705	29.84
PVC05C-040	Gallon	6	0	705	101.68

PVC-02 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4" diameter. Goes on clear, dries clearest and is slightly thicker than PVC-00. Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-21 BLUE: Medium bodied, fast setting, high strength PVC cement. It is suitable for use on rigid PVC with interference fit Schedule 40 thru 6" and Schedule 80 thru 4". Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems through 4" if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-02 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC02C-005	1/4 Pint	24	0	705	7.27
PVC02C-010	1/2 Pint	24	0	705	10.58
PVC02C-020	Pint	12	0	705	16.29
PVC02C-030	Quart	12	0	705	27.49
PVC02C-040	Gallon	6	0	705	89.19

PVC-21 Blue Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC21B-005	1/4 Pint	24	0	705	7.89
PVC21B-010	1/2 Pint	24	0	705	12.99
PVC21B-020	Pint	12	0	705	22.23
PVC21B-030	Quart	12	0	705	37.35
PVC21B-040	Gallon	6	0	705	128.39



Solvent Cements & Thread Sealants PVC Low VOC Cements

PVC-25 AQUA BLUE WET-N-DRY: Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-25 Aqua Blue Wet-N-Dry Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC25B-005	1/4 Pint	24	0	705	7.89
PVC25B-010	1/2 Pint	24	0	705	12.82
PVC25B-020	Pint	12	0	705	21.83
PVC25B-030	Quart	12	0	705	36.56
PVC25B-040	Gallon	6	0	705	126.09

PVC-27 CLEAR COLD-N-HOT: Medium bodied, very fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. Formulated for -15°F to 110°F (-26°C to 43°C) weather conditions. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-27 Clear Cold-N-Hot Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC27C-020	Pint	12	0	705	22.79
PVC27C-030	Quart	12	0	705	38.36
PVC27C-040	Gallon	6	0	705	133.09

PVC-50 HOT BLUE: Medium bodied, very fast setting, high strength PVC cement. Can be used on PVC with interference fit for Schedule 40 thru 6" and Schedule 80 thru 4". Hot Blue premium all-weather formulation is excellent for use in challenging conditions including wet, damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-50 HOT BLUE Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC50B-005	1/4 Pint	24	0	705	7.12
PVC50B-010	1/2 Pint	24	0	705	11.71
PVC50B-020	Pint	12	0	705	20.04
PVC50B-030	Quart	12	0	705	33.65
PVC50B-040	Gallon	6	0	705	115.67

PVC-95 CLEAR/BLUE Flexible: Medium bodied, fast setting PVC cement specially formulated for use on flex-to-flex and flex-to-rigid PVC connections with interference fit through 6" and Schedule 80 through 3". Maintains high-strength, flexible joints. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-95 Clear Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95C-005	1/4 Pint	24	0	705	8.96
PVC95C-010	1/2 Pint	24	0	705	13.33
PVC95C-020	Pint	12	0	705	22.79
PVC95C-030	Quart	12	0	705	38.46
PVC95C-040	Gallon	6	0	705	133.09



PVC-95 Blue Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95B-030	Quart	12	0	705	38.36
PVC95B-040	Gallon	6	0	705	133.09

PVC-11 GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter. Medium set allows more working time in warm weather and has good gap filling properties. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2.



PVC-11 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC11G-010	1/2 Pint	24	0	706	17.47
PVC11G-020	Pint	12	0	706	23.29
PVC11G-030	Quart	12	0	706	39.19
PVC11G-040	Gallon	6	0	706	132.53

PVC-17 CLEAR/GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter (non-pressure applications only up to 18"). Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code (Clear/Gray); CSA B137.3, B181.2 (Gray only).



PVC-17 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17G-010	1/2 Pint	24	0	706	13.11
PVC17G-020	Pint	12	0	706	23.01
PVC17G-030	Quart	12	0	706	38.85
PVC17G-040	Gallon	6	0	706	130.91

Solvent Cements & Thread Sealants
PVC Low VOC Cements



PVC-17 Clear Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17C-010	1/2 Pint	24	0	706	13.11
PVC17C-020	Pint	12	0	706	23.01
PVC17C-030	Quart	12	0	706	38.85
PVC17C-040	Gallon	6	0	706	130.91

PVC-19 WHITE/GRAY: Extra heavy bodied, slow setting PVC cement for all classes and schedules with interference fit through 30" diameter. Designed for large size piping systems requiring high gap filling properties such as industrial piping and fitting fabrication in pressure and non-pressure applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA (Gray Only) B137.3, B181.2.



PVC-19 White Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19W-020	Pint	12	0	706	35.20
PVC19W-030	Quart	12	0	706	46.92
PVC19W-040	Gallon	4	0	706	154.71
PVC19W-040-F*	Gallon	6	0	706	154.71
PVC19W-050	5 Gallon	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"



PVC-19 Gray Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-020	Pint	12	0	706	35.20
PVC19G-030	Quart	12	0	706	46.92
PVC19G-040	Gallon	4	0	706	154.71
PVC19G-040-F*	Gallon	6	0	706	154.71
PVC19G-050	5 Gallon	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"



Solvent Cements & Thread Sealants CPVC Low VOC Cements

Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 2-Year Shelf Life

CPVC-24 GRAY/ORANGE: Heavy bodied, medium setting CPVC cement for all classes and schedules with interference fit through 24" diameter. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code.



The Most Chemically Resistant Cement Available for Both PVC & CPVC Applications

CPVC-24 Gray Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24G-005	1/4 Pint	24	0	707	9.01
CPVC24G-010	1/2 Pint	24	0	707	14.34
CPVC24G-020	Pint	12	0	707	26.09
CPVC24G-030	Quart	12	0	707	46.08
CPVC24G-040	Gallon	6	0	707	159.13



CPVC-24 Orange Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24O-005	1/4 Pint	24	0	707	9.01
CPVC24O-010	1/2 Pint	24	0	707	14.34
CPVC24O-020	Pint	12	0	707	26.09
CPVC24O-030	Quart	12	0	707	46.08
CPVC24O-040	Gallon	6	0	707	159.13

CTS-5 EverTUFF® YELLOW: Medium bodied, fast setting cement for copper tube size pipe and fittings with interference fit through 2" diameter. ONE STEP CEMENT - formulated for use without primer if local code permits. Listings: ASTM F493/D2846, NSF®-PW, DWV, SW, U.P. Code, CSA B137.6, B181.2.



Approved for All Copper Tube Size (CTS) Hot & Cold Water Distribution Systems, Including Spears® EverTUFF® and FlowGuard Gold®

CTS-5 EverTUFF® One-Step CTS CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CTS5-005	1/4 Pint	24	0	701	9.01
CTS5-010	1/2 Pint	24	0	701	14.34
CTS5-020	Pint	12	0	701	23.23

CTS-5 EverTUFF® One-Step CTS CPVC Cement (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CTS5-030	Quart	12	0	701	40.42
CTS5-040	Gallon	6	0	701	138.29

FS-5 RED: One-Step (no primer required) CPVC cement specifically formulated and approved for use with Spears® FlameGuard® and other approved CPVC Fire Sprinkler Products with interference fit through 3". See publication FG-3, FlameGuard® Installation Instructions for additional application details. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code, UL®, FM® Approved.



FS-5 FlameGuard® One-Step CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FS5-020	Pint	12	0	703	28.25
FS5-030	Quart	12	0	703	51.83

LW-5 MUSTARD: One-Step (no primer required) CPVC cement specifically formulated and approved for use with Spears® LabWaste™ CPVC Corrosive Waste Drainage System Products with interference fit through 24". See Publication LW-4, Technical Information, for application details. Listings: ASTM F493, NSF®-CW, PW, DWV, SW, U.P. Code, ICC-ES PMG.



The Only Chemically Resistant Cement Approved for Spears® LabWaste™

LW-5 LabWaste™ One-Step CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW5-020	Pint	12	0	704	45.51
LW5-030	Quart	12	0	704	60.67
LW5-040	Gallon	6	0	704	246.82
LW5-050	5 Gallon	1	0	704	1234.15

Solvent Cements & Thread Sealants

ABS Low VOC Cements



ABS cements are specially formulated for rigid ABS pipe and fittings in all classes, schedules and fittings having interference type sockets. These medium-bodied, fast setting cements are used for all classes and schedules with interference fit through 8" diameter in ABS drain, waste and vent systems (DWV), and sewer applications. Do not use primer on ABS pipe and fittings.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

ABS-73 BLACK: Medium bodied, fast setting, high strength ABS solvent cement for all classes and schedules of pipe and fittings with interference fit through 8" diameter. Listings: ASTM D2235, NSF®-DWV, SW, U.P. Code.



ABS-73 Black Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ABS73B-005	1/4 Pint	24	0	708	7.27
ABS73B-010	1/2 Pint	24	0	708	9.80
ABS73B-020	Pint	12	0	708	16.35
ABS73B-030	Quart	12	0	708	26.77
ABS73B-040	Gallon	6	0	708	89.76

ABS-71 YELLOW/MILKY: Medium bodied, fast setting, high strength ABS solvent cement for all classes and schedules of pipe and fittings with interference fit through 8" diameter. Listings: ASTM D2235, NSF®-DWV, SW, U.P. Code, CSA (Yellow Only) B181.1.



ABS-71 Yellow Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ABS71Y-005	1/4 Pint	24	0	708	8.64
ABS71Y-010	1/2 Pint	24	0	708	10.33
ABS71Y-020	Pint	12	0	708	18.14
ABS71Y-030	Quart	12	0	708	30.91
ABS71Y-040	Gallon	6	0	708	105.15



ABS-71 Milky Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ABS71M-005	1/4 Pint	24	0	708	8.64
ABS71M-010	1/2 Pint	24	0	708	10.33
ABS71M-020	Pint	24	0	708	18.14
ABS71M-030	Quart	24	0	708	30.91
ABS71M-040	Gallon	24	0	708	105.15



Solvent Cements & Thread Sealants

ABS to PVC Transition & Multi Purpose Low VOC Cements

Designed for joining PVC, ABS, CPVC and Styrene pipe and fittings, involving both similar materials and transition joints between dissimilar plastic materials.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

ABS TO PVC-94 ABS-PVC GREEN: Medium bodied, fast setting transition cement for all classes and schedules with interference fit through 6" diameter (not for Schedule 80). Specifically designed for use on ABS to PVC transition joints in non-pressure systems. Suitable for sewer and DWV applications. Listings: ASTM D3138, NSF®-DWV, SW, U.P. Code.



ABS TO PVC-94 Green Medium Body ABS to PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TRAN94G-005	1/4 Pint	24	0	708	8.96
TRAN94G-010	1/2 Pint	24	0	708	13.11
TRAN94G-020	Pint	12	0	708	21.34
TRAN94G-030	Quart	12	0	708	36.73
TRAN94G-040	Gallon	6	0	708	120.66

MP-90 MULTI-PURPOSE CLEAR: Medium bodied, fast setting, multi-purpose cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. High-strength cement for PVC and CPVC pressure and on ABS and styrene low-pressure systems.



MP-90 Clear Multi-Purpose Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MP90C-005	1/4 Pint	24	0	708	8.45
MP90C-010	1/2 Pint	24	0	708	12.38
MP90C-020	Pint	12	0	708	20.77
MP90C-030	Quart	12	0	708	34.66

Solvent Cements & Thread Sealants
Low Extractable Low VOC Cement



LX-5 Clear: One-Step (no primer required) PVC cement specifically formulated for use with Spears® Low Extractable PVC piping, with interference fit through 6". Unlike conventional PVC solvent cements, LX-5 contains fewer contaminants and cures quickly to reduce potential for TOC contamination. See publication LXT-4, Low-Extractable Ultra Pure Water Systems, for application details.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life



LX-5 Low Extractable One-Step PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LX5C-020	Pint	12	0	702	33.96
LX5C-030	Quart	12	0	702	54.77



Solvent Cements & Thread Sealants Low VOC Solvent Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with SCAQMD Rule 1168/316A.
- Spears® Primers are certified for use with potable water by NSF® International.
- 3-Year Shelf Life

PRIMER-68 PURPLE/CLEAR: Essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Choose from Clear or Purple color which provides positive identification that a primer was used (check local code requirements). Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-68 Clear Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68C-005	1/4 Pint	24	0	709	7.27
PRIM68C-010	1/2 Pint	24	0	709	9.85
PRIM68C-020	Pint	12	0	709	18.25
PRIM68C-030	Quart	12	0	709	30.46
PRIM68C-040	Gallon	6	0	709	91.82

PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	1/4 Pint	24	0	709	7.89
PRIM70P-010	1/2 Pint	24	0	709	10.75
PRIM70P-020	Pint	12	0	709	21.51
PRIM70P-030	Quart	12	0	709	34.83
PRIM70P-040	Gallon	6	0	709	114.44



CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



PRIMER-68 Purple Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68P-005	1/4 Pint	24	0	709	7.27
PRIM68P-010	1/2 Pint	24	0	709	9.85
PRIM68P-020	Pint	12	0	709	18.25
PRIM68P-030	Quart	12	0	709	30.46
PRIM68P-040	Gallon	6	0	709	91.82

CLEANER-65 Clear Cleaner

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	1/4 Pint	24	0	709	5.82
CLEAN65-010	1/2 Pint	24	0	709	8.67
CLEAN65-020	Pint	12	0	709	15.06
CLEAN65-030	Quart	12	0	709	22.12
CLEAN65-040	Gallon	6	0	709	70.83

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR: Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	1/4 Pint	24	0	709	7.89
PRIM70C-010	1/2 Pint	24	0	709	10.75
PRIM70C-020	Pint	12	0	709	21.51
PRIM70C-030	Quart	12	0	709	34.83
PRIM70C-040	Gallon	6	0	709	114.44

Solvent Cements & Thread Sealants Applicators & Accessories



Can-Mate Kit

Includes Plastic Carrier Strap and two (2) Can-Mate 150 adjustable Daubers. Provides convenient carrying of 1/2 pint, pint or quart cans of cement and primer.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CM-KIT	2 @1-1/4"	24	0	710	13.78

Small-Cap Swab

Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8".



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5020	4" Length	24	0	710	14.89

Can-Mate Daubers

Adjustable Plastic Applicator with Telescoping Stem for use with Standard 1/2 Pint, Pint and Quart Cans.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CM-50	1/2"	50	0	710	5.26
CM-75	3/4"	50	0	710	5.26
CM-150	1-1/4"	50	0	710	5.26

See application footnote below

CM-50	1/2"	50	0	710	5.26
CM-75	3/4"	50	0	710	5.26
CM-150	1-1/4"	50	0	710	5.26

1/2" Diameter for pipe sizes up to 1"

3/4" Diameter for pipe size to 1-1/2"

1-1/4" Diameter for pipe size 1-1/2" to 3"

Large-Cap Swab

Fits 2-7/8" Neck Gallon Can (MT-648). For pipe size 6" & larger.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4020	4" Length	24	0	710	21.96

Swab with Heavy Handle

For pipe size 6" & larger



Cap Daubers

Fits 1-3/4" Neck Cans. Size by Dauber Diameter and Can Fitment.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4520	4" length	12	0	710	18.59

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

See application footnotes below

DQP-50	1/2" for 1/4 Pint	50	0	710	1.45
DQP-75	3/4" for 1/4 Pint	50	0	710	1.45
DHP-38	3/8" for 1/2 Pint	50	400	710	1.23
DHP-50	1/2" for 1/2 Pint	50	400	710	1.23
DHP-75	3/4" for 1/2 Pint	50	0	710	1.31
DP-62	5/8" for Pint	50	0	710	1.45
DP-75	3/4" for Pint	50	0	710	1.31
DP-125	1-1/4" for Pint	50	0	710	1.58
DQ-62	3/4" for Quart	50	0	710	1.45
DQ-75	3/4" for Quart	50	0	710	1.23
DQ-125	1-1/4" for Quart	50	0	710	1.58

3/8" Diameter for pipe sizes to 3/4"

1/2" Diameter for pipe sizes to 1"

5/8" Diameter for pipe sizes to 1-1/4"

3/4" Diameter for pipe size to 1-1/2"

1-1/4" Diameter for pipe size 1-1/2" to 3"

Small-Cap Roller

Fits 1-3/4" Neck Quart Cans (MT-651). Replaceable cover. For pipe size 3" to 6".



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6020	4" length	24	0	710	14.93

Can Roller

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6".



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3020	3" length	20	0	710	16.03



Solvent Cements & Thread Sealants Applicators & Accessories

Large-Cap Roller

Fits 2-7/8" Neck Gallon Can (MT-648). Roller for pipe size 6" & larger.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
7020	7" length	20	0	710	19.97

Acid Brush

Small Utility Brush



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AB-1	1/2"	144	0	710	.51

Roller with Heavy Handle

Replaceable Cover. For pipe size 6" & larger.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5520	4" length	12	0	710	15.17
6520	6" length	12	0	710	18.59

Standard Empty Cans

1-3/4" Neck



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MT-656	1/4 Pint	24	0	710	2.36
MT-655	1/2 Pint	24	0	710	3.55
MT-654*	Pint	12	0	710	7.40
MT-651*	Quart	12	0	710	8.36
MT-647	Gallon	6	0	710	19.65

Roller Replacement Covers

Fits Rollers with Heavy Handles #5520, #6020 & #6520. Sold as Pack of 2, full pack only.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5520-1	Fits 5520 & 6020 Roller	1	75	710	13.53
6520-1	Fits 6520 Roller	1	50	710	14.89

Large Mouth Empty Cans

2-7/8" Neck



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MT-648	Gallon	6	0	710	24.58

Cap Brushes

For Pint and Quart Cans



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
KD-110	4-1/2" Length	25	0	710	9.59
KD-112	5-1/2" length	25	0	710	9.59

Easy Pour Spout

Fits 1/4 Pint, 1/2 Pint, Pint, Quart, & Gallon Can 1-3/4" Neck



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPS-1	N/A	36	0	710	5.65



Paint Type Empty Cans



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MT-652	Pint	12	0	710	7.40
MT-653	Quart	12	0	710	8.36
MT-650	Gallon	4	0	710	17.69

Deburring Tool

Cone Type for PVC, CPVC, ABS, PE & PB pipe from 1/2" through 2"



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DEB-2	1/2 to 2 Pipe	1	6	710	97.71



Solvent Cements & Thread Sealants

Spears® Solvent Cement & Primer Selection Guide

Please refer to the selection guide below in selecting the right Spears® products for your application.

Type	Body	Product	Color	Relative Set	Capacity	Features
PVC	Regular	PVC-00	Clear	Fast	Schedule 40 - 4"	
		PVC-02	Clear	Fast	Schedule 40 - 4"	Dries Clearest, slightly thicker than PVC-00
	Medium	PVC-05	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Industrial Duty Primerless Capability ¹
		PVC-21	Blue	Fast	Schedule 40 - 6" Schedule 80 - 4"	Primerless Capability ¹
	Heavy	PVC-11	Gray	Medium	All Classes & Schedules - 12"	Industrial Duty
		PVC-17	Clear/ Gray	Medium	All Classes & Schedules - 12" Non-pressure - 18"	Industrial Duty
	Heavy Extra	PVC-19	White/ Gray	Slow	All Classes & Schedules Requiring High Gap Filling - 30"	Industrial Duty
	Specialty Cements	PVC-25	Aqua Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Wet-N-Dry Formulation Primerless Capability ¹
		PVC-27	Clear	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Cold-N-Hot Formulation -15°F to 110°F Primerless Capability ¹
		PVC-50	Blue	Very Fast	Schedule 40 - 6" Schedule 80 - 4"	HOT PVC Formulation Primerless Capability ¹
		PVC-95	Clear/ Blue	Fast	All Classes & Schedules - 6" Schedule 80 - 3"	Flexible PVC for Flex-Flex, Flex-Rigid Joints
		LX-5	Clear	Fast	Low Extractable PVC Systems - 6"	One Step ² Low Extractable, High Purity Cement
CPVC	Heavy	CPVC-24	Gray/ Orange	Medium	All Classes & Schedules PVC or CPVC - All Sizes	Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct - Industrial Duty
	Specialty Cements	LW-5	Mustard	Medium	LabWaste™ CPVC Drainage Systems - 24"	One Step ² Cement -Only LabWaste™ System Chemically Approved Cement
		FS-5	Red	Fast	CPVC Fire Sprinkler Systems - 3"	One-Step ² Cement for all CPVC Fire Sprinkler Systems - FlameGuard® & BlazeMaster®
		CTS-5	Yellow	Fast	CTS CPVC Systems - 2"	One-Step ² Cement for all CTS CPVC Systems - EverTUFF® & FlowGuard Gold®
ABS	Medium	ABS-71	Yellow/ Milky	Fast	All ABS Classes & Schedules - 8"	
		ABS-73	Black	Fast	All ABS Classes & Schedules - 8"	
Transition & Multipurpose	Medium	ABS TO PVC-94	Green	Fast	All Classes & Schedules - 6" (Except Schedule 80)	For ABS-to-PVC Transition Joints
		MULTIPUPOSE-90	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	For PVC and CPVC pressure ABS and Styrene low-pressure systems
Primers & Cleaners		Primer-70	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	Industrial Duty
		Primer-68	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	
		Cleaner-65	Clear		All Classes & Schedules -All Sizes	For PVC, CPVC, ABS or Styrene

Notes

1= Primerless Capability indicates a cement can be used without primer in certain applications if local code permits. See specific cement information for further restrictions.
 2 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.
 CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems.

Solvent Cements & Thread Sealants
Solvent Cemented Joints - Initial Set Schedule, Cure Schedule and Cement Usage Table



The following are basic guidelines and may require adjustment according to application or installation conditions. Certain specialty cements, such as FlameGuard® FS-5, may have different instructions for specific application conditions. Consult appropriate installation instructions for details.

INITIAL SET SCHEDULE: The Initial set schedule is the necessary waiting period before handling newly assembled joints. After initial set, the joint will withstand the stress of a normal installation. In damp or humid weather allow 50% more set time.

AVERAGE INITIAL SET SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Temperature Range	Pipe Sizes 1/2" to 1-1/4"	Pipe Sizes 1-1/2" to 2"	Pipe Sizes 2-1/2" to 8"	Pipe Sizes 10" to 15"	Pipe Sizes 15"+
60° - 100°F/16° - 38°C	2 minutes	5 minutes	30 minutes	2 hours	4 hours
40° - 60°F/5° - 16°C	5 minutes	10 minutes	2 hours	8 hours	16 hours
0° - 40°F/-18° - 5°C	10 minutes	15 minutes	12 hours	24 hours	48 hours

JOINT CURE SCHEDULE: The Joint cure schedule is the necessary waiting period before pressurizing newly assembled joints. Follow the schedule carefully. In damp or humid weather or chemical applications, allow a minimum of 50% more cure time.

AVERAGE JOINT CURE SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Relative Humidity 60% or Less	Cure Time Pipe Sizes 1/2" to 1-1/4"		Cure Time Pipe Sizes 1-1/2" to 2"		Cure Time Pipe Sizes 2-1/2" to 8"		Cure Time Pipe Sizes 10" to 15"	Cure Time Pipe Sizes 15"+
Temperature range during assembly and cure periods	Up to 160 psi	Above 160 to 370 psi	Up to 160 psi	Above 160 to 315 psi	Up to 160 psi	Above 160 to 315 psi	Up to 100 psi	Up to 100 psi
60° - 100°F/16° - 38°C	15 min	6 hrs	30 min	12 hrs	1-1/2 hrs	24 hrs	48 hrs	72 hrs
40° - 60°F/5° - 16°C	20 min	12 hrs	45 min	24 hrs	4 hrs	48 hrs	96 hrs	6 days
0° - 40°F/-18° - 5°C	30 min	48 hrs	1 hr	96 hrs	72 hrs	8 days	8 days	14 days

AVERAGE NUMBER OF JOINTS PER QUART OF SPEARS® CEMENT

Pipe Diameter	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"	15"	18"
Number of Joints	300	200	125	90	60	40	30	10	5	2-3	1-2	3/4	1/2

NOMINAL INCH AND CORRESPONDING NOMINAL MILLIMETER PIPE SIZES

in.	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	18"	24"	30"
mm	20	25	32	40	50	63	75	90	110	160	200	250	315	355	450	600	800

SPEARS® APPLICATOR SELECTION GUIDE

For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe

DAUBERS	Pipe Diameters						
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2
3/8" Dauber	*	*	*				
1/2" Dauber			*	*			
5/8" Dauber				*	*		
3/4" Dauber					*	*	
1-1/4" Dauber							*
ROLLERS & SWABS			SIZE		FOR PIPE DIAMETERS		
3020			3" Roller		3" - 6"		
6020			4" Roller		3" - 8"		
7020			7" Roller		6" +		
5520			4" Roller		6" +		
6520			6" Roller		6" +		
4020			4" Swab		6" +		
5020			4" Swab		3" - 8"		
4520			4" Swab		6" +		

PRODUCT SHELF LIFE

Spears® Products	Shelf Life	Spears® Products	Shelf Life
Primers / Cleaners	3 years	CPVC Solvent Cement	2 years
PVC Solvent Cement	3 years	ABS Solvent Cement	3 years



FlameGuard® CPVC Fire Sprinkler Products
FlameGuard® CPVC Fire Sprinkler Piping Products

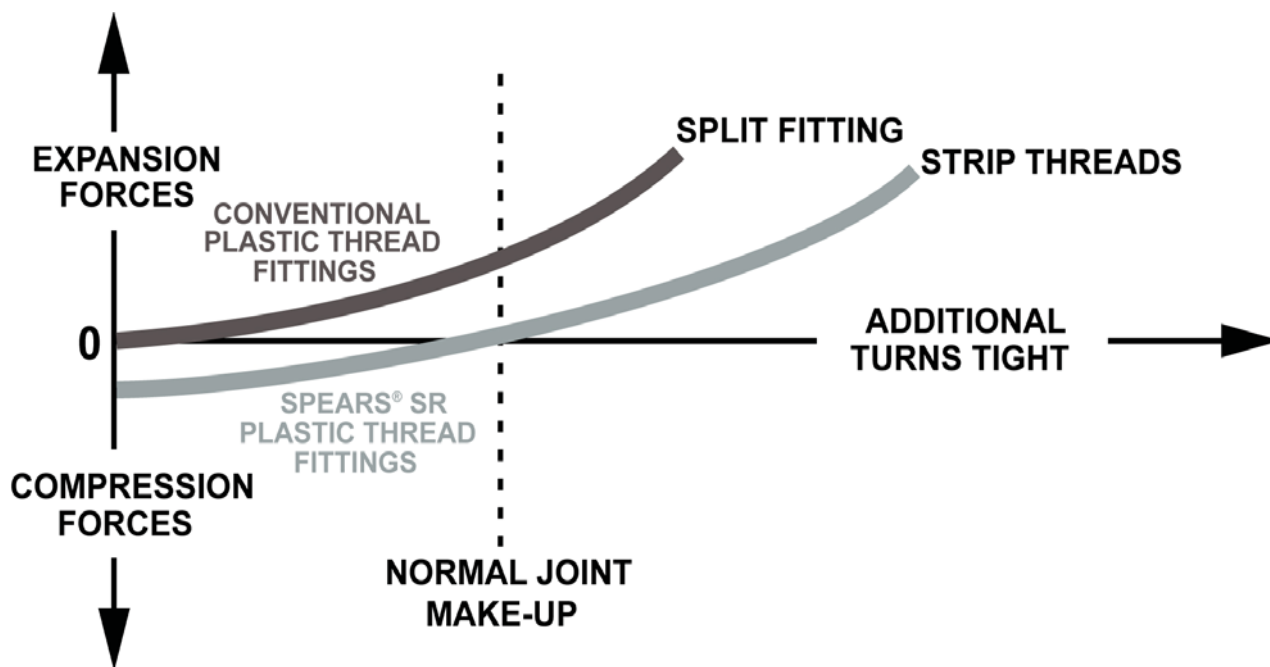
SPEARS® Patented SR Design Sprinkler Head Adapters



SPEARS® Patented Special Reinforced (SR) plastic female thread design is one of the most significant advancements in the use of CPVC Fire Sprinkler System threaded fittings. Not just an added ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is no longer a problem in normal installations and easily managed in severe over-tightening situations.

Contains and Compensates for Radial Stress...

Radial stress, generated by tightening of tapered pipe threads, exerts tremendous expansion force on female plastic thread fittings. When subjected to over-tightening - even accidentally - these forces can literally split the fitting. Spears® patented SR Adapter design not only alleviates this problem by containing expansion forces with its special reinforced collar, but additionally compensates for expansion stress through thermoplastic material compression. Stresses are equalized at normal joint make-up. The following graph illustrates this effect in a comparison of conventional plastic female thread fittings with Spears® SR adapters when taken to failure.



Another Quality SPEARS® Product Designed for Performance, Customer Satisfaction and Service.

FlameGuard® CPVC Fire Sprinkler Products
FlameGuard® CPVC Fire Sprinkler Piping Products



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

FlameGuard® CPVC Fire Sprinkler Pipe
SDR 13.5 10' Lengths, Price Per Foot



List Price Per Foot

CP-007-10	3/4	260	0	071	1.92
CP-010-10	1	170	0	071	2.96
CP-012-10	1-1/4	90	0	071	4.63
CP-015-10	1-1/2	70	0	071	6.40
CP-020-10	2	50	0	071	9.57
CP-025-10	2-1/2	40	0	071	14.60
CP-030-10	3	30	0	071	22.19

Pipe

SDR 13.5, 15' Lengths, Price Per Foot



List Price Per Foot

CP-007	3/4	390	0	071	1.92
CP-010	1	255	0	071	2.96
CP-012	1-1/4	135	0	071	4.63
CP-015	1-1/2	105	0	071	6.40
CP-020	2	75	0	071	9.57
CP-025	2-1/2	60	0	071	14.60
CP-030	3	45	0	071	22.19

Tee

Socket x Socket x Socket



4201-007	3/4	20	220	070	3.73
4201-010	1	15	120	070	7.56
4201-012	1-1/4	10	0	070	11.29
4201-015	1-1/2	10	0	070	16.61
4201-020	2	10	0	070	24.52
4201-025	2-1/2	10	0	070	39.95
4201-030	3	5	0	070	62.60

Reducing Tee

Socket x Socket x Socket



4201-102	3/4X1	20	0	070	6.38
4201-125	1X3/4X3/4	15	150	070	6.38
4201-126	1X3/4X1	15	0	070	6.38
4201-131	1X3/4	20	0	070	6.38
4201-157	1-1/4X1X3/4	15	0	070	11.78
4201-158	1-1/4X1X1	15	0	070	11.78
4201-159	1-1/4X1X1-1/4	15	0	070	11.78
4201-167	1-1/4X3/4	15	0	070	11.78
4201-168	1-1/4X1	15	0	070	11.78
4201-169	1-1/4X1-1/2	10	0	070	14.22
4201-201	1-1/2X1-1/4X3/4	10	0	070	14.22
4201-202	1-1/2X1-1/4X1	10	0	070	14.22
4201-210	1-1/2X3/4	15	0	070	14.22
4201-211	1-1/2X1	10	0	070	14.22
4201-212	1-1/2X1-1/4	10	0	070	14.22
4201-213	1-1/2X2	10	0	070	22.57
4201-248	2X3/4	10	0	070	22.57
4201-249	2X1	10	0	070	22.57
4201-250	2X1-1/4	10	0	070	22.57
4201-251	2X1-1/2	10	0	070	22.57
4201-289	2-1/2X1	10	0	070	31.03
4201-290	2-1/2X1-1/4	10	0	070	31.03
4201-291	2-1/2X1-1/2	10	0	070	31.03
4201-292 ¹	2-1/2X2	10	0	070	31.03
4201-335	3X1	5	0	070	35.81
4201-336 ¹	3X1-1/4	5	0	070	35.81
4201-337 ¹	3X1-1/2	5	0	070	35.81
4201-338	3X2	5	0	070	35.81

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

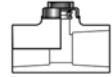
Reducing Tee (continued)

Socket x Socket x Socket

4201-339	3X2-1/2	6	0	070	35.81
----------	---------	---	---	-----	-------

¹Outlet sized with Bushing

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style

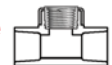


Socket x Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

4202-101 G	3/4X1/2	50	0	076	13.83
4202-124 G	1X3/4X1/2	50	0	076	14.93
4202-130 G	1X1/2	50	0	076	14.93
4202-166 G	1-1/4X1/2	15	0	076	24.89
4202-209 G	1-1/2X1/2	10	0	076	32.79
4202-247 G	2X1/2	10	0	076	46.24

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking.

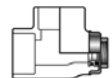
Sprinkler Head Tee - Brass Thread Insert Style
Socket x Socket x FIPT



4202-101	3/4X1/2	50	0	076	13.83
4202-124	1X3/4X1/2	50	0	076	14.93
4202-130	1X1/2	50	0	076	14.93
4202-010	1	10	40	076	38.39
4202-156	1-1/4X1X1/2	15	0	076	24.89
4202-166	1-1/4X1/2	15	0	076	24.89
4202-199	1-1/2X1-1/4X1/2	10	0	076	32.79
4202-209	1-1/2X1/2	10	0	076	32.79
4202-237	2X1-1/2X1/2	10	0	076	46.24
4202-247	2X1/2	10	0	076	46.24

Not intended to convey or dispense water for human consumption through drinking or cooking.

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style



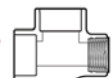
Socket x Gasket FIPT x Socket With Elastomer Seal - Use NO Thread Sealant

4203-122 G	1X1/2X1	50	0	076	24.52
------------	---------	----	---	-----	-------

FIPT With Elastomer Seal - Use NO Thread Sealant

Not intended to convey or dispense water for human consumption through drinking or cooking.

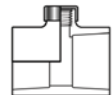
Sprinkler Head Tee - Brass Thread Insert Style
Socket x FIPT x Socket



4203-122	1X1/2X1	50	0	076	24.52
----------	---------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking.

Sprinkler Head Tee - Special Reinforced Plastic Thread Style



Socket x Socket x SR FIPT - Stainless Steel Collar

4202-010SR	1	15	0	076	20.40
4202-101SR	3/4X1/2	50	0	076	7.36
4202-124SR	1X3/4X1/2	50	0	076	7.95
4202-130SR	1X1/2	50	0	076	7.95
4202-156SR	1-1/4X1X1/2	15	0	076	13.25
4202-166SR	1-1/4X1/2	15	0	076	13.25
4202-168SR	1-1/4X1	15	0	076	28.48
4202-199SR	1-1/2X1-1/4X1/2	10	0	076	17.44
4202-209SR	1-1/2X1/2	25	0	076	17.44
4202-211SR	1-1/2X1-1/2X1	10	0	076	17.44
4202-237SR	2X1-1/2X1/2	10	0	076	24.61
4202-247SR	2X1/2	10	0	076	24.61
4202-287SR	2-1/2X1/2	10	0	076	33.73

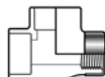


FlameGuard® CPVC Fire Sprinkler Products FlameGuard® CPVC Fire Sprinkler Piping Products

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

Socket x SR FIPT x Socket - Stainless Steel Collar



4203-122SR	1X1/2X1	50	0	076	8.54
------------	---------	----	---	-----	------

Street Tee

Spigot x Socket x Socket



4244-007	3/4	15	105	070	6.65
4244-010	1	15	0	070	8.87
4244-012	1-1/4	10	0	070	16.12
4244-015	1-1/2	10	0	070	19.51
4244-020	2	10	0	070	28.84

90° EII

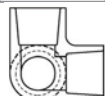
Socket x Socket



4206-007	3/4	30	300	070	2.75
4206-010	1	20	200	070	6.11
4206-012	1-1/4	10	100	070	7.80
4206-015	1-1/2	10	0	070	10.89
4206-020	2	25	0	070	13.47
4206-025	2-1/2	5	0	070	26.00
4206-030	3	5	0	070	35.46

Side Outlet EII

Socket x Socket x Socket



4213-007	3/4	50	0	070	8.95
4213-010	1	25	0	070	12.20

90° Reducing EII

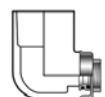
Socket x Socket



4206-131	1X3/4	20	240	070	5.41
----------	-------	----	-----	-----	------

TorqueSafe™ 90° Sprinkler Head Elbow - Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

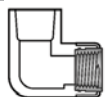


4207-101 G	3/4X1/2	20	120	076	9.14
4207-130 G	1X1/2	15	90	076	12.84
4207-166 G	1-1/4X1/2	10	60	076	17.88

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head 90° EII - Brass Thread Insert Style

Socket x FIPT

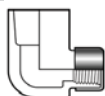


4207-101	3/4X1/2	20	120	076	9.14
4207-130	1X1/2	15	90	076	12.84
4207-131	1X3/4	25	0	076	15.54
4207-166	1-1/4X1/2	10	60	076	17.88

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head 90° EII - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar



4207-101SR	3/4X1/2	20	180	076	4.85
4207-130SR	1X1/2	10	150	076	6.84
4207-131SR	1X3/4	50	0	076	8.27
4207-166SR	1-1/4X1/2	25	0	076	8.69

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

90° Street EII Spigot x Socket



4209-007	3/4	50	0	070	5.97
4209-010	1	50	0	070	8.82
4209-012	1-1/4	25	0	070	14.51
4209-015	1-1/2	10	0	070	17.67
4209-020	2	25	0	070	26.02

45° EII

Socket x Socket



4217-007	3/4	20	360	070	3.73
4217-010	1	15	240	070	4.43
4217-012	1-1/4	10	120	070	6.49
4217-015	1-1/2	10	0	070	8.93
4217-020	2	10	0	070	11.23
4217-025	2-1/2	5	0	070	20.01
4217-030	3	5	0	070	28.94

45° Street EII

Spigot x Socket



4227-010	1	50	0	070	4.43
4227-012	1-1/4	25	0	070	6.49
4227-015	1-1/2	25	0	070	8.03
4227-020	2	20	0	070	11.23

22-1/2° EII

Socket



4216-007	3/4	20	360	070	4.46
4216-010	1	20	240	070	5.76
4216-012	1-1/4	20	0	070	7.79
4216-015	1-1/2	20	0	070	10.71
4216-020	2	20	0	070	13.25
4216-025	2-1/2	5	0	070	27.22
4216-030	3	5	0	070	34.51

22-1/2° Street EII

Spigot x Socket



4242-007	3/4	50	0	070	4.68
4242-010	1	50	0	070	6.03
4242-012	1-1/4	20	0	070	8.20
4242-015	1-1/2	25	0	070	11.25
4242-020	2	20	0	070	13.93
4242-025	2-1/2	5	0	070	19.53
4242-030	3	5	0	070	27.97

Cross

Socket x Socket x Socket x Socket



4220-007	3/4	20	0	070	5.88
4220-010	1	15	0	070	7.35
4220-012	1-1/4	10	0	070	10.24
4220-015	1-1/2	10	0	070	13.98
4220-020	2	8	0	070	22.77
4220-025	2-1/2	5	0	070	50.04
4220-030	3	5	0	070	73.39

Reducing Cross

Socket x Socket x Socket x Socket



4220-131	1X3/4	20	0	070	7.94
----------	-------	----	---	-----	------

FlameGuard® CPVC Fire Sprinkler Products
FlameGuard® CPVC Fire Sprinkler Piping Products



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Reducing Cross (continued)

Socket x Socket x Socket x Socket

4220-167	1-1/4X3/4	25	0	070	12.26
4220-210	1-1/2X3/4	15	0	070	17.11
4220-289	2-1/2X1	15	0	070	31.65

Coupling

Socket x Socket



4229-007	3/4	25	500	070	2.68
4229-010	1	25	250	070	3.43
4229-012	1-1/4	10	160	070	5.15
4229-015	1-1/2	10	100	070	7.35
4229-020	2	20	0	070	9.91
4229-025	2-1/2	10	0	070	15.09
4229-030	3	5	0	070	19.63

Reducer Coupling

Socket x Socket



4229-131	1X3/4	15	270	070	3.43
4229-167	1-1/4X3/4	25	0	070	5.33
4229-168	1-1/4X1	10	140	070	5.15
4229-210	1-1/2X3/4	25	0	070	7.94
4229-211	1-1/2X1	10	70	070	7.72
4229-212	1-1/2X1-1/4	10	120	070	7.35
4229-248	2X3/4	10	80	070	10.35
4229-249	2X1	10	60	070	10.35
4229-250	2X1-1/4	10	60	070	10.09
4229-251	2X1-1/2	10	100	070	9.91
4229-291	2-1/2X1-1/2	10	0	070	15.25
4229-292	2-1/2X2	10	0	070	15.63
4229-339	3X2-1/2	5	0	070	46.42

Grooved Coupling Adapter

Groove x Socket



4233-012	1-1/4	10	40	076	103.14
4233-015	1-1/2	10	40	076	109.31
4233-020	2	8	32	076	126.60
4233-025	2-1/2	5	0	076	162.39
4233-030	3	5	0	076	180.53

Not intended to convey or dispense water for human consumption through drinking or cooking

Male Adapter

MIPT x Socket



4236-007	3/4	40	160	076	41.02
4236-010	1	10	60	076	62.72
4236-012	1-1/4	10	60	076	75.00
4236-015	1-1/2	10	40	076	136.12
4236-020	2	8	32	076	181.14

Female Adapter - Brass Thread Insert Style

Socket x FIPT



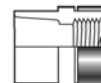
4235-007	3/4	15	90	076	18.23
4235-010	1	15	90	076	31.99
4235-012	1-1/4	15	60	076	52.15
4235-015	1-1/2	10	40	076	69.57
4235-020	2	8	32	076	87.19

Not intended to convey or dispense water for human consumption through drinking or cooking

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Female Adapter - Special Reinforced Plastic Thread Style

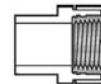
Socket x SR FIPT - Stainless Steel Collar



4235-007SR	3/4	25	300	076	8.65
4235-010SR	1	25	200	076	15.21
4235-012SR	1-1/4	10	60	076	24.76

Spigot Female Adapter - Brass Thread Insert Style

Spigot x FIPT

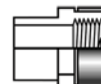


4278-007	3/4	25	150	076	17.05
4278-010	1	15	90	076	30.37

Not intended to convey or dispense water for human consumption through drinking or cooking

Spigot Female Adapter - Special Reinforced Plastic Thread Style

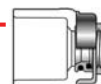
Spigot x SR FIPT - Stainless Steel Collar



4278-007SR	3/4	25	300	076	9.08
4278-010SR	1	50	0	076	16.17

TorqueSafe™ Female Sprinkler Head Adapter - Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT

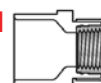


4235-101 G	3/4X1/2	50	0	076	9.96
4235-130GS	1X1/2	50	0	076	10.63
4235-131 G	1X3/4	50	0	076	16.80

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Brass Thread Insert Style

Socket x FIPT

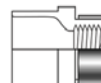


4235-101	3/4X1/2	50	0	076	9.96
4235-130	1X1/2	50	0	076	10.63
4235-131	1X3/4	50	0	076	16.80

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style

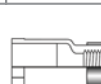
Socket x SR FIPT - Stainless Steel Collar



4235-101SR	3/4X1/2	50	200	076	5.28
4235-130SR	1X1/2	50	0	076	5.65
4235-131SR	1X3/4	50	0	076	8.95

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Socket Body Wrench Flats

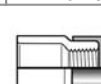
Socket x SR FIPT - Stainless Steel Collar



W4235-101SR	3/4X1/2	50	0	076	6.03
W4235-130SR	1X1/2	50	0	076	6.45

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread with Metal Thread Start

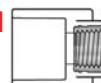
Socket x SR FIPT - Zinc Collar



Z4235-101SR	3/4X1/2	50	200	076	5.28
-------------	---------	----	-----	-----	------

Female Sprinkler Head Adapter - Brass Thread Insert Style with Long Body

Socket x FIPT



L4235-130	1X1/2	50	0	076	15.07
-----------	-------	----	---	-----	-------

Not intended to convey or dispense water for human consumption through drinking or cooking



FlameGuard® CPVC Fire Sprinkler Products FlameGuard® CPVC Fire Sprinkler Piping Products

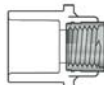
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Female Sprinkler Head Adapter - Brass Thread Insert Style with Positioning Ring

Socket x FIPT

R4235-101	3/4X1/2	50	0	076	9.96
-----------	---------	----	---	-----	------

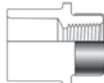
Not intended to convey or dispense water for human consumption through drinking or cooking



Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Positioning Ring

Socket x SR FIPT - Stainless Steel Collar

R4235-101SR	3/4X1/2	25	300	076	5.97
-------------	---------	----	-----	-----	------

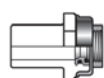


TorqueSafe™ Female Spigot Sprinkler Head Adapters - Gasket Sealed Brass Thread Insert Style

Spigot x Gasket FIPT x Socket With Elastomer Seal - Use NO Thread Sealant

4238-101 G	3/4X1/2	50	200	076	9.96
4238-130 G	1X1/2	50	0	076	10.63

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

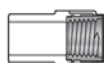


Spigot Female Sprinkler Head Adapters - Brass Thread Insert Style

Spigot x FIPT

4238-101	3/4X1/2	50	0	076	9.96
4238-130	1X1/2	50	0	076	10.63

Not intended to convey or dispense water for human consumption through drinking or cooking



TorqueSafe™ Bushing - Gasket Sealed Brass Thread Insert Style

Spigot x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

4238-130BR G	1X1/2	50	300	076	13.76
--------------	-------	----	-----	-----	-------

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking



Replacement Gaskets for all TorqueSafe™ Gasket Sealed Head Adapters

Pack of 25 EPDM Gaskets

For Use in 1/2" or 3/4" Gasket Sealed Threads

RGSK-005	1/2	0	0	299	10.62
RGSK-007	3/4	0	0	299	14.84



Bushing - with Brass Thread Insert

Spigot x FIPT

4238-130BR	1X1/2	50	300	076	13.76
------------	-------	----	-----	-----	-------

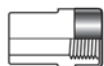
Not intended to convey or dispense water for human consumption through drinking or cooking



Spigot Female Sprinkler Head Adapters - Special Reinforced Plastic Threaded Style

Spigot x SR FIPT - Stainless Steel Collar

4238-101SR	3/4X1/2	50	400	076	5.28
4238-130SR	1X1/2	50	0	076	5.72



Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

42001SR	3/4X1/2	12	0	076	13.49
42011SR	1X1/2	12	0	076	13.49



Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

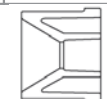
42004SR	3/4X1/2	12	0	076	13.49
42014SR	1X1/2	12	0	076	13.49



Reducer Bushing - Flush Style

Spigot x Socket

4237-131	1X3/4	50	700	070	2.08
4237-167	1-1/4X3/4	25	200	070	3.27
4237-168	1-1/4X1	25	350	070	3.27
4237-210	1-1/2X3/4	25	125	070	3.68
4237-211	1-1/2X1	25	150	070	3.68
4237-212	1-1/2X1-1/4	25	300	070	3.68
4237-248	2X3/4	10	160	070	5.40
4237-249	2X1	10	160	070	5.40
4237-250	2X1-1/4	10	160	070	5.40
4237-251	2X1-1/2	10	160	070	5.40
4237-290	2-1/2X1-1/4	10	0	070	9.34
4237-291	2-1/2X1-1/2	10	0	070	9.34
4237-292	2-1/2X2	15	0	070	9.34
4237-338	3X2	10	0	070	13.98
4237-339	3X2-1/2	10	0	070	13.98



Cap Socket

4247-007	3/4	25	400	070	1.62
4247-010	1	25	450	070	2.34
4247-012	1-1/4	10	120	070	3.68
4247-015	1-1/2	10	160	070	5.11
4247-020	2	10	60	070	7.78
4247-025	2-1/2	5	40	070	11.04
4247-030	3	5	0	070	18.06

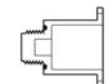


Test Plug - O-ring Sealed

MIPT - For Pressure Testing Only. NOT for use with TorqueSafe™ or Z4235 Series Adapters

FTP-005	1/2	50	400	079	1.78
---------	-----	----	-----	-----	------

DO NOT use with Tape or Paste thread sealants



Test Plug Replacement O-ring

Buna-N, For O-ring Sealed Test Plug Only

B-116	116	100	0	901	.12
-------	-----	-----	---	-----	-----

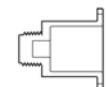
For Use With FTP-005 Test Plug



Test Plug for TorqueSafe™ Gasket Sealed Head Adapters

MIPT - For Pressure Testing Only. Use ONLY with Gasket Sealed Head Adapters

FTP-005GS	1/2	50	400	079	1.78
-----------	-----	----	-----	-----	------

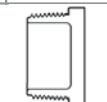


Test Plug - White PVC

MIPT - For Pressure Testing Only

4250-005	1/2	50	400	070	1.76
----------	-----	----	-----	-----	------

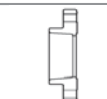
Requires use of a thread sealant



Flange

Socket - 4 Bolt Holes - 175 lb.

4251-007	3/4	25	0	070	5.79
4251-010	1	15	0	070	7.69



FlameGuard® CPVC Fire Sprinkler Products
FlameGuard® CPVC Fire Sprinkler Piping Products



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Flange (continued)

Socket - 4 Bolt Holes - 175 lb.

4251-012	1-1/4	15	0	070	9.91
4251-015	1-1/2	15	0	070	11.48
4251-020	2	10	0	070	17.55
4251-025	2-1/2	10	0	070	29.69

Flange - Van Stone Style

Socket - 4 Bolt Holes - 175 lb.

4254-030	3	10	0	070	36.49
----------	---	----	---	-----	-------

Blind Flange

4 Bolt Holes - 175 lb.

4253-007	3/4	25	0	070	5.79
4253-010	1	15	0	070	8.23
4253-012	1-1/4	15	0	070	10.52
4253-015	1-1/2	15	0	070	11.82
4253-020	2	10	0	070	19.35
4253-025	2-1/2	10	0	070	31.11
4253-030	3	10	0	070	34.17

Flange - Van Stone Style

Spigot - 4 Bolt Holes - 175 lb.

4256-007	3/4	25	0	070	5.97
4256-010	1	15	0	070	8.42
4256-012	1-1/4	15	0	070	10.77
4256-015	1-1/2	15	0	070	12.09
4256-020	2	10	0	070	19.72
4256-025	2-1/2	10	0	070	31.54
4256-030	3	10	0	070	36.80

Union

Socket x Socket

175 psi @ 73°F (23°C)

4257-007	3/4	10	80	070	7.46
4257-010	1	10	40	070	13.53
4257-012	1-1/4	5	20	070	17.71
4257-015	1-1/2	5	0	070	20.99
4257-020	2	5	0	070	34.49

Transition Union - Metal Thread Insert Style

Socket x FIPT

175 psi @ 73°F (23°C)

4259-010BR	1	10	0	076	47.01
4259-012BR	1-1/4	5	20	076	68.93
4259-015BR	1-1/2	5	0	076	97.95
4259-020BR	2	5	0	076	144.44

Not intended to convey or dispense water for human consumption through drinking or cooking

Short Repair Couplings

Spigot x Socket

SH118-07CO	3/4	30	0	025	13.56
SH118-10CO	1	35	0	025	21.98

Blue 75™ Thread Sealant

SB75-005	1/4 Pint	24	0	895	10.46
SB75-010	1/2 Pint	24	0	895	16.66

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Blue 75™ Thread Sealant (continued)

SB75-020	Pint	12	0	895	26.94
SB75-030	Quart	12	0	895	48.41



FS5 One-Step Cement

FS5-020	Pint	12	0	703	28.25
FS5-030	Quart	12	0	703	51.83



Accessories

Empty Can

MT-654*	Pint	12	0	710	7.40
MT-651*	Quart	12	0	710	8.36
MT-653**	Quart	12	0	710	8.36

* 1-3/4" Screw Neck

**TT Paint Type

Brush

KD-110	4-1/2" Length	25	0	710	9.59
KD-112	5-1/2" length	25	0	710	9.59

1" Brush w/1-3/4" Screw Cap, for pipe size 3/4" - 2"



Roller

3020	3" length	20	0	710	16.03
------	-----------	----	---	-----	-------

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3"



Dauber

DP-75	3/4" for Pint	50	0	710	1.31
DP-125	1-1/4" for Pint	50	0	710	1.58
DQ-125	1-1/4" for Quart	50	0	710	1.58

* 3/4" Diameter fits Pint Cans, for pipe size 3/4"

** 1-1/2" Diameter fits Pint Cans, for pipe size 1-1/2"

***1-1/2" Diameter fits Quart Cans, for pipe size 1-1/2"



Can-Mate Dauber

CM-75	3/4"	50	0	710	5.26
CM-150	1-1/4"	50	0	710	5.26

3/4" Diameter fits Pint or Quart Cans, for pipe sizes 3/4" - 1-1/4"

1-1/4" Diameter fits Pint or Quart Cans, for pipe sizes 1-1/2" - 3"



Deburring Tool

Cone Type for pipe 3/4" - 2"

DEB-2	1/2 to 2 Pipe	1	6	710	97.71
-------	---------------	---	---	-----	-------





FlameGuard® CPVC Fire Sprinkler Products
Spears® Sprinkler Head Adapter Removal Kit & CPVC Riser Drain Valves For NFPA 13D Installations Only

Spears® Sprinkler Head Adapter Removal Kit

Occasionally a Sprinkler Head Adapter may need to be removed for relocation, extension or repair. Kit includes Cutter, Deburring Tool and Wrench. Cutter provides easy cutting of pipe from the inside (using a power drill) to remove adapters without disturbing ceiling or side wall. Deburring Tool allows removal of burrs in cut pipe. Wrench is designed to hold Spears® TorqueSafe™ Head Adapter brass insert from rotating to aid in sprinkler head removal from adapter, if required.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Complete Kit
Inside Pipe Cutter, Deburring Tool and Wrench



SHRK-005	3/4" & 1" Pipe	24	0	299	537.82
----------	----------------	----	---	-----	--------

Inside Pipe Cutter Only



GSC-005	3/4" & 1" Pipe	80	0	299	316.05
---------	----------------	----	---	-----	--------

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

Deburring Tool Only



GSB-005	3/4" & 1" Pipe	24	0	299	364.63
---------	----------------	----	---	-----	--------

Wrench Only



GSW-005	For 1/2" Outlet	50	0	299	131.16
---------	-----------------	----	---	-----	--------

CPVC Riser Drain Valves For NFPA 13D Installations Only

FlameGuard® CPVC Drain & Check Valves For NFPA 13D Applications Only

Application: FlameGuard® CPVC Orange Check Valves and PVC/CPVC True Union Drain Valves are for use in configuring CPVC Fire Sprinkler System connection to water supply (riser/drain assembly) in NFPA 13D installations only. These valves are not UL Listed and NOT for use in any other locations within the fire sprinkler system.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
-------------	------	--------	----------	-----------	------------

True Union Industrial Drain Valve
With Locking Handle
Socket x Socket



CPVC Gray Valve with, CPVC Orange End Connector

1822-007CFG	3/4	1	18	004	82.65
1822-010CFG	1	1	12	004	98.40
1822-012CFG	1-1/4	1	8	004	156.43
1822-015CFG	1-1/2	1	8	004	165.21
1822-020CFG	2	1	4	004	220.95

Not UL Listed

True Union Standard Drain Valves
PVC Valve with CPVC End Connector
Socket x Socket



PVC Valve with CPVC End Connector

3622-007FG	3/4	1	18	004	47.03
3622-010FG	1	1	12	004	56.02

Not UL Listed

CPVC Check Valves
Socket x Socket



S1520-10CO	1	20	0	004	32.12
S1520-12CO	1-1/4	12	0	004	35.89
S1520-15CO	1-1/2	12	0	004	40.36

Not UL Listed

CPVC Special Reinforced Thread Inlet Check Valves



SR Fipt x Socket

S1520-10FSRSCO	1	20	0	004	34.78
----------------	---	----	---	-----	-------

CPVC Special Reinforced Thread Inlet Check Valves
(continued)
SR Fipt x Socket

S1520-12FSRSCO	1-1/4	12	0	004	40.16
S1520-15FSRSCO	1-1/2	12	0	004	47.64

Not UL Listed

General Installation Information: Socket end connections should be installed using Spears® FS-5 One-Step Cement for use with Spears® CPVC Fire Sprinkler Products. Threaded connections should be made using Spears® **BLUE 75™** Thread Sealant tested for compatibility with CPVC materials. PVC True Union Drain Valves are to be installed with system connection to Valve CPVC End Connector. Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down.

FlameGuard® CPVC Fire Sprinkler Products
CPVC Riser Drain Valves For NFPA 13D Installations Only



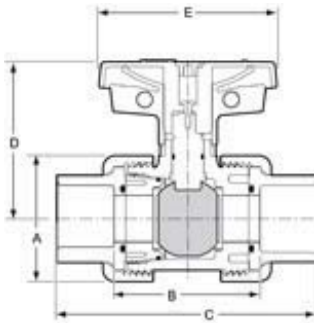
FlameGuard® CPVC Drain & Check Valves For NFPA 13D Applications Only

Specifications

True Union Industrial Drain Valve:

Nominal Size Range
 Type
 Material
 Seats
 Seals
 Handle
 End Connections

3/4", 1", 1-1/4", 1-1/2", 2",
 1/4-Turn Ball Valve, True Union Style with Locking Handle
 CPVC Gray w/CPVC Orange End Connector
 PTFE
 EPDM
 Polypropylene, Red
 Socket x Socket

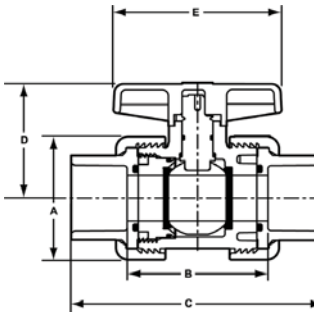


Socket x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)				
		A	B	C	D	E
1822-007CFG	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8
1822-010CFG	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16
1822-012CFG	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8
1822-015CFG	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16
1822-020CFG	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8

True Union Standard Drain Valve:

Nominal Size Range
 Type
 Material
 Seats
 Seals
 Handle
 End Connections

3/4", 1"
 1/4-Turn Ball Valve, True Union Style
 PVC w/CPVC Orange End Connector
 PTFE/HDPE
 EPDM
 Polypropylene, Red
 Socket x Socket

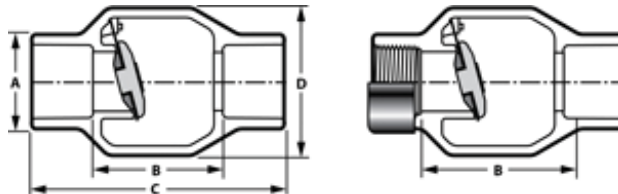


Socket x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)				
		A	B	C	D	E
3622-007FG	3/4	2-1/4	2-3/4	4-3/4	2	3
3622-010FG	1	2-1/2	2-7/8	5-1/8	2-5/16	3-7/16

Check Valve:

Nominal Size Range
 Type
 Material
 Seat
 End Connections

1", 1-1/4", 1-1/2"
 Swing Check, Maintenance-free Sealed Unit
 CPVC, Orange
 EPDM
 Socket x Socket
 Special Reinforced (SR) Female Plastic Thread Inlet x Socket



Socket x Socket Part Number	SR Thread x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)					C _v (GPM)
			A	B		C	D	
				Socket	SR Thread			
S1520-10CO	S1520-10FSRSCO	1	1-11/16	2-5/16	2-15/16	4-9/16	2-5/8	33
S1520-12CO	S1520-12FSRSCO	1-1/4	2-1/16	2-15/16	3-5/8	5-1/2	3-3/8	42
S1520-15CO	S1520-15FSRSCO	1-1/2	2-7/16	3	3-11/16	5-5/8	3-3/8	89



Spears List Price Part Number Index

AAV-015	544	BF-BOK-060P	448	BF-EOK-200P	448	BF-VOK-160P	448	BFC-VRK-080	418
AAV-015C	578	BF-BOK-080	447	BF-EOK-240P	448	BF-VOK-180P	448	BFC-VRK-080C	418
AB-1	733	BF-BOK-080C	448	BF-EOKD-015	448	BF-VOK-200P	448	BFC-VRK-100	418
ABS71M-005	728	BF-BOK-080P	448	BF-EOKD-015C	448	BF-VOK-240P	448	BFC-VRK-100C	418
ABS71M-010	728	BF-BOK-100	447	BF-EOKD-015P	448	BF-VOKD-015	448	BFC-VRK-120	418
ABS71M-020	728	BF-BOK-100C	448	BF-EOKD-020	448	BF-VOKD-015C	448	BFC-VRK-120C	418
ABS71M-030	728	BF-BOK-100P	448	BF-EOKD-020C	448	BF-VOKD-015P	448	BFH-015	444
ABS71M-040	728	BF-BOK-120	447	BF-EOKD-020P	448	BF-VOKD-020	448	BFH-020	444
ABS71Y-005	728	BF-BOK-120C	448	BF-EOKD-025	448	BF-VOKD-020C	448	BFH-030	444
ABS71Y-010	728	BF-BOK-120P	448	BF-EOKD-025C	448	BF-VOKD-020P	448	BFH-040	444
ABS71Y-020	728	BF-BOKD-015	448	BF-EOKD-025P	448	BF-VOKD-025	448	BFH-060	444
ABS71Y-030	728	BF-BOKD-015C	448	BF-EOKD-030	448	BF-VOKD-025C	448	BFH-080	444
ABS71Y-040	728	BF-BOKD-015P	448	BF-EOKD-030C	448	BF-VOKD-025P	448	BFHK-015	443
ABS73B-005	728	BF-BOKD-020	448	BF-EOKD-030P	448	BF-VOKD-030	448	BFHK-020	443
ABS73B-010	728	BF-BOKD-020C	448	BF-EOKD-040	448	BF-VOKD-030C	448	BFHK-030	443
ABS73B-020	728	BF-BOKD-020P	448	BF-EOKD-040C	448	BF-VOKD-030P	448	BFHK-040	443
ABS73B-030	728	BF-BOKD-025	448	BF-EOKD-040P	448	BF-VOKD-040	448	BFHK-060	443
ABS73B-040	728	BF-BOKD-025C	448	BF-EOKD-060	448	BF-VOKD-040C	448	BFHK-080	443
AMB2-005	403	BF-BOKD-025P	448	BF-EOKD-060C	448	BF-VOKD-040P	448	BFHK-120	443
AMB2-007	403	BF-BOKD-030	448	BF-EOKD-060P	448	BF-VOKD-060	448	BFHKL-015	443
AMB2-010	403	BF-BOKD-030C	448	BF-EOKD-080	448	BF-VOKD-060C	448	BFHKL-020	443
AMB2-012	404	BF-BOKD-030P	448	BF-EOKD-080C	448	BF-VOKD-060P	448	BFHKL-025	443
AMB2-015	404	BF-BOKD-040	448	BF-EOKD-080P	448	BF-VOKD-080	448	BFHKL-030	443
AMB2-020	404	BF-BOKD-040C	448	BF-EOKD-100	448	BF-VOKD-080C	448	BFHKL-040	443
AMB2-030	404	BF-BOKD-040P	448	BF-EOKD-100C	448	BF-VOKD-080P	448	BFHKL-080	443
AMB2-040	404	BF-BOKD-060	448	BF-EOKD-100P	448	BF-VOKD-100	448	BFHKL-120	443
AMB2-060	404	BF-BOKD-060C	448	BF-EOKD-120	448	BF-VOKD-100C	448	BFHKL1-015	443
AMB3-005	403	BF-BOKD-060P	448	BF-EOKD-120C	448	BF-VOKD-100P	448	BFHKL1-020	443
AMB3-007	403	BF-BOKD-080	448	BF-EOKD-120P	448	BF-VOKD-120	448	BFHKL1-025	443
AMB3-010	403	BF-BOKD-080C	448	BF-EOKD-140P	448	BF-VOKD-120C	448	BFHKL1-030	443
AMB3-012	404	BF-BOKD-080P	448	BF-EOKD-160P	448	BF-VOKD-120P	448	BFHKL1-040	443
AMB3-015	404	BF-BOKD-100	448	BF-EOKD-180P	448	BF-VOKD-140P	448	BFHKL1-080	443
AMB3-020	404	BF-BOKD-100C	448	BF-EOKD-200P	448	BF-VOKD-160P	448	BFHKL1-120	443
AMB3-030	404	BF-BOKD-100P	448	BF-EOKD-240P	448	BF-VOKD-180P	448	BFHKL2-015	443
AMB3-040	404	BF-BOKD-120	448	BF-ERK-015	447	BF-VOKD-200P	448	BFHKL2-020	443
AMB4-005	403	BF-BOKD-120C	448	BF-ERK-015C	447	BF-VOKD-240P	448	BFHKL2-025	443
AMB4-007	403	BF-BOKD-120P	448	BF-ERK-015P	447	BF-VRK-015	447	BFHKL2-030	443
AMB4-010	403	BF-BRK-015	447	BF-ERK-020	447	BF-VRK-015C	447	BFHKL2-040	443
AMB4-012	404	BF-BRK-015C	447	BF-ERK-020C	447	BF-VRK-015P	447	BFHKL2-080	443
AMB4-015	404	BF-BRK-015P	447	BF-ERK-020P	447	BF-VRK-020	447	BFHKL2-120	443
AMB4-020	404	BF-BRK-020	447	BF-ERK-025	447	BF-VRK-020C	447	BFHK1-015	443
AMB4-030	404	BF-BRK-020C	447	BF-ERK-025C	447	BF-VRK-020P	447	BFHK1-020	443
AMB4-040	404	BF-BRK-020P	447	BF-ERK-025P	447	BF-VRK-025	447	BFHK1-030	443
AMB5-005	403	BF-BRK-025	447	BF-ERK-030	447	BF-VRK-025C	447	BFHK1-040	443
AMB5-007	403	BF-BRK-025C	447	BF-ERK-030C	447	BF-VRK-025P	447	BFHK1-060	443
AMB5-010	403	BF-BRK-025P	447	BF-ERK-030P	447	BF-VRK-030	447	BFHK1-080	443
AMB5-012	403	BF-BRK-030	447	BF-ERK-040	447	BF-VRK-030C	447	BFHK1-120	443
AMB5-015	403	BF-BRK-030C	447	BF-ERK-040C	447	BF-VRK-030P	447	BFHK2-015	443
AMB5-020	403	BF-BRK-030P	447	BF-ERK-040P	447	BF-VRK-040	447	BFHK2-020	443
AMB5-030	403	BF-BRK-040	447	BF-ERK-060	447	BF-VRK-040C	447	BFHK2-030	443
AMB5-040	403	BF-BRK-040C	447	BF-ERK-060C	447	BF-VRK-040P	447	BFHK2-040	443
AMB5-060	403	BF-BRK-040P	447	BF-ERK-060P	447	BF-VRK-060	447	BFHK2-060	443
AMB6-005	403	BF-BRK-060	447	BF-ERK-080	447	BF-VRK-060C	447	BFHK2-080	443
AMB6-007	403	BF-BRK-060C	447	BF-ERK-080C	447	BF-VRK-060P	447	BFHK2-120	443
AMB6-010	403	BF-BRK-060P	447	BF-ERK-080P	447	BF-VRK-080	447	BFSE-015-1020	446
AMB6-012	403	BF-BRK-080	447	BF-ERK-100	447	BF-VRK-080C	447	BFSE-015-1080	446
AMB6-015	403	BF-BRK-080C	447	BF-ERK-100C	447	BF-VRK-080P	447	BFSE-015-1140	446
AMB6-020	403	BF-BRK-080P	447	BF-ERK-100P	447	BF-VRK-100	447	BFSE-015-1200	446
AMB6-030	403	BF-BRK-100	447	BF-ERK-120	447	BF-VRK-100C	447	BFSE-015-240	445
AMB6-040	403	BF-BRK-100C	447	BF-ERK-120C	447	BF-VRK-100P	447	BFSE-015-300	445
AP-100	61, 106	BF-BRK-100P	447	BF-ERK-120P	447	BF-VRK-120	447	BFSE-015-360	446
AP-101	60, 105	BF-BRK-120	447	BF-ERK-140P	447	BF-VRK-120C	447	BFSE-015-420	446
AP-101B	60, 105	BF-BRK-120C	447	BF-ERK-160P	447	BF-VRK-120P	447	BFSE-015-480	446
AP-105	60, 105	BF-BRK-120P	447	BF-ERK-180P	447	BF-VRK-140P	447	BFSE-015-540	446
AP-106	60, 105	BF-EOK-015	447	BF-ERK-200P	447	BF-VRK-160P	447	BFSE-015-600	446
AP-109	60, 105	BF-EOK-015C	448	BF-ERK-240P	447	BF-VRK-180P	447	BFSE-015-660	446
AP-110	60, 105	BF-EOK-015P	448	BF-VOK-015	447	BF-VRK-200P	447	BFSE-015-720	446
AP-112	60, 105	BF-EOK-020	447	BF-VOK-015C	448	BF-VRK-240P	447	BFSE-015-780	446
B-113	72, 101	BF-EOK-020C	448	BF-VOK-015P	448	BFC-ERK-020	418	BFSE-015-840	446
B-115	72, 101	BF-EOK-020P	448	BF-VOK-020	447	BFC-ERK-020C	418	BFSE-015-900	446
B-116	741	BF-EOK-025	447	BF-VOK-020C	448	BFC-ERK-025	418	BFSE-015-960	446
B-120	72, 101	BF-EOK-025C	448	BF-VOK-020P	448	BFC-ERK-025C	418	BFSE-020-1020	446
B-242	54, 111	BF-EOK-025P	448	BF-VOK-025	447	BFC-ERK-030	418	BFSE-020-1080	446
	509	BF-EOK-030	447	BF-VOK-025C	448	BFC-ERK-030C	418	BFSE-020-1140	446
B-335-60	54, 111	BF-EOK-030C	448	BF-VOK-025P	448	BFC-ERK-040	418	BFSE-020-1200	446
	509	BF-EOK-030P	448	BF-VOK-030	447	BFC-ERK-040C	418	BFSE-020-240	446
BC-1	445	BF-EOK-040	447	BF-VOK-030C	448	BFC-ERK-060	418	BFSE-020-300	446
BF-BOK-015	447	BF-EOK-040C	448	BF-VOK-030P	448	BFC-ERK-060C	418	BFSE-020-360	446
BF-BOK-015C	448	BF-EOK-040P	448	BF-VOK-040	447	BFC-ERK-080	418	BFSE-020-420	446
BF-BOK-015P	448	BF-EOK-060	447	BF-VOK-040C	448	BFC-ERK-080C	418	BFSE-020-480	446
BF-BOK-020	447	BF-EOK-060C	448	BF-VOK-040P	448	BFC-ERK-100	418	BFSE-020-540	446
BF-BOK-020C	448	BF-EOK-060P	448	BF-EOK-060	447	BFC-ERK-100C	418	BFSE-020-600	446
BF-BOK-020P	448	BF-EOK-080	447	BF-VOK-060C	448	BFC-ERK-120	418	BFSE-020-660	446
BF-BOK-025	447	BF-EOK-080C	448	BF-VOK-060P	448	BFC-ERK-120C	418	BFSE-020-720	446
BF-BOK-025C	448	BF-EOK-080P	448	BF-VOK-080	447	BFC-VRK-020	418	BFSE-020-780	446
BF-BOK-025P	448	BF-EOK-100	447	BF-VOK-080C	448	BFC-VRK-020C	418	BFSE-020-840	446
BF-BOK-030	447	BF-EOK-100C	448	BF-VOK-080P	448	BFC-VRK-025	418	BFSE-020-900	446
BF-BOK-030C	448	BF-EOK-100P	448	BF-VOK-100	447	BFC-VRK-025C	418	BFSE-020-960	446
BF-BOK-030P	448	BF-EOK-120	447	BF-VOK-100C	448	BFC-VRK-030	418	BFSE-030-1020	446
BF-BOK-040	447	BF-EOK-120C	448	BF-VOK-100P	448	BFC-VRK-030C	418	BFSE-030-1080	446
BF-BOK-040C	448	BF-EOK-120P	448	BF-VOK-120	447	BFC-VRK-040	418	BFSE-030-1140	446
BF-BOK-040P	448	BF-EOK-140P	448	BF-VOK-120C	448	BFC-VRK-040C	418	BFSE-030-1200	446
BF-BOK-060	447	BF-EOK-160P	448	BF-VOK-120P	448	BFC-VRK-060	418	BFSE-030-240	446
BF-BOK-060C	448	BF-EOK-180P	448	BF-VOK-140P	448	BFC-VRK-060C	418	BFSE-030-300	446

Spears List Price Part Number Index



BFSE-030-360	446	BFSE-120-960	446	BFT-VOKD-020C	449	BS22C6-080C	345, 524	BS27C6-005C	346, 525	BS32S6-040	269, 523
BFSE-030-420	446	BFT-BOK-015	449	BFT-VOKD-025	449	BS22C6-100C	345, 524	BS27C6-007C	346, 525	BS32S6-040C	345, 524
BFSE-030-480	446	BFT-BOK-015C	449	BFT-VOKD-025C	449	BS22C6-120C	345, 524	BS27C6-010C	346, 525	BS32S6-060	269, 523
BFSE-030-540	446	BFT-BOK-020	449	BFT-VOKD-030	449	BS22P6-005	269, 523	BS27C6-012C	346, 525	BS32S6-060C	345, 524
BFSE-030-600	446	BFT-BOK-020C	449	BFT-VOKD-030C	449	BS22P6-007	269, 523	BS27C6-015C	346, 525	BS32S6-080	269, 523
BFSE-030-660	446	BFT-BOK-025	449	BFT-VOKD-040	449	BS22P6-010	269, 523	BS27C6-020C	346, 525	BS32S6-080C	345, 524
BFSE-030-720	446	BFT-BOK-025C	449	BFT-VOKD-040C	449	BS22P6-012	269, 523	BS27C6-025C	346, 525	BS32S6-100	269, 523
BFSE-030-780	446	BFT-BOK-030	449	BFT-VOKD-060	449	BS22P6-015	269, 523	BS27C6-030C	346, 525	BS32S6-100C	345, 524
BFSE-030-840	446	BFT-BOK-030C	449	BFT-VOKD-060C	449	BS22P6-020	269, 523	BS27C6-040C	346, 525	BS32S6-120	269, 523
BFSE-030-900	446	BFT-BOK-040	449	BFT-VOKD-080	449	BS22P6-025	269, 523	BS27C6-060C	346, 525	BS32S6-120C	345, 524
BFSE-030-960	446	BFT-BOK-040C	449	BFT-VOKD-080C	449	BS22P6-030	269, 523	BS27C6-080C	346, 525	BS33C6-005C	345, 525
BFSE-040-1020	446	BFT-BOK-060	449	BFT-VOKD-100	449	BS22P6-040	269, 523	BS27C6-100C	346, 525	BS33C6-007C	345, 525
BFSE-040-1080	446	BFT-BOK-060C	449	BFT-VOKD-100C	449	BS22P6-060	269, 523	BS27C6-120C	346, 525	BS33C6-010C	345, 525
BFSE-040-1140	446	BFT-BOK-080	449	BFT-VOKD-120	449	BS22P6-080	269, 523	BS27P6-005	270, 524	BS33C6-012C	345, 525
BFSE-040-1200	446	BFT-BOK-080C	449	BFT-VOKD-120C	449	BS22P6-100	269, 523	BS27P6-007	270, 524	BS33C6-015C	345, 525
BFSE-040-240	446	BFT-BOK-100	449	BFTH-020	444	BS22P6-120	269, 523	BS27P6-010	270, 524	BS33C6-020C	345, 525
BFSE-040-300	446	BFT-BOK-100C	449	BFTH-030	444	BS22S6-005	269, 523	BS27P6-012	270, 524	BS33C6-025C	345, 525
BFSE-040-360	446	BFT-BOK-120	449	BFTH-040	444	BS22S6-005C	345, 524	BS27P6-015	270, 524	BS33C6-030C	346, 525
BFSE-040-420	446	BFT-BOK-120C	449	BFW-BOK-020	448	BS22S6-007	269, 523	BS27P6-020	270, 524	BS33C6-040C	346, 525
BFSE-040-480	446	BFT-BOKD-015	449	BFW-BOK-025	448	BS22S6-007C	345, 524	BS27P6-025	270, 524	BS33C6-060C	346, 525
BFSE-040-540	446	BFT-BOKD-015C	449	BFW-BOK-030	448	BS22S6-010	269, 523	BS27P6-030	270, 524	BS33C6-080C	346, 525
BFSE-040-600	446	BFT-BOKD-020	449	BFW-BOK-040	448	BS22S6-010C	345, 524	BS27P6-040	270, 524	BS33C6-100C	346, 525
BFSE-040-660	446	BFT-BOKD-020C	449	BFW-BOK-060	449	BS22S6-012	269, 523	BS27P6-060	270, 524	BS33C6-120C	346, 525
BFSE-040-720	446	BFT-BOKD-025	449	BFW-BOK-080	449	BS22S6-012C	345, 524	BS27P6-080	270, 524	BS33P6-005	269, 523
BFSE-040-780	446	BFT-BOKD-025C	449	BFW-BOKD-020	449	BS22S6-015	269, 523	BS27P6-100	270, 524	BS33P6-007	269, 523
BFSE-040-840	446	BFT-BOKD-030	449	BFW-BOKD-025	449	BS22S6-015C	345, 524	BS27P6-120	270, 524	BS33P6-010	269, 523
BFSE-040-900	446	BFT-BOKD-030C	449	BFW-BOKD-030	449	BS22S6-020	269, 523	BS27S6-005	270, 524	BS33P6-012	269, 523
BFSE-040-960	446	BFT-BOKD-040	449	BFW-BOKD-040	449	BS22S6-020C	345, 524	BS27S6-005C	346, 525	BS33P6-015	269, 523
BFSE-060-1020	446	BFT-BOKD-040C	449	BFW-BOKD-060	449	BS22S6-025	269, 523	BS27S6-007	270, 524	BS33P6-020	269, 523
BFSE-060-1080	446	BFT-BOKD-060	449	BFW-BOKD-080	449	BS22S6-025C	345, 524	BS27S6-007C	346, 525	BS33P6-025	270, 523
BFSE-060-1140	446	BFT-BOKD-060C	449	BFW-BRK-020	447	BS22S6-030	269, 523	BS27S6-010	270, 524	BS33P6-030	270, 524
BFSE-060-1200	446	BFT-BOKD-080	449	BFW-BRK-025	447	BS22S6-030C	345, 524	BS27S6-010C	346, 525	BS33P6-040	270, 524
BFSE-060-240	446	BFT-BOKD-080C	449	BFW-BRK-030	447	BS22S6-040	269, 523	BS27S6-012	270, 524	BS33P6-060	270, 524
BFSE-060-300	446	BFT-BOKD-100	449	BFW-BRK-040	447	BS22S6-040C	345, 524	BS27S6-012C	346, 525	BS33P6-080	270, 524
BFSE-060-360	446	BFT-BOKD-100C	449	BFW-BRK-060	447	BS22S6-060	269, 523	BS27S6-015	270, 524	BS33P6-100	270, 524
BFSE-060-420	446	BFT-BOKD-120	449	BFW-BRK-080	447	BS22S6-060C	345, 524	BS27S6-015C	346, 525	BS33P6-120	270, 524
BFSE-060-480	446	BFT-BOKD-120C	449	BFW-EOK-020	448	BS22S6-080	269, 523	BS27S6-020	270, 524	BS33S6-005	269, 523
BFSE-060-540	446	BFT-EOK-015	449	BFW-EOK-025	448	BS22S6-080C	345, 524	BS27S6-020C	346, 525	BS33S6-005C	345, 525
BFSE-060-600	446	BFT-EOK-015C	449	BFW-EOK-030	448	BS22S6-100	269, 523	BS27S6-025	270, 524	BS33S6-007	269, 523
BFSE-060-660	446	BFT-EOK-020	449	BFW-EOK-040	448	BS22S6-100C	345, 524	BS27S6-025C	346, 525	BS33S6-007C	345, 525
BFSE-060-720	446	BFT-EOK-020C	449	BFW-EOK-060	449	BS22S6-120	269, 523	BS27S6-030	270, 524	BS33S6-010	269, 523
BFSE-060-780	446	BFT-EOK-025	449	BFW-EOK-080	449	BS22S6-120C	345, 524	BS27S6-030C	346, 525	BS33S6-010C	345, 525
BFSE-060-840	446	BFT-EOK-025C	449	BFW-EOKD-020	449	BS23C6-005C	345, 525	BS27S6-040	270, 524	BS33S6-012	269, 523
BFSE-060-900	446	BFT-EOK-030	449	BFW-EOKD-020C	449	BS23C6-007C	345, 525	BS27S6-040C	346, 525	BS33S6-012C	345, 525
BFSE-060-960	446	BFT-EOK-030C	449	BFW-EOKD-025	449	BS23C6-010C	345, 525	BS27S6-060	270, 524	BS33S6-015	269, 523
BFSE-080-1020	446	BFT-EOK-040	449	BFW-EOKD-025C	449	BS23C6-012C	345, 525	BS27S6-060C	346, 525	BS33S6-015C	345, 525
BFSE-080-1080	446	BFT-EOK-040C	449	BFW-EOKD-030	449	BS23C6-015C	345, 525	BS27S6-080	270, 524	BS33S6-020	269, 523
BFSE-080-1140	446	BFT-EOK-060	449	BFW-EOKD-030C	449	BS23C6-020C	345, 525	BS27S6-080C	346, 525	BS33S6-020C	345, 525
BFSE-080-1200	446	BFT-EOK-060C	449	BFW-EOKD-040	449	BS23C6-025C	345, 525	BS27S6-100	270, 524	BS33S6-025	270, 523
BFSE-080-240	446	BFT-EOK-080	449	BFW-EOKD-040C	449	BS23C6-030C	346, 525	BS27S6-100C	346, 525	BS33S6-025C	345, 525
BFSE-080-300	446	BFT-EOK-080C	449	BFW-EOKD-060	449	BS23C6-040C	346, 525	BS27S6-120	270, 524	BS33S6-030	270, 524
BFSE-080-360	446	BFT-EOK-100	449	BFW-EOKD-060C	449	BS23C6-060C	346, 525	BS27S6-120C	346, 525	BS33S6-030C	346, 525
BFSE-080-420	446	BFT-EOK-100C	449	BFW-EOKD-080	449	BS23C6-080C	346, 525	BS32C6-005C	345, 524	BS33S6-040	270, 524
BFSE-080-480	446	BFT-EOK-120	449	BFW-EOKD-080C	449	BS23C6-100C	346, 525	BS32C6-007C	345, 524	BS33S6-040C	346, 525
BFSE-080-540	446	BFT-EOK-120C	449	BFW-ERK-020	447	BS23C6-120C	346, 525	BS32C6-010C	345, 524	BS33S6-060	270, 524
BFSE-080-600	446	BFT-EOKD-015	449	BFW-ERK-025	447	BS23P6-005	269, 523	BS32C6-012C	345, 524	BS33S6-060C	346, 525
BFSE-080-660	446	BFT-EOKD-015C	449	BFW-ERK-030	447	BS23P6-007	269, 523	BS32C6-015C	345, 524	BS33S6-080	270, 524
BFSE-080-720	446	BFT-EOKD-020	449	BFW-ERK-040	447	BS23P6-010	269, 523	BS32C6-020C	345, 524	BS33S6-080C	346, 525
BFSE-080-780	446	BFT-EOKD-020C	449	BFW-ERK-060	447	BS23P6-012	269, 523	BS32C6-025C	345, 524	BS33S6-100	270, 524
BFSE-080-840	446	BFT-EOKD-025	449	BFW-ERK-080	447	BS23P6-015	269, 523	BS32C6-030C	345, 524	BS33S6-100C	346, 525
BFSE-080-900	446	BFT-EOKD-025C	449	BFW-VOK-020	448	BS23P6-020	269, 523	BS32C6-040C	345, 524	BS33S6-120	270, 524
BFSE-080-960	446	BFT-EOKD-030	449	BFW-VOK-025	448	BS23P6-025	270, 523	BS32C6-060C	345, 524	BS33S6-120C	346, 525
BFSE-100-1020	446	BFT-EOKD-030C	449	BFW-VOK-030	448	BS23P6-030	270, 524	BS32C6-080C	345, 524	BS33S6-005C	346, 525
BFSE-100-1080	446	BFT-EOKD-040	449	BFW-VOK-040	448	BS23P6-040	270, 524	BS32C6-100C	345, 524	BS37C6-007C	346, 525
BFSE-100-1140	446	BFT-EOKD-040C	449	BFW-VOK-060	449	BS23P6-060	270, 524	BS32C6-120C	345, 524	BS37C6-010C	346, 525
BFSE-100-1200	446	BFT-EOKD-060	449	BFW-VOK-080	449	BS23P6-080	270, 524	BS32P6-005	269, 523	BS37C6-012C	346, 525
BFSE-100-240	446	BFT-EOKD-060C	449	BFW-VOKD-020	449	BS23P6-100	270, 524	BS32P6-007	269, 523	BS37C6-015C	346, 525
BFSE-100-300	446	BFT-EOKD-080	449	BFW-VOKD-020C	449	BS23P6-120	270, 524	BS32P6-010	269, 523	BS37C6-020C	346, 525
BFSE-100-360	446	BFT-EOKD-080C	449	BFW-VOKD-025	449	BS23S6-005	269, 523	BS32P6-012	269, 523	BS37C6-025C	346, 525
BFSE-100-420	446	BFT-EOKD-100	449	BFW-VOKD-025C	449	BS23S6-005C	345, 525	BS32P6-015	269, 523	BS37C6-030C	346, 525
BFSE-100-480	446	BFT-EOKD-100C	449	BFW-VOKD-030	449	BS23S6-007	269, 523	BS32P6-020	269, 523	BS37C6-040C	346, 525
BFSE-100-540	446	BFT-EOKD-120	449	BFW-VOKD-030C	449	BS23S6-007C	345, 525	BS32P6-025	269, 523	BS37C6-060C	346, 525
BFSE-100-600	446	BFT-EOKD-120C	449	BFW-VOKD-040	449	BS23S6-010	269, 523	BS32P6-030	269, 523	BS37C6-080C	346, 525
BFSE-100-660	446	BFT-VOK-015	449	BFW-VOKD-040C	449	BS23S6-010C	345, 525	BS32P6-040	269, 523	BS37C6-100C	346, 525
BFSE-100-720	446	BFT-VOK-015C	449	BFW-VOKD-060	449	BS23S6-012	269, 523	BS32P6-060	269, 523	BS37C6-120C	346, 525
BFSE-100-780	446	BFT-VOK-020	449	BFW-VOKD-060C	449	BS23S6-012C	345, 525	BS32P6-080	269, 523	BS37P6-005	270, 524
BFSE-100-840	446	BFT-VOK-020C	449	BFW-VOKD-080	449	BS23S6-015	269, 523	BS32P6-100	269, 523	BS37P6-007	270, 524
BFSE-100-900	446	BFT-VOK-025	449	BFW-VOKD-080C	449	BS23S6-015C	345, 525	BS32P6-120	269, 523	BS37P6-010	270, 524
BFSE-100-960	446	BFT-VOK-025C	449	BFW-VRK-020	447	BS23S6-020	269, 523	BS32S6-005	269, 523	BS37P6-012	270, 524
BFSE-120-1020	446	BFT-VOK-030	449	BFW-VRK-025	447	BS23S6-020C	345, 525	BS32S6-005C	345, 524	BS37P6-015	270, 524
BFSE-12											



Spears List Price Part Number Index

BS37S6-012	270, 524	CK2-ERK-012	405	CTS5-040	727	DCCF-C120	617	DCDB-C015-G040	619	DC01-A005-G020	607
BS37S6-012C	346, 525	CK2-ERK-015	405	DCAT-A005-A020	615	DCCF-G030	617	DCDB-C020-A040	618	DC01-A007-A030	607
BS37S6-015	270, 524	CK2-ERK-020	405	DCAT-A005-G020	615	DCCF-G040	617	DCDB-C020-B040	618	DC01-A007-G030	607
BS37S6-015C	346, 525	CK2-ERK-030	405	DCAT-A007-A030	615	DCCF-G060	617	DCDB-C020-C040	618	DC01-A010-A030	607
BS37S6-020	270, 524	CK2-ERK-040	405	DCAT-A007-G030	615	DCCF-G080	617	DCDB-C020-G040	619	DC01-A010-G030	607
BS37S6-020C	346, 525	CK2-ERK-060	405	DCAT-A010-A030	615	DCCT-H005-A020	622	DCDB-C030-A060	618	DC01-A015-A040	607
BS37S6-025	270, 524	CK2-VRK-005	405	DCAT-A010-G030	615	DCCT-H005-B020	622	DCDB-C030-B060	618	DC01-A015-G040	607
BS37S6-025C	346, 525	CK2-VRK-007	405	DCAT-A015-A040	615	DCCT-H005-C020	622	DCDB-C030-C060	618	DC01-A020-A040	607
BS37S6-030	270, 524	CK2-VRK-010	405	DCAT-A015-G040	615	DCCT-H005-G020	622	DCDB-C030-G060	619	DC01-A020-G040	607
BS37S6-030C	346, 525	CK2-VRK-012	405	DCAT-A020-A040	615	DCCT-H007-A030	622	DCDB-C040-A080	618	DC01-A030-A060	607
BS37S6-040	270, 524	CK2-VRK-015	405	DCAT-A020-G040	615	DCCT-H007-B020	622	DCDB-C040-B080	618	DC01-A030-G060	607
BS37S6-040C	346, 525	CK2-VRK-020	405	DCAT-A030-A060	615	DCCT-H007-C030	622	DCDB-C040-C080	618	DC01-A040-A080	607
BS37S6-060	270, 524	CK2-VRK-030	405	DCAT-A030-G060	615	DCCT-H007-G020	622	DCDB-C060-A100	618	DC01-A040-G080	607
BS37S6-060C	346, 525	CK2-VRK-040	405	DCAT-A040-A080	615	DCCT-H010-A030	622	DCDB-C060-B100	618	DC01-A060-A100	607
BS37S6-080	270, 524	CK2-VRK-060	405	DCAT-A040-G080	615	DCCT-H010-B030	622	DCDB-C060-C100	618	DC01-A080-A120	607
BS37S6-080C	346, 525	CLEAN65-005	5, 185	DCAT-A060-A100	615	DCCT-H010-C030	622	DCDB-C080-A120	618	DC01-B005-A020	607
BS37S6-100	270, 524	CLEAN65-010	276, 731	DCAT-A080-A120	615	DCCT-H010-G030	622	DCDB-C080-B120	618	DC01-B005-B020	607
BS37S6-100C	346, 525	CLEAN65-010	5, 185	DCAT-B005-A020	615	DCCT-H015-A040	622	DCDB-C080-C120	618	DC01-B005-G020	607
BS37S6-120	270, 524	CLEAN65-020	276, 731	DCAT-B005-B020	615	DCCT-H015-B040	622	DCDB-C080-C120	618	DC01-B007-A030	607
BS37S6-120C	346, 525	CLEAN65-020	5, 185	DCAT-B005-G020	615	DCCT-H015-C040	622	DCDB-C080-C120	618	DC01-B007-B030	607
BVSE-005-000	401	CLEAN65-030	276, 731	DCAT-B007-A030	615	DCCT-H015-G040	622	DCDB-C080-C120	618	DC01-B007-G030	607
BVSE-007-000	401	CLEAN65-030	5, 185	DCAT-B007-B030	615	DCCT-H020-A040	622	DCDB-C080-C120	618	DC01-B010-A030	607
BVSE-010-000	401	CLEAN65-040	276, 731	DCAT-B007-G030	615	DCCT-H020-B040	622	DCDB-C080-C120	618	DC01-B010-B030	607
BVSE-012-000	401	CLEAN65-040	5, 185	DCAT-B010-A030	615	DCCT-H020-C040	622	DCDB-C080-C120	618	DC01-B010-G030	607
BVSE-015-000	401	CM-KIT	276, 731	DCAT-B010-B030	615	DCCT-H020-G040	622	DCDB-C080-C120	618	DC01-B015-A040	607
BVSE-020-000	401	CM-150	732	DCAT-B010-G030	615	DCCT-H030-A060	622	DCDB-C080-C120	618	DC01-B015-B040	607
BVSE-030-000	401	CM-150	564, 568	DCAT-B015-A040	615	DCCT-H030-B060	622	DCDB-C080-C120	618	DC01-B015-G040	607
BVSE-040-000	401	CM-150	580, 732	DCAT-B015-B040	615	DCCT-H030-C060	622	DCDB-C080-C120	618	DC01-B020-A040	607
BVSE2-005-000	401	CM-50	742	DCAT-B015-G040	615	DCCT-H030-G060	622	DCDB-C080-C120	618	DC01-B020-B040	607
BVSE2-007-000	401	CM-75	564, 732	DCAT-B020-A040	615	DCCT-H040-A080	622	DCDB-C080-C120	618	DC01-B020-G040	607
BVSE2-010-000	401	CM-75	564, 568	DCAT-B020-B040	615	DCCT-H040-B080	622	DCDB-C080-C120	618	DC01-B030-A060	607
BVSE2-012-000	401	CM-75	580, 732	DCAT-B020-G040	615	DCCT-H040-C080	622	DCDB-C080-C120	618	DC01-B030-B060	607
BVSE2-015-000	401	CM-75	742	DCAT-B030-A060	615	DCCT-H040-G080	622	DCDB-C080-C120	618	DC01-B030-G060	607
BVSE2-020-000	401	CO-020	445	DCAT-B030-B060	615	DCCT-H060-A100	622	DCDB-C080-C120	618	DC01-B040-A080	607
BVSE2-030-000	401	CO-025	445	DCAT-B030-G060	615	DCCT-H060-B100	622	DCDB-C080-C120	618	DC01-B040-B080	607
BVSE2-040-000	401	CO-030	445	DCAT-B040-A080	615	DCCT-H060-C100	622	DCDB-C080-C120	618	DC01-B040-G080	607
BVSE2-060-000	401	CO-040	445	DCAT-B040-B080	615	DCCT-H080-A120	622	DCDB-C080-C120	618	DC01-B060-A100	607
C-44	60, 105	CO-060	445	DCAT-B040-G080	615	DCCT-H080-B120	622	DCDB-C080-C120	618	DC01-B060-B100	607
C-55	60, 105	CO-080	445	DCAT-B060-A100	615	DCCT-H080-C120	622	DCDB-C080-C120	618	DC01-B080-A120	607
C-66	60, 105	CO-100	445	DCAT-B060-B100	615	DCDB-A005-A020	618	DCDB-C080-C120	618	DC01-B080-B120	607
CCW-000	50, 83	CO-120	445	DCAT-B080-A120	615	DCDB-A005-G020	618	DCDB-C080-C120	618	DC01-B080-G030	607
CCW-005	224, 422	CP-007	721, 738	DCAT-B080-B120	615	DCDB-A007-A030	618	DCDB-C080-C120	618	DC01-C005-A020	607
CCW-007	224, 422	CP-007-10	721, 738	DCAT-C005-B020	615	DCDB-A007-G030	618	DCDB-C080-C120	618	DC01-C005-B020	607
CCW-010	50, 83	CP-010	721, 738	DCAT-C005-C020	615	DCDB-A010-A030	618	DCDB-C080-C120	618	DC01-C005-G020	607
CCW-012	224, 422	CP-010-10	721, 738	DCAT-C005-G020	615	DCDB-A010-G030	618	DCDB-C080-C120	618	DC01-C007-A030	607
CCW-015	50, 83	CP-012	721, 738	DCAT-C007-A030	615	DCDB-A015-A040	618	DCDB-C080-C120	618	DC01-C007-B030	607
CCW-020	224, 422	CP-012-10	721, 738	DCAT-C007-B030	615	DCDB-A015-G040	618	DCDB-C080-C120	618	DC01-C007-G030	607
CCW-030	50, 83	CP-015	721, 738	DCAT-C007-C030	615	DCDB-A020-A040	618	DCDB-C080-C120	618	DC01-C010-A030	607
CCW-060	224, 422	CP-015-10	721, 738	DCAT-C007-G030	615	DCDB-A020-B040	618	DCDB-C080-C120	618	DC01-C010-B030	607
CFVS1-005	244, 411	CP-020	721, 738	DCAT-C010-A030	615	DCDB-A030-A060	618	DCDB-C080-C120	618	DC01-C010-G030	607
CFVS1-005P	244, 411	CP-020-10	721, 738	DCAT-C010-B030	615	DCDB-A030-G060	618	DCDB-C080-C120	618	DC01-C015-A040	607
CFVS1-007	244, 411	CP-025	721, 738	DCAT-C010-C030	615	DCDB-A040-A080	618	DCDB-C080-C120	618	DC01-C015-B040	607
CFVS1-007P	244, 411	CP-025-10	721, 738	DCAT-C010-G030	615	DCDB-A040-G080	618	DCDB-C080-C120	618	DC01-C015-G040	607
CFVS1-010	244, 411	CP-030	721, 738	DCAT-C015-A040	615	DCDB-A060-A100	618	DCDB-C080-C120	618	DC01-C015-C040	607
CFVS1-010P	244, 411	CP-030-10	721, 738	DCAT-C015-B040	615	DCDB-A080-A120	618	DCDB-C080-C120	618	DC01-C015-G040	607
CFVS1-012	244, 411	CPVC24G-005	184, 275	DCAT-C015-C040	615	DCDB-B005-A020	618	DCDB-C080-C120	618	DC01-C020-A040	607
CFVS1-012P	244, 411	CPVC24G-010	184, 275	DCAT-C015-G040	615	DCDB-B005-B020	618	DCDB-C080-C120	618	DC01-C020-B040	607
CFVS1-015	244, 411	CPVC24G-020	184, 275	DCAT-C020-A040	615	DCDB-B005-G020	618	DCDB-C080-C120	618	DC01-C020-C040	607
CFVS1-015P	244, 411	CPVC24G-030	184, 275	DCAT-C020-B040	615	DCDB-B007-A030	618	DCDB-C080-C120	618	DC01-C020-G040	607
CFVS1-020P	244, 411	CPVC24G-040	184, 275	DCAT-C020-G040	615	DCDB-B007-B030	618	DCDB-C080-C120	618	DC01-C030-A060	607
CFVS7-005	244, 411	CPVC24G-050	184, 275	DCAT-C030-A060	615	DCDB-B010-A030	618	DCDB-C080-C120	618	DC01-C030-B060	607
CFVS7-007	244, 411	CPVC24G-060	184, 275	DCAT-C030-B060	615	DCDB-B010-G030	618	DCDB-C080-C120	618	DC01-C030-G060	607
CFVS7-010	244, 411	CPVC24G-070	184, 275	DCAT-C030-C060	615	DCDB-B015-A040	618	DCDB-C080-C120	618	DC01-C040-A080	607
CFVS7-012	244, 411	CPVC24G-080	184, 275	DCAT-C030-G060	615	DCDB-B015-B040	618	DCDB-C080-C120	618	DC01-C040-B080	607
CFVS7-015	244, 411	CPVC24G-090	184, 275	DCAT-C040-A080	615	DCDB-B015-G040	618	DCDB-C080-C120	618	DC01-C040-G080	607
CFVS7-020	244, 411	CPVC24G-100	184, 275	DCAT-C040-B080	615	DCDB-B020-A040	618	DCDB-C080-C120	618	DC01-C040-A100	607
CK-ERK-005	405	CPVC24G-110	184, 275	DCAT-C040-G080	615	DCDB-B020-B040	618	DCDB-C080-C120	618	DC01-C040-B100	607
CK-ERK-007	405	CPVC24G-120	184, 275	DCAT-C060-A100	615	DCDB-B030-A060	618	DCDB-C080-C120	618	DC01-C060-A100	607
CK-ERK-010	405	CPVC24G-130	184, 275	DCAT-C060-B100	615	DCDB-B030-G060	618	DCDB-C080-C120	618	DC01-C060-B100	607
CK-ERK-012	405	CPVC24G-140	184, 275	DCAT-C060-C100	615	DCDB-B030-B060	618	DCDB-C080-C120	618	DC01-C060-C100	607
CK-ERK-015	405	CPVC24G-150	184, 275	DCAT-C080-A120	615	DCDB-B040-A080	618	DCDB-C080-C120	618	DC01-C080-A120	607
CK-ERK-020	405	CPVC24G-160	184, 275	DCAT-C080-B120	615	DCDB-B040-B080	618	DCDB-C080-C120	618	DC01-C080-B120	607
CK-ERK-030	405	CPVC24G-170	184, 275	DCAT-C080-C120	615	DCDB-B040-G080	618	DCDB-C080-C120	618	DC01-C080-C120	607
CK-ERK-040	405	CPVC24G-180	184, 275	DCAT-C080-G120	615	DCDB-B060-A100	618	DCDB-C080-C120	618	DC01-C080-G120	607
CK-VRK-005	405	CTS-005	563, 714	DCCF-A030	617	DCDB-B060-B100	618	DCDB-C080-C120	618	DC01-C080-A120	607
CK-VRK-007	405	CTS-005-100	563, 714	DCCF-A040	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B005-A020	607
CK-VRK-010	405	CTS-005-20	563, 714	DCCF-A060	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B005-B020	607
CK-VRK-012	405	CTS-007	563, 714	DCCF-A080	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B005-G020	607
CK-VRK-015	405	CTS-007-100	563, 714	DCCF-A100	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B010-A030	607
CK-VRK-020	405	CTS-007-20	563, 714	DCCF-A120	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B010-B030	607
CK-VRK-030	405	CTS-010	563, 714	DCCF-B020	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B010-G030	607
CK-VRK-040	405	CTS-010-100	563, 714	DCCF-B030	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B015-A040	607
CK-VRK-050	405	CTS-010-20	563, 714	DCCF-B040	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B015-B040	607
CK-VRK-060	405	CTS-012	563, 714	DCCF-B060	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B015-G040	607
CK-VRK-070	405	CTS-012-20	563, 714	DCCF-B080	617	DCDB-B080-B120	618	DCDB-C080-C120	618	DC01-B020-A040	607
CK-VRK-080	405	CTS-015	563, 714	DCCF-B1							

Spears List Price Part Number Index



DC06-B007-B030	609	DC17-B080-A120	611	DC29-C020-B040	613	ECSP2-005C	399	ECS2-060C	399	EP-663	63, 108
DC06-B007-G030	609	DC17-B080-B120	611	DC29-C020-C040	613	ECSP2-007	399	ECS3-005	399	EP-664	63, 108
DC06-B010-A030	609	DC17-C005-A020	611	DC29-C020-G040	614	ECSP2-007C	399	ECS3-005C	399	EP-1	733
DC06-B010-B030	609	DC17-C005-B020	611	DC29-C030-A060	613	ECSP2-010	399	ECS3-007	399	ES-443	62, 108
DC06-B010-G030	609	DC17-C005-C020	611	DC29-C030-B060	613	ECSP2-010C	400	ECS3-007C	399	ES-444	62, 108
DC06-B015-A040	609	DC17-C005-G020	611	DC29-C030-C060	613	ECSP2-012	399	ECS3-010	399	ES-543	62, 108
DC06-B015-B040	609	DC17-C007-A030	611	DC29-C030-G060	614	ECSP2-012C	400	ECS3-010C	399	ES-544	62, 108
DC06-B015-G040	609	DC17-C007-B030	611	DC29-C040-A080	613	ECSP2-015	399	ECS3-012	399	ES-553	62, 108
DC06-B020-A040	609	DC17-C007-C030	611	DC29-C040-B080	613	ECSP2-015C	400	ECS3-012C	399	ES-554	62, 108
DC06-B020-B040	609	DC17-C007-G030	611	DC29-C040-C080	613	ECSP2-020	399	ECS3-015	399	ES-653	62, 108
DC06-B020-G040	609	DC17-C010-A030	611	DC29-C040-G080	614	ECSP2-020C	400	ECS3-015C	399	ES-654	62, 108
DC06-B030-A060	609	DC17-C010-B030	611	DC29-C060-A100	613	ECSP2-025	399	ECS3-020	399	ES-663	62, 108
DC06-B030-B060	609	DC17-C010-C030	611	DC29-C060-B100	613	ECSP2-025C	400	ECS3-020C	399	ES-664	63, 108
DC06-B030-G060	609	DC17-C010-G030	611	DC29-C060-C100	613	ECSP2-030	399	ECS3-025	399	E1404-005	81, 470
DC06-B040-A080	609	DC17-C015-A040	611	DC29-C080-A120	613	ECSP2-030C	400	ECS3-025C	399	E1404-005C	470
DC06-B040-B080	609	DC17-C015-B040	611	DC29-C080-B120	613	ECSP2-040	399	ECS3-030	399	E1404-007	81, 470
DC06-B040-G080	609	DC17-C015-C040	611	DC29-C080-C120	613	ECSP2-040C	400	ECS3-030C	399	E1404-007C	470
DC06-B060-A100	609	DC17-C015-G040	611	DEB-2	564, 568	ECSP3-005	399	ECS3-040	399	E1404-010	81, 470
DC06-B060-B100	609	DC17-C020-A040	611	DET-005	734, 742	ECSP3-005C	399	ECS3-040C	399	E1404-010C	470
DC06-B080-A120	609	DC17-C020-B040	611	DES-005	560, 561	ECSP3-007	399	ECS3-060	399	E1405-005	81, 470
DC06-B080-B120	609	DC17-C020-C040	611	DET-005	561	ECSP3-007C	399	ECS3-060C	399	E1405-005C	470
DC06-C005-A020	609	DC17-C020-G040	612	DEZ4107-005SR	364, 561	ECSP3-010	399	EHP-007	60, 105	E1405-007	81, 470
DC06-C005-B020	609	DC17-C030-A060	611	DE4101-005	560	ECSP3-010C	400	EHP-101	60, 105	E1405-007C	470
DC06-C005-C020	609	DC17-C030-B060	611	DE4106-005	561	ECSP3-012	399	EJ01-007SR	218, 354	E1405-010	81, 470
DC06-C005-G020	609	DC17-C030-C060	611	DE4107-005SR	364, 561	ECSP3-012C	400		530	E1405-010C	470
DC06-C007-A030	609	DC17-C030-G060	612	DHP-38	563, 732	ECSP3-015	399	EJ01-010SR	218, 354	E1406-005	81, 470
DC06-C007-B030	609	DC17-C040-A080	611	DHP-50	563, 732	ECSP3-015C	400		530	E1406-005C	470
DC06-C007-C030	609	DC17-C040-B080	611	DHP-75	563, 732	ECSP3-020	399	EJ01-012SR	218, 354	E1406-007	81, 470
DC06-C007-G030	609	DC17-C040-C080	611	DP-125	564, 568	ECSP3-020C	400		530	E1406-007C	470
DC06-C010-A030	609	DC17-C040-G080	612		580, 732	ECSP3-025	399	EJ01-015SR	218, 354	E1406-010	81, 470
DC06-C010-B030	609	DC17-C060-A100	611		742	ECSP3-025C	400		530	E1406-010C	470
DC06-C010-C030	609	DC17-C060-B100	611	DP-50	564	ECSP3-030	399	EJ01-020SR	218, 354	E1407-005	81, 470
DC06-C010-G030	609	DC17-C060-C100	611	DP-62	732	ECSP3-030C	400		530	E1407-005C	470
DC06-C015-A040	609	DC17-C080-A120	611	DP-75	564, 568	ECSP3-040	399	EJ01-025SR	218, 354	E1407-007	81, 470
DC06-C015-B040	609	DC17-C080-B120	611		580, 732	ECSP3-040C	400		530	E1407-007C	470
DC06-C015-C040	609	DC17-C080-C120	611		742	ECSP3-040C	400	EJ01-030SR	218, 354	E1407-010	81, 470
DC06-C015-G040	609	DC29-A005-A020	613	DQ-125	564, 568	ECSP3-040C	400		530	E1407-010C	470
DC06-C020-A040	609	DC29-A005-G020	613		580, 732	ECSP3-040C	400	EJ02-007	218, 530	E1408-005	81, 470
DC06-C020-B040	609	DC29-A007-A030	613		742	ECSP3-040C	400	EJ02-010	218, 530	E1408-005C	470
DC06-C020-C040	609	DC29-A007-G030	613	DQ-50	564	ECSP3-040C	400	EJ02-012	218, 530	E1408-007	81, 470
DC06-C020-G040	610	DC29-A010-A030	613	DQ-62	732	ECSP3-040C	400	EJ02-015	218, 530	E1408-007C	470
DC06-C030-A060	609	DC29-A010-G030	613	DQ-75	564, 732	ECSP3-040C	400	EJ02-020	218, 530	E1408-010	81, 470
DC06-C030-B060	609	DC29-A015-A040	613	DQP-50	732	ECSP3-040C	400	EJ02-025	218, 530	E1408-010C	470
DC06-C030-C060	609	DC29-A015-G040	613	DQP-75	732	ECSP3-040C	400	EJ02-030	218, 530	E1409-005	81, 470
DC06-C030-G060	610	DC29-A020-A040	613	DS-100	64, 109	ECSP3-040C	400	EJ21-007CSR	304, 359	E1409-005C	470
DC06-C040-A080	609	DC29-A020-G040	613	DS-150	64, 109	ECSP3-040C	400		530	E1409-007	81, 470
DC06-C040-B080	609	DC29-A030-A060	613	DS-200	64, 109	ECSP3-040C	400	EJ21-007SR	218, 354	E1409-007C	470
DC06-C040-C080	609	DC29-A030-G060	613	DS-250	64, 109	ECSP3-040C	400		530	E1409-010	81, 470
DC06-C040-G080	610	DC29-A040-A080	613	DS-300	64, 109	ECSP3-040C	400	EJ21-010CSR	304, 359	E1409-010C	470
DC06-C060-A100	609	DC29-A040-G080	613	DS-400	64, 109	ECSP3-040C	400		530	E1451-005CSR	471
DC06-C060-B100	609	DC29-A060-A100	613	DS-450	64, 109	ECSP3-040C	400	EJ21-010SR	218, 354	E1451-005SR	81, 471
DC06-C060-C100	609	DC29-A080-A120	613	DS-500	64, 109	ECSP3-040C	400		530	E1451-007CSR	471
DC06-C080-A120	609	DC29-B005-A020	613	DV-ERK-005	456	ECSP3-040C	400	EJ21-012CSR	304, 359	E1451-007SR	81, 471
DC06-C080-B120	609	DC29-B005-B020	613	DV-ERK-007	456	ECSP3-040C	400		530	E1451-010CSR	471
DC06-C080-C120	609	DC29-B005-G020	613	DV-ERK-010	456	ECSP3-040C	400	EJ21-012SR	218, 354	E1451-010SR	81, 471
DC17-A005-A020	611	DC29-B007-A030	613	DV-ERK-015	456	ECSP3-040C	400		530	E1452-005CSR	471
DC17-A005-G020	611	DC29-B007-B030	613	DV-ERK-020	456	ECSP3-040C	400	EJ21-015CSR	304, 359	E1452-005SR	81, 471
DC17-A007-A030	611	DC29-B007-G030	613	DV-TERK-005	456	ECSP3-040C	400		530	E1452-007CSR	471
DC17-A007-G030	611	DC29-B010-A030	613	DV-TERK-007	456	ECSP3-040C	400	EJ21-015SR	218, 354	E1452-007SR	81, 471
DC17-A010-A030	611	DC29-B010-B030	613	DV-TERK-010	456	ECSP3-040C	400		530	E1452-010CSR	471
DC17-A010-G030	611	DC29-B010-G030	613	DV-TERK-015	456	ECSP3-040C	400	EJ21-020CSR	304, 359	E1452-010SR	81, 471
DC17-A015-A040	611	DC29-B015-A040	613	DV-TERK-020	456	ECSP3-040C	400		530	E1453-005	81, 471
DC17-A015-G040	611	DC29-B015-B040	613	DV-TVVRK-005	456	ECSP3-040C	400	EJ21-020SR	218, 354	E1453-005C	81, 471
DC17-A020-A040	611	DC29-B015-G040	613	DV-TVVRK-007	456	ECSP3-040C	400		530	E1453-007	81, 471
DC17-A020-G040	611	DC29-B020-A040	613	DV-TVVRK-010	456	ECSP3-040C	400	EJ21-025CSR	304, 359	E1453-007C	471
DC17-A030-A060	611	DC29-B020-B040	613	DV-TVVRK-015	456	ECSP3-040C	400		530	E1453-010	81, 471
DC17-A030-G060	611	DC29-B020-G040	613	DV-TVVRK-020	456	ECSP3-040C	400	EJ21-025SR	218, 354	E1454-005	81, 471
DC17-A040-A080	611	DC29-B030-A060	613	DV-TVVRK-005	456	ECSP3-040C	400		530	E1454-005C	471
DC17-A040-G080	611	DC29-B030-B060	613	DV-TVVRK-007	456	ECSP3-040C	400	EJ21-030CSR	304, 359	E1454-007	81, 471
DC17-A060-A100	611	DC29-B030-G060	613	DV-TVVRK-010	456	ECSP3-040C	400		530	E1454-007C	471
DC17-A080-A120	611	DC29-B040-A080	613	DV-TVVRK-015	456	ECSP3-040C	400	EJ21-030SR	218, 354	E1454-010	81, 471
DC17-B005-A020	611	DC29-B040-B080	613	DV-TVVRK-020	456	ECSP3-040C	400		530	E1454-010C	471
DC17-B005-B020	611	DC29-B040-G080	613	DV-TVVRK-005	456	ECSP3-040C	400	EJ22-007	218, 530	E1455-010C	471
DC17-B005-G020	611	DC29-B060-A100	613	DV-TVVRK-007	456	ECSP3-040C	400	EJ22-007C	304, 530	E1457-005	81, 471
DC17-B007-A030	611	DC29-B060-B100	613	DV-TVVRK-010	456	ECSP3-040C	400	EJ22-010	218, 530	E1457-005C	471
DC17-B007-B030	611	DC29-B080-A120	613	DV-TVVRK-015	456	ECSP3-040C	400	EJ22-010C	304, 530	E1457-007	81, 471
DC17-B007-G030	611	DC29-B080-B120	613	DV-TVVRK-020	456	ECSP3-040C	400	EJ22-012	218, 530	E1457-007C	471
DC17-B010-A030	611	DC29-C005-A020	613	DV-TVVRK-005	456	ECSP3-040C	400	EJ22-012C	304, 530	E1457-010	81, 471
DC17-B010-B030	611	DC29-C005-B020	613	DV-TVVRK-007	456	ECSP3-040C	400	EJ22-015	218, 530	E1457-010C	471
DC17-B010-G030	611	DC29-C005-C020	613	DV-TVVRK-010	456	ECSP3-040C	400	EJ22-015C	304, 530	E1458-005	81, 471
DC17-B015-A040	611	DC29-C005-G020	613	DV-TVVRK-015	456	ECSP3-040C	400	EJ22-020	218, 530	E1458-005C	471
DC17-B015-B040	611	DC29-C007-A030	613	DV-TVVRK-020	456	ECSP3-040C	400	EJ22-020C	304, 530	E1458-007	81, 471
DC17-B015-G040	611	DC29-C007-B030	613	D401-101	6	ECSP3-040C	400	EJ22-025	218, 530	E1458-007C	471
DC17-B020-A040	611	DC29-C007-C030	613	D401-130	6	ECSP3-040C	400	EJ22-025C	304, 530	E1458-010	81, 471
DC17-B020-B040	611	DC29-C007-G030	613	D401-166	6	ECSP3-040C	400	EJ22-030	218, 530	E1458-010C	471
DC17-B020-G040	611	DC29-C010-A030	613	D401-209	6	ECSP3-040C	400	EJ22-030C	304, 530	E1459-005	472
DC17-B030-A060	611	DC29-C010-B030	613	D401-247	6	ECSP3-040C	400	EP-443	63, 108	E1459-005C	472
DC17-B030-B060	611	DC29-C010-C030	613	D401-247G	38	ECSP3-040C	400	EP-444	63, 108	E1459-007	472
DC17-B030-G060	611	DC29-C010-G030	614	D406-1							



Spears List Price Part Number Index

E1460-007C	472	E1558-012C	471	510, 516	FVS-007	244, 411	308, 442	GT-VRK-030	433
E1460-010	472	E1558-015	81, 471	53, 110	FVS-007C	325, 411	76, 223	GT-VRK-040	433
E1460-010C	472	E1558-015C	471	508	FVS-010	244, 411	308, 442	GTN-005	433
E1463-005CSR	472	E1558-020	81, 471	53, 54	FVS-010C	325, 411	76, 223	GTN-012	433
E1463-005SR	472	E1558-020C	471	56, 56	FVS-012	244, 411	308, 442	GTN-030	433
E1463-007CSR	472	E1559-012	472	110, 111	FVS-012C	325, 411	76, 223	GTN-040	433, 445
E1463-007SR	472	E1559-012C	472	113, 113	FVS-015	244, 411	308, 442	G0002-002	227, 591
E1463-010CSR	472	E1559-015	472	262, 340	FVS-015C	325, 411	76, 223	G0002-002BL	568
E1463-010SR	472	E1559-015C	472	340, 508	FVS-020	244, 411	308, 442	G0002-002C	310, 592
E1464-005CSR	472	E1559-020	472	510, 510	FVS-020C	325, 411	76, 223	G0002-002P	369, 592
E1464-005SR	472	E1559-020C	472	513, 516	FVS-025	244, 411	308, 442	G0002-005	227, 591
E1464-007CSR	472	E1560-012	472	516	FVS-025C	325, 411	76, 223	G0002-005BL	568
E1464-007SR	472	E1560-012C	472	53, 110	FVS-030	244, 411	308, 442	G0002-005C	310, 592
E1464-010CSR	472	E1560-015	472	508	FVS-030C	325, 411	76, 223	G0002-005P	369, 592
E1464-010SR	472	E1560-015C	472	53, 56	FVS-040	244, 411	308, 442	G0003-002	227, 591
E1465-005	472	E1560-020	472	110, 113	FVS-040C	325, 411	76, 223	G0003-002BL	567
E1465-005C	472	E1560-020C	472	340, 508	FVS-060	244, 411	308, 442	G0003-002C	310, 591
E1465-007	472	E1563-012CSR	472	510, 516	FVS-060C	325, 411	76, 223	G0003-002P	369, 592
E1465-007C	472	E1563-012SR	472	53, 110	GC-1	445	308, 442	G0003-005	227, 591
E1465-010	472	E1563-015CSR	472	508	GK1-005	76, 223	76, 223	G0003-005BL	568
E1465-010C	472	E1563-015SR	472	53, 54	GK1-007	308, 442	308, 442	G0003-005C	310, 591
E1466-005	472	E1563-020CSR	472	56, 56	GK1-010	76, 223	76, 223	G0003-005P	369, 592
E1466-005C	472	E1563-020SR	472	110, 111	GK1-012	308, 442	308, 442	G0004-002	227, 591
E1466-007	472	E1564-012CSR	472	113, 113	GK1-015	76, 223	76, 223	G0004-002BL	567
E1466-007C	472	E1564-012SR	472	262, 340	GK1-020	308, 442	308, 442	G0004-002C	310, 591
E1466-010	472	E1564-015CSR	472	340, 508	GK1-025	308, 442	76, 223	G0004-002P	369, 592
E1466-010C	472	E1564-015SR	472	510, 510	GK1-030	76, 223	308, 442	G0004-005	227, 591
E1504-012	81, 470	E1564-020CSR	472	513, 516	GK1-040	308, 442	76, 223	G0004-005BL	567
E1504-012C	470	E1564-020SR	472	516	GK1-050	76, 223	308	G0004-005C	310, 591
E1504-015	81, 470	E1565-012	472	53, 110	GK1-060	76, 223	76, 223	G0004-005P	369, 592
E1504-015C	470	E1565-012C	472	508	GK1-080	308, 442	308	G0152-002	227, 591
E1504-020	81, 470	E1565-015	472	54, 111	GK1-100	76, 223	76, 223	G0152-002BL	568
E1504-020C	470	E1565-015C	472	509	GK1-120	308, 442	308	G0152-002C	310, 592
E1505-012	81, 470	E1565-020	472	53, 111	GK1-140	76, 223	76, 223	G0152-002P	369, 592
E1505-012C	470	E1565-020C	472	508	GK1-160	308, 442	308	G0152-005	227, 591
E1505-015	81, 470	E1566-012	472	54, 111	GK1-180	76, 223	308	G0152-005BL	568
E1505-015C	470	E1566-012C	472	509	GK1-240	76, 223	308	G0152-005C	310, 592
E1505-020	81, 470	E1566-015	472	53, 110	GK2-005	76, 223	308	G0152-005P	369, 592
E1505-020C	470	E1566-015C	472	508	GK2-010	308, 442	308	G0153-002	227, 591
E1506-012	81, 470	E1566-020	472	53, 56	GK2-015	76, 223	308	G0153-002BL	567
E1506-012C	470	E1566-020C	472	110, 113	GK2-020	308, 442	308	G0153-002C	310, 591
E1506-015	81, 470	F-64	60, 105	340, 508	GK2-025	76, 223	308	G0153-002P	369, 592
E1506-015C	470	F-64-P	60, 105	510, 516	GK2-030	308, 442	308	G0153-005	227, 591
E1506-020	81, 470	F-64B	60, 105	53, 110	GK2-040	76, 223	308	G0153-005BL	568
E1506-020C	470	F-65	60, 105	508	GK2-050	308, 442	308	G0153-005C	310, 591
E1507-012	81, 470	F-66	60, 105	53, 56	GK2-060	76, 223	308	G0153-005P	369, 592
E1507-012C	470	F-66-P	60, 105	110, 113	GK2-080	308, 442	308	G0154-002	227, 591
E1507-015	81, 470	FCG-5	54, 111	340, 508	GK2-100	76, 223	308	G0154-002BL	567
E1507-015C	470		509	510, 516	GK2-120	308, 442	308	G0154-002C	310, 591
E1507-020	81, 470	FCKE-020	226	54, 111	GK2-140	76, 223	308	G0154-002P	369, 592
E1507-020C	470	FCKE-020C	309	513	GK2-160	308, 442	308	G0154-005	227, 591
E1508-012	81, 470	FCKE-025	226	54, 56	GK2-180	76, 223	308	G0154-005BL	567
E1508-012C	470	FCKE-025C	309	111, 113	GK2-200	308, 442	308	G0154-005C	310, 591
E1508-015	81, 470	FCKE-030	226	262, 340	GK2-240	76, 223	308	G0154-005P	369, 592
E1508-015C	470	FCKE-030C	309	510, 513	GK3-005	76, 223	308	G0302-002	227, 591
E1508-020	81, 470	FCKE-040	226	516	GK3-007	76, 223	308	G0302-002BL	568
E1508-020C	470	FCKE-040C	309	54, 111	GK3-010	308, 442	308	G0302-002C	310, 592
E1509-012	81, 470	FCKE-060	226	513	GK3-012	76, 223	308	G0302-002P	369, 592
E1509-012C	470	FCKE-060C	309	54, 56	GK3-015	308, 442	308	G0302-005	227, 591
E1509-015	81, 470	FCKE-080	226	111, 113	GK3-020	76, 223	308	G0302-005BL	568
E1509-015C	470	FCKE-080C	309	262, 340	GK3-025	308, 442	308	G0302-005C	310, 592
E1509-020	81, 470	FCKE-100	226	510, 513	GK3-030	76, 223	308	G0302-005P	369, 592
E1509-020C	470	FCKE-100C	309	516	GK3-040	308, 442	308	G0303-002	227, 591
E1551-012CSR	471	FCKE-120	226	54, 111	GK3-050	76, 223	308	G0303-002BL	567
E1551-012SR	81, 471	FCKE-120C	309	513	GK3-060	308, 442	308	G0303-002C	310, 591
E1551-015CSR	471	FCKV-020	226	54, 111	GK3-070	76, 223	308	G0303-002P	369, 592
E1551-015SR	81, 471	FCKV-020C	309	513	GK3-080	308, 442	308	G0303-005	227, 591
E1551-020CSR	471	FCKV-025	226	54, 56	GK3-090	76, 223	308	G0303-005BL	568
E1551-020SR	81, 471	FCKV-025C	309	111, 113	GK3-100	308, 442	308	G0303-005C	310, 591
E1552-012CSR	471	FCKV-030	226	262, 341	GK3-110	76, 223	308	G0303-005P	369, 592
E1552-012SR	81, 471	FCKV-030C	309	510, 513	GK3-120	308, 442	308	G0304-002	227, 591
E1552-015CSR	471	FCKV-040	226	516	GK3-130	76, 223	308	G0304-002BL	567
E1552-015SR	81, 471	FCKV-040C	309	54, 111	GK3-140	308, 442	308	G0304-002C	310, 591
E1552-020CSR	471	FCKV-060	226	513	GK3-150	76, 223	308	G0304-002P	369, 592
E1552-020SR	81, 471	FCKV-060C	309	54, 111	GK3-160	308, 442	308	G0304-005	227, 591
E1553-012	81, 471	FCKV-080	226	513	GK3-170	76, 223	308	G0304-005BL	567
E1553-015	81, 471	FCKV-080C	309	54, 56	GK3-180	308, 442	308	G0304-005C	310, 591
E1553-020	81, 471	FCKV-100	226	111, 113	GK3-190	76, 223	308	G0304-005P	369, 592
E1554-012	81, 471	FCKV-100C	309	262, 340	GK3-200	308, 442	308	G0602-002	227, 591
E1554-012C	471	FCKV-120	226	510, 513	GK3-210	76, 223	308	G0602-002BL	568
E1554-015	81, 471	FCKV-120C	309	516	GK3-220	308, 442	308	G0602-002C	310, 592
E1554-015C	471	FL-100	53, 110	54, 111	GK3-230	76, 223	308	G0602-002P	369, 592
E1554-020	81, 471		508	513	GK3-240	308, 442	308	G0602-005	227, 591
E1554-020C	471	FL-100-1	53, 56	54, 56	GK3-250	76, 223	308	G0602-005BL	568
E1555-012C	471		110, 113	111, 113	GK3-260	308, 442	308	G0602-005C	310, 592
E1555-015C	471		340, 508	262, 340	GK3-270	76, 223	308	G0602-005P	369, 592
E1555-020C	471		510, 516	510, 513	GK3-280	308, 442	308	G0603-002	227, 591
E1557-012	81, 471	FL-11	53, 110	516	GK3-290	76, 223	308	G0603-002BL	567
E1557-012C	471		508	727, 742	GK3-300	308, 442	308	G0603-002C	310, 591
E1557-015	81, 471	FL-150	53, 110	727, 742	GK3-310	76, 223	308	G0603-002P	369, 592
E1557-015C	471		508	741	GK3-320	308, 442	308	G0603-005	227, 591
E1557-020	81, 471	FL-150-1	53, 56	741	GK3-330	76, 223	308	G0603-005BL	568
E1557-020C	471		110, 113	244, 411	GK3-340	308, 442	308	G0603-005C	310, 591
E1558-012	81, 471		340, 508	325, 411	GK3-350	76, 223	308	G0603-005P	369, 592

Spears List Price Part Number Index



G0604-002	227, 591	G30V3-005C	310, 591	HK-020	75, 222	HTS3S-337C	299	HT3-334C	299	LF2003-C	594
G0604-002BL	567	G30V3-005P	369, 592		307	HTS3S-416	211	HT3-337	211	LF300	595
G0604-002C	310, 591	G30V4-002	227, 591	HK-025	75, 222	HTS3S-416C	299	HT3-337C	299	LF300-C	595
G0604-002P	369, 592	G30V4-002BL	567		307	HTS3S-419	211	HT3-416	211	LF3002	594
G0604-005	227, 591	G30V4-002C	310, 591	HK-030	75, 222	HTS3S-419C	299	HT3-416C	299	LF3002-BL	571, 594
G0604-005BL	567	G30V4-002P	369, 592		307	HTS3S-524	211	HT3-419	211	LF3002-C	594
G0604-005C	310, 591	G30V4-005	227, 591	HK-040	75, 222	HTS3S-524C	299	HT3-419C	299	LF3003	594
G0604-005P	369, 592	G30V4-005BL	567		307	HTS3S-527	211	HT3-524	211	LF3003-BL	571, 594
G1002-002	227, 591	G30V4-005C	310, 591	HK-060	75, 222	HTS3S-527C	299	HT3-524C	299	LF3003-C	594
G1002-002BL	568	G30V4-005P	369, 592		307	HTS3S-574	211	HT3-527	211	LF400	595
G1002-002C	310, 592	G3002-002	227, 591	HK-080	75, 222	HTS3S-574C	299	HT3-527C	299	LF400-BL	572, 595
G1002-002P	369, 592	G3002-002BL	568		307	HTS3S-577	211	HT3-574	211	LF400-C	595
G1002-005	227, 591	G3002-002C	310, 592	HK-120	75, 222	HTS3S-577C	299	HT3-574C	299	LF4002	594
G1002-005BL	568	G3002-002P	369, 592		307	HT2-248	211	HT3-577	211	LF4002-C	594
G1002-005C	310, 592	G3002-005	227, 591	HK1-005	75, 222	HT2-248C	299	HT3-577C	299	LF4003	594
G1002-005P	369, 592	G3002-005BL	568		307	HT2-248W	30	HT3S-248	211	LF4003-C	594
G1003-002	227, 591	G3002-005C	310, 592	HK1-010	75, 222	HT2-251	211	HT3S-248C	299	LF500	595
G1003-002BL	567	G3002-005P	369, 592		307	HT2-251C	299	HT3S-251	211	LF500-BL	571, 595
G1003-002C	310, 591	G3003-002	227, 591	HK1-015	75, 222	HT2-251W	30	HT3S-251C	299	LF500-C	595
G1003-002P	369, 592	G3003-002BL	567		307	HT2-288	211	HT3S-288	211	LUG1-015	445
G1003-005	227, 591	G3003-002C	310, 592	HK1-020	75, 222	HT2-288C	299	HT3S-288C	299	LUG1-020	445
G1003-005BL	568	G3003-002P	369, 592		307	HT2-288W	30	HT3S-291	211	LUG1-030	445
G1003-005C	310, 591	G3003-005	227, 591	HK1-025	75, 222	HT2-291	211	HT3S-291C	299	LUG1-040	445
G1003-005P	369, 592	G3003-005BL	568		307	HT2-291C	299	HT3S-334	211	LUG1-080	445
G1004-002	227, 591	G3003-005C	310, 592	HK1-030	75, 222	HT2-291W	30	HT3S-334C	299	LUG1-120	445
G1004-002BL	567	G3003-005P	369, 592		307	HT2-334	211	HT3S-337	211	LUG2-015	445
G1004-002C	310, 591	G3004-002	227, 591	HK1-040	75, 222	HT2-334C	299	HT3S-337C	299	LUG2-020	445
G1004-002P	369, 592	G3004-002BL	567		307	HT2-334W	30	HT3S-416	211	LUG2-030	445
G1004-005	227, 591	G3004-002C	310, 591	HK1-060	75, 222	HT2-337	211	HT3S-416C	299	LUG2-040	445
G1004-005BL	567	G3004-002P	369, 592		307	HT2-337C	299	HT3S-419	211	LUG2-080	445
G1004-005C	310, 591	G3004-005	227, 591	HK1-080	75, 222	HT2-337W	30	HT3S-419C	299	LUG2-120	445
G1004-005P	369, 592	G3004-005BL	567		307	HT2-416	211	HT3S-524	211	LW-015	579, 720
G1602-002	227, 591	G3004-005C	310, 591	HK1-120	75, 222	HT2-416C	299	HT3S-524C	299	LW-020	579, 720
G1602-002BL	568	G3004-005P	369, 592		307	HT2-416W	30	HT3S-527	211	LW-030	579, 720
G1602-002C	310, 592	HC-443	63, 108	HK2-005	76, 222	HT2-419	211	HT3S-527C	299	LW-040	579, 720
G1602-002P	369, 592	HC-443-1	63, 108		307	HT2-419C	299	HT3S-574	211	LW-060	579, 720
G1602-005	227, 591	HC-444	63, 108	HK2-010	76, 222	HT2-419W	30	HT3S-574C	299	LW-080	579, 720
G1602-005BL	568	HC-444-1	63, 108		307	HT2-524	211	HT3S-577	211	LW-100	579, 720
G1602-005C	310, 592	HC-543	63, 108	HK2-015	76, 222	HT2-524C	299	HT3S-577C	299	LW-120	579, 720
G1602-005P	369, 592	HC-543-1	63, 108		307	HT2-524W	30	IJ-030-010P	222, 307	LW-140	579, 720
G1603-002	227, 591	HC-544	63, 108	HK2-020	76, 223	HT2-527	211	IJ-040-010P	222, 307	LW-160	579, 720
G1603-002BL	567	HC-544-1	63, 108		308	HT2-527C	299	IJ-060-010P	222, 307	LWTP-015060	579
G1603-002C	310, 592	HC-553	63, 108	HK2-025	76, 223	HT2-527W	30	IJ-080-010P	222, 307	LWTP-015120	579
G1603-002P	369, 592	HC-553-1	63, 108		308	HT2-574	211	IJ-100-010P	222, 307	LWTP-015140	579
G1603-005	227, 591	HC-554	63, 108	HK2-030	76, 223	HT2-574C	299	IJ-120-010P	222, 307	LWTPN-015060	579
G1603-005BL	568	HC-554-1	63, 108		308	HT2-574W	30	IJ-140-010P	222, 307	LWTPN-015120	579
G1603-005C	310, 592	HC-653	63, 108	HK2-040	76, 223	HT2-577	211	IJ-160-010P	222, 307	LWTPN-015140	579
G1603-005P	369, 592	HC-653-1	63, 108		308	HT2-577C	299	IJ-180-010P	222, 307	LWVA-1	578
G1604-002	227, 591	HC-654	63, 108	HK2-060	76, 223	HT2-577W	30	IJ-200-010P	222, 307	LW150M-015C	578
G1604-002BL	567	HC-654-1	63, 108		308	HT2S-248	211	IJ-240-010P	222, 307	LW150M-015S	578
G1604-002C	310, 591	HC-663	63, 108	HK2-080	76, 223	HT2S-248C	299	IJ300-030-010P	222, 307	LW150M-020C	578
G1604-002P	369, 592	HC-663-1	63, 108		308	HT2S-248W	31	IJ300-040-010P	222, 307	LW150M-020S	579
G1604-005	227, 591	HC-664	63, 108	HK2-120	76, 223	HT2S-251	211	IJ300-060-010P	222, 307	LW150M-030C	578
G1604-005BL	567	HC-664-1	63, 108		308	HT2S-251C	299	IJ300-080-010P	222, 307	LW150M-030S	579
G1604-005C	310, 591	HF	59, 116	HPL-6	61, 106	HT2S-251W	31	IJ300-100-010P	222, 307	LW150M-040C	578
G1604-005P	369, 592		509	HPTC-100	587	HT2S-288	211	IJ300-120-010P	222, 307	LW150M-040S	579
G2002-002	227, 591	HF-100	59, 116	HPTC-1200	587	HT2S-288C	299	IJ300-140-010P	222, 307	LW1500-015C	578
G2002-002BL	568		509	HPTC-350	587	HT2S-288W	31	IJ300-160-010P	222, 307	LW1500-015S	578
G2002-002C	310, 592	HF-100-1W	59, 116	HPTC-5	587	HT2S-291	211	IJ300-180-010P	222, 307	LW1500-020C	578
G2002-002P	369, 592		509	HTS2S-248	211	HT2S-291C	299	IJ300-200-010P	222, 307	LW1500-020S	578
G2002-005	227, 591	HF-150	59, 116	HTS2S-248C	299	HT2S-291W	31	IJ300-240-010P	222, 307	LW1500-030C	578
G2002-005BL	568		509	HTS2S-251	211	HT2S-334	211	KD-110	568, 579	LW1500-030S	578
G2002-005C	310, 592	HF-150-1NW	59, 116	HTS2S-251C	299	HT2S-334C	299		733, 742	LW1500-040C	578
G2002-005P	369, 592		509	HTS2S-288	211	HT2S-334W	31	KD-112	568, 579	LW1500-040S	578
G2003-002	227, 591	HF-150-1W	59, 116	HTS2S-288C	299	HT2S-337	211		733, 742	LW151M-015S	579
G2003-002BL	567		509	HTS2S-291	211	HT2S-337C	299	LFB	596	LW151M-020S	579
G2003-002C	310, 592	HF-150N	59, 116	HTS2S-291C	299	HT2S-337W	31	LFB-BL	572, 596	LW151M-030S	579
G2003-002P	369, 592		509	HTS2S-334	211	HT2S-416	211	LFB-C	596	LW151M-040S	579
G2003-005	227, 591	HF-20	59, 116	HTS2S-334C	299	HT2S-416C	299	LFGN	595	LW1510-015S	579
G2003-005BL	568		509	HTS2S-337	211	HT2S-416W	31	LFGN-BL	572, 595	LW1510-020S	579
G2003-005C	310, 592	HF-20-1W	59, 116	HTS2S-337C	299	HT2S-419	211	LFGN-C	595	LW1510-030S	579
G2003-005P	369, 592		509	HTS2S-416	211	HT2S-419C	299	LFRGN-BL	572	LW1510-040S	579
G2004-002	227, 591	HF-200	59, 116	HTS2S-416C	299	HT2S-419W	31	LFR1000-BLN	571, 595	LW152M-015C	578
G2004-002BL	567		509	HTS2S-419	211	HT2S-524	211	LFR1000-CN	595	LW152M-020C	578
G2004-002C	310, 591	HF-200-1W	59, 116	HTS2S-419C	299	HT2S-524C	299	LFR1000-N	595	LW152M-030C	578
G2004-002P	369, 592		509	HTS2S-524	211	HT2S-524W	31	LF100	594	LW152M-040C	578
G2004-005	227, 591	HF-30	59, 116	HTS2S-524C	299	HT2S-527	211	LF100-BL	571, 594	LW1520-015C	578
G2004-005BL	567		509	HTS2S-527	211	HT2S-527C	299	LF100-C	594	LW1520-020C	578
G2004-005C	310, 591	HF-30-1W	59, 116	HTS2S-527C	299	HT2S-527W	31	LF1000-BLN	570, 593	LW1520-030C	578
G2004-005P	369, 592		509	HTS2S-574	211	HT2S-574	211	LF1000-CN	593	LW1520-040C	578
G30V2-002	227, 591	HF-50	59, 116	HTS2S-574C	299	HT2S-574C	299	LF1000-N	593	LW160M-015S	578
G30V2-002BL	568		509	HTS2S-577	211	HT2S-574W	31	LF1002	593	LW160M-020S	579
G30V2-002C	310, 592	HF-50-1W	59, 116	HTS2S-577C	299	HT2S-577	211	LF1002-BL	571, 593	LW160M-030S	579
G30V2-002P	369, 592		509	HTS3S-248	211	HT2S-577C	299	LF1002-C	593	LW160M-040S	579
G30V2-005	227, 591	HF-80	59, 116	HTS3S-248C	299	HT2S-577W	31	LF1003	593	LW1600-015S	578
G30V2-005BL	568		509	HTS3S-251	211	HT3-248	211	LF1003-BL	571, 593	LW1600-020S	578
G30V2-005C	310, 592	HF-80-1W	59, 116	HTS3S-251C	299	HT3-248C	299	LF1003-C	593	LW1600-030S	578
G30V2-005P	369, 592		509	HTS3S-288	211	HT3-251	211	LF104	594	LW1600-040S	578
G30V3-002	227, 591	HK-005	75, 222	HTS3S-288C	299	HT3-251C	299	LF104-C	594	LW170M-015S	578
G30V3-002BL	567		307	HTS3S-291	211	HT3-288	211	LF2000-CN	593	LW170M-020S	579
G30V3-002C	310, 591	HK-010	75, 222	HTS3S-291C	299	HT3-288C	299	LF2000-N	593	LW170M-030S	579



Spears List Price Part Number Index

LW1700-030S	578	110, 113	MS412-010	10	MTF3-76	262, 515	PD-400-140C-10	273, 712	PD-800-012C	273, 712
LW1700-040S	578	262, 340	MS412-101	10	MTF3-76C	340, 515	PD-400-160	1, 716	PD-800-012C-10	273, 712
LW180M-015S	579	508, 510	MT-647	579, 733	M312-010	693	PD-400-160C	273, 712	PD-800-012L-10	181, 717
LW180M-020S	579	516	MT-648	579, 733	M412-005	10	PD-400-160C-10	273, 712	PD-800-015	180, 715
LW180M-030S	579	53, 110	MT-650	734	M412-007	10	PD-400-180C	273, 712	PD-800-015-10	180, 715
LW180M-040S	579	508	MT-651	568, 579	M412-010	10	PD-400-180C-10	273, 712	PD-800-015C	273, 712
LW1800-015S	578	53, 54		733, 742	M412-012	10	PD-400-200C	273, 712	PD-800-015C-10	273, 712
LW1800-020S	578	56, 56	MT-652	734	M412-015	10	PD-400-200C-10	273, 712	PD-800-015L-10	181, 717
LW1800-030S	578	110, 111	MT-653	568, 579	M434-005-3	18, 178	PD-400-240C	273, 712	PD-800-020	180, 715
LW1800-040S	578	113, 113		734, 742	M434-007-4	18, 178	PD-400-240C-10	273, 712	PD-800-020-10	180, 715
LW5-020	579, 727	262, 263	MT-654	568, 579	M481-005	104, 179	PD-430-060	598, 722	PD-800-020C	273, 712
LW5-030	579, 727	340, 341		733, 742	M481-007	104, 179	PD-430-060-10	598, 722	PD-800-020C-10	273, 712
LW5-040	579, 727	508, 510	MT-655	733	M481-101	104, 179	PD-430-060C	598, 722	PD-800-020L-10	181, 717
LW5-050	579, 727	510, 513	MT-656	733	M854-020	74, 220	PD-430-060C-10	598, 722	PD-800-025	180, 715
LXT-005	566, 719	516, 516	MTF-100	56, 113		692	PD-430-080	598, 722	PD-800-025-10	180, 715
LXT-007	566, 719	53, 110		510	M854-020C	306	PD-430-080-10	598, 722	PD-800-025C	273, 712
LXT-010	566, 719	508	MTF-150	56, 113	M854-060	75, 220	PD-430-080C	598, 722	PD-800-025C-10	273, 712
LXT-012	566, 719	53, 56		510		692	PD-430-080C-10	598, 722	PD-800-025L-10	181, 717
LXT-015	566, 719	110, 113	MTF-16	56, 56	M854-060C	306	PD-430-100	598, 722	PD-800-030	180, 715
LXT-020	566, 719	262, 340		113, 113	M854-080	75, 220	PD-430-100-10	598, 722	PD-800-030-10	180, 715
LXT-030	566, 719	508, 510		510, 510		692	PD-430-100C	598, 722	PD-800-030C	273, 712
LXT-040	566, 719	516	MTF-200	56, 113	M854-080C	306	PD-430-100C-10	598, 722	PD-800-030C-10	273, 712
LXT-060	566, 719	53, 110		510	M856-020	75, 220	PD-430-120	598, 722	PD-800-030L-10	181, 717
LX5C-020	568, 730	508	MTF-32	56, 56		692	PD-430-120-10	598, 722	PD-800-040	180, 715
LX5C-030	568, 730	53, 56		113, 113	M856-060	75, 220	PD-430-120C	598, 722	PD-800-040-10	180, 715
L4235-130	362, 740	110, 113		510, 510		692	PD-430-120C-10	598, 722	PD-800-040C	273, 712
M-44	60, 105	262, 340	MTF-50	56, 113	M856-080	75, 220	PD-430-140	598, 722	PD-800-040C-10	273, 712
M-64	60, 105	508, 510		510		692	PD-430-140-10	598, 722	PD-800-040L-10	181, 717
M-64-P	60, 105	516	MTF-76	56, 113	N-1	62, 106	PD-430-140C	598, 722	PD-800-060	180, 715
M-64B	60, 105	54, 111		510	N-2	62, 106	PD-430-140C-10	598, 722	PD-800-060-10	180, 715
M-65	60, 105	513	MTFR-100	56, 113	N-3	62, 106	PD-430-160	598, 722	PD-800-060C	273, 712
M-66	60, 105	54, 57		510	N-4	62, 106	PD-430-160-10	598, 722	PD-800-060C-10	273, 712
M-66-P	60, 105	111, 113	MTFR-150	56, 113	P-100	61, 107	PD-430-160C	598, 722	PD-800-060L-10	181, 717
MA-214	66, 103	263, 341		510	P-101	61, 107	PD-430-160C-10	598, 722	PD-800-080	180, 715
	711	511, 513	MTFR-200	56, 113	P-102	61, 107	PD-430-180	598, 722	PD-800-080-10	180, 715
MA-218	66, 103	516		510	P-103	61, 107	PD-430-180-10	598, 722	PD-800-080C	273, 712
	711	54, 111	MTFR-50	56, 113	PA2010-01	62, 106	PD-430-180C	598, 722	PD-800-080C-10	273, 712
MA0101-010	66, 103	513		510	PA2010-02	62, 106	PD-430-200	598, 722	PD-800-100	180, 715
MA0101-010-2	66, 103	54, 57	MTFR-76	56, 113	PA2010-03	62, 106	PD-430-200-10	598, 722	PD-800-100-10	180, 715
MA0101-010-3	66, 103	111, 114		510	PA2010-04	62, 106	PD-430-200C	598, 722	PD-800-100C	273, 712
MA0101-010-4	66, 103	263, 341	MTFR2-100	262, 515	PA2010-01	62, 106	PD-430-240	598, 722	PD-800-100C-10	273, 712
MA0101-010BT	711	511, 513	MTFR2-100C	340, 516	PA2020-02	62, 106	PD-430-240-10	598, 722	PD-800-120	180, 715
MA0109-010	66, 103	516	MTFR2-150	262, 515	PA2020-03	62, 106	PD-430-240C	598, 722	PD-800-120-10	180, 715
MA0109-010BT	711	54, 111	MTFR2-150C	340, 516	PA2020-04	62, 106	PD-430-260	598, 722	PD-800-120C	273, 712
MA0602-010	66, 103	513	MTFR2-200	262, 515	PD-400-001C	273, 712	PD-430-260C	598, 722	PD-800-120C-10	273, 712
MA0602-010BT	711	54, 111	MTFR2-200C	340, 516	PD-400-001C-10	273, 712	PD-430-280	598, 722	PD-800-140	180, 715
MA0603-010	66, 103	513	MTFR2-50	262, 515	PD-400-002C	273, 712	PD-430-280C	598, 722	PD-800-140-10	180, 715
	711	54, 57	MTFR2-50C	340, 516	PD-400-002C-10	273, 712	PD-430-300	598, 722	PD-800-140C	273, 712
MA2004-010	66, 103	111, 114	MTFR2-76	262, 515	PD-400-003C	273, 712	PD-430-300C	598, 722	PD-800-140C-10	273, 712
MA2004-010BT	711	263, 341	MTFR2-76C	340, 516	PD-400-003C-10	273, 712	PD-430-320	598, 722	PD-800-160	180, 715
MA2903-010	66, 103	511, 513	MTFR3-100	262, 515	PD-400-005	1, 716	PD-430-320C	598, 722	PD-800-160-10	180, 715
	711	516	MTFR3-100C	340, 516	PD-400-005B	42	PD-430-360	598, 722	PD-800-160C	273, 712
MA2907-010	66, 103	54, 111	MTFR3-150	262, 515	PD-400-005C	273, 712	PD-430-360C	598, 722	PD-800-160C-10	273, 712
MA2907-010BT	711	513	MTFR3-150C	340, 516	PD-400-005C-10	273, 712	PD-430-380	598, 722	PD-800-180	180, 715
MA2908-010	66, 103	54, 111	MTFR3-200	262, 515	PD-400-007	1, 716	PD-430-380C	598, 722	PD-800-180-10	180, 715
	711	513	MTFR3-200C	340, 516	PD-400-007B	42	PD-430-400	598, 722	PD-800-180C	273, 712
MA3505-007	66, 103	54, 57	MTFR3-50	262, 515	PD-400-007C	273, 712	PD-430-400C	598, 722	PD-800-180C-10	273, 712
MA3505-010	66, 103	111, 113	MTFR3-50C	340, 516	PD-400-007C-10	273, 712	PD-430-420	598, 722	PD-800-200	180, 715
	711	263, 341	MTFR3-76	262, 515	PD-400-010	1, 716	PD-430-420C	598, 722	PD-800-200-10	180, 715
MA4800-010	66, 103	511, 513	MTFR3-76C	340, 516	PD-400-010B	42	PD-430-460	598, 722	PD-800-200C	274, 713
	711	516	MTF2-100	262, 515	PD-400-010C	273, 712	PD-430-460C	598, 722	PD-800-200C-10	273, 712
MA8306-010	66, 103	54, 111	MTF2-100C	340, 516	PD-400-010C-10	273, 712	PD-430-480	598, 722	PD-800-240	180, 715
MA8306-010BT	711	513	MTF2-150	262, 515	PD-400-012	1, 716	PD-430-480C	598, 722	PD-800-240-10	180, 715
MA8306-131	66, 103	54, 57	MTF2-150C	340, 516	PD-400-012C	273, 712	PD-800-001	180, 715	PD-800-240C	274, 713
MFL-100	53, 110	111, 113	MTF2-16	262, 262	PD-400-012C-10	273, 712	PD-800-001-10	180, 715	PD-800-240C-10	273, 712
	508	263, 341		515, 515	PD-400-015	1, 716	PD-800-001C	273, 712	PGT-BRK-010	433
MFL-100-1	53, 56	511, 513	MTF2-16C	340, 340	PD-400-015C	273, 712	PD-800-001C-10	273, 712	PGT-BRK-020	433
	110, 113	516		515, 516	PD-400-015C-10	273, 712	PD-800-002	180, 715	PGT-ERK-010	433
	262, 340	588	MTF2-200	262, 515	PD-400-020	1, 716	PD-800-002-10	180, 715	PGT-ERK-020	433
	508, 510	588	MTF2-200C	340, 516	PD-400-020C	273, 712	PD-800-002C	273, 712	PGT-VRK-010	433
	516	588	MTF2-32	262, 262	PD-400-020C-10	273, 712	PD-800-002C-10	273, 712	PGT-VRK-020	433
MFL-11	53, 110	588		515, 515	PD-400-025	1, 716	PD-800-002L-10	181, 717	PGTN-012	433
	508	402	MTF2-32C	340, 340	PD-400-025C	273, 712	PD-800-003	180, 715	PL-002	44, 717
MFL-150	53, 110	402		515, 516	PD-400-025C-10	273, 712	PD-800-003-10	180, 715	PL-003	44, 717
	508	402	MTF2-50	262, 515	PD-400-030	1, 716	PD-800-003C	273, 712	PL-005	44, 717
MFL-150-1	53, 56	402	MTF2-50C	340, 515	PD-400-030C	273, 712	PD-800-003C-10	273, 712	PL-007	44, 717
	110, 113	402	MTF2-76	262, 515	PD-400-030C-10	273, 712	PD-800-003L-10	181, 717	PL-010	44, 717
	262, 340	402	MTF2-76C	340, 515	PD-400-040	1, 716	PD-800-005	180, 715	PL-012	44, 717
	508, 510	402	MTF3-100	262, 515	PD-400-040C	273, 712	PD-800-005-10	180, 715	PL-015	44, 717
	516	403	MTF3-100C	340, 516	PD-400-040C-10	273, 712	PD-800-005C	273, 712	PL-020	44, 717
MFL-16	53, 110	402	MTF3-150	262, 515	PD-400-060	1, 716	PD-800-005C-10	273, 712	PL-025	44, 717
	508	402	MTF3-150C	340, 516	PD-400-060C	273, 712	PD-800-005L-10	181, 717	PL-030	44, 717
MFL-16-1	53, 54	402	MTF3-16	262, 262	PD-400-060C-10	273, 712	PD-800-007	180, 715	PL-040	44, 717
	56, 56	402		515, 515	PD-400-080	1, 716	PD-800-007-10	180, 715	PL-060	44, 717
	110, 111	402	MTF3-16C	340, 340	PD-400-080C	273, 712	PD-800-007C	273, 712	PL-080	44, 717
	113, 113	402		515, 516	PD-400-080C-10	273, 712	PD-800-007C-10	273, 712	PL-100	44, 717
	262, 262	402	MTF3-200	262, 515	PD-400-100	1, 716	PD-800-007L-10	181, 717	PL-120	44, 717
	340, 341	403	MTF3-200C	340, 516	PD-400-100C	273, 712	PD-800-010	180, 715	PL091-020UVR-10	46, 718
	508, 510	429	MTF3-32	262, 262	PD-400-100C-10	273, 712	PD-800-010-10	180, 715	PL135-030UVR-10	46, 718
	510, 513	729		515,						

Spears List Price Part Number Index



PL400-005UVR-10	46, 718	PVC17C-030	4, 183	P097-040C	573	P105-030C	574	P116-060C	574	P300-100C	574
PL400-007UVR-10	46, 718		726	P098-015C	573	P105-040	536	P116-080	537	P300-120C	574
PL400-010UVR-10	46, 718	PVC17C-040	4, 183	P098-020C	573	P105-040C	574	P116-080C	574	P300S-338	537
PL400-012UVR-10	46, 718		726	P098-030C	573	P105-060	536	P117-040	537	P300S-338C	574
PL400-015UVR-10	46, 718	PVC17G-010	3, 183	P098-040C	573	P105-060C	574	P117-422	537	P302-015	537
PL400-020UVR-10	46, 718		725	P098-060C	573	P105-080	536	P118-030	537	P302-015C	574
PL400-025UVR-10	46, 718	PVC17G-020	3, 183	P099-015C	573	P105-080C	574	P118-040	537	P302-020	537
PL400-030UVR-10	46, 718		725	P099-020C	573	P105H-040	536	P119-015	537	P302-020C	574
PL400-035UVR-10	46, 718	PVC17G-030	3, 183	P099-030C	573	P105H-060	536	P119-015C	574	P302-030	537
PL400-040UVR-10	46, 718		725	P099-040C	573	P105X-015	536	P119-020	537	P302-030C	574
PL400-060UVR-10	46, 718	PVC17G-040	3, 183	P099-060C	573	P105X-015C	574	P119-020C	574	P302-040	537
PR-100	61, 107		725	P099-080C	573	P105X-020	536	P119-030	537	P302-040C	575
PR-101	61, 107	PVC19G-020	4, 183	P100-015	535	P105X-020C	574	P119-030C	574	P302-060	537
PR-102	61, 107		726	P100-015C	573	P105X-030	536	P119-040	537	P302-060C	575
PR-103	61, 107	PVC19G-030	4, 183	P100-020	535	P105X-030C	574	P119-040C	574	P302-080	537
PRIM68C-005	5, 731		726	P100-020C	573	P105X-040	536	P119-060C	574	P302-080C	575
PRIM68C-010	5, 731	PVC19G-040	4, 183	P100-030	535	P105X-040C	574	P119-251	537	P302-100	537
PRIM68C-020	5, 731		726	P100-030C	573	P105X-060	536	P119-422	537	P302-100C	575
PRIM68C-030	5, 731	PVC19G-040-F	4, 183	P100-040	535	P105X-060C	574	P122-040	537	P302-120	537
PRIM68C-040	5, 731		726	P100-040C	573	P105X-080	536	P123-020	537	P302-120C	575
PRIM68P-005	5, 731	PVC19G-050	4, 183	P100-060	535	P105X-080C	574	P123-020C	574	P303-338	537
PRIM68P-010	5, 731		726	P100-060C	573	P106-015	536	P123-030	537	P303-338C	575
PRIM68P-020	5, 731	PVC19W-020	4, 726	P100-080	535	P106-015C	574	P123-030C	574	P123R-213	537
PRIM68P-030	5, 731	PVC19W-030	4, 726	P100-080C	573	P106-020	536	P123-040	537	P123R-342	537
PRIM68P-040	5, 731	PVC19W-040	4, 726	P100-100	535	P106-020C	574	P123R-213	537	P304-015	537
PRIM70C-005	5, 185	PVC19W-040-F	4, 726	P100-100C	573	P106-025	536	P123R-342	537	P304-015C	575
	276, 731	PVC19W-050	4, 726	P100-120	535	P106-030	536	P130-015	537	P304-020	537
PRIM70C-010	5, 185	PVC21B-005	2, 182	P100-120C	573	P106-030C	574	P130-015C	574	P304-020C	575
	276, 731		724	P100-140	535	P106-040	536	P130-020	537	P304-030	537
PRIM70C-020	5, 185	PVC21B-010	2, 182	P100-140C	573	P106-040C	574	P130-020C	574	P304-030C	575
	276, 731		724	P101-015	535	P106-060	536	P130-030	537	P304-040	537
PRIM70C-030	5, 185	PVC21B-020	2, 182	P101-015C	573	P106-060C	574	P130-030C	574	P304-040C	575
	276, 731		724	P101-020	535	P106-080	536	P130-040	537	P304-060	537
PRIM70C-040	5, 185	PVC21B-030	2, 182	P101-020C	573	P106-080C	574	P130-040C	574	P304-060C	575
	276, 731		724	P101-030	535	P107-251	536	P130-060	537	P309-015	537
PRIM70P-005	5, 185	PVC21B-040	2, 182	P101-030C	573	P107-251C	574	P130-080	537	P309-015C	575
	276, 731		724	P101-040	535	P107-337	536	P130-100	537	P309-020	538
PRIM70P-010	5, 185	PVC25B-005	3, 183	P101-040C	573	P107-337C	574	P131-015	537	P309-020C	575
	276, 731		725	P101-060	535	P107-338	536	P131-020	537	P309-030	538
PRIM70P-020	5, 185	PVC25B-010	3, 183	P101-060C	573	P107-338C	574	P131-030	537	P309-030C	575
	276, 731		725	P102-251	535	P107-420	536	P131-040	537	P309-040	538
PRIM70P-030	5, 185	PVC25B-020	3, 183	P102-251C	573	P107-420C	574	P150M-015S	544	P309-040C	575
	276, 731		725	P102-337	535	P107-422	536	P150M-020S	544	P309-060	538
PRIM70P-040	5, 185	PVC25B-030	3, 183	P102-337C	573	P107-422C	574	P150M-030S	544	P309-060C	575
	276, 731		725	P102-338	535	P107-530C	574	P150M-040S	544	P310-338	538
PSS-120	445	PVC25B-040	3, 183	P102-338C	573	P107-532	536	P1500-015S	544	P319-015	538
PS4-90	62, 106		725	P102-338E	535	P107-532C	574	P1500-020S	544	P319-015C	575
PS4-90N	62, 106	PVC27C-020	3, 183	P102-420	535	P107-582	536	P1500-030S	544	P319-020	538
PTC-100	587		725	P102-420C	573	P107-582C	574	P1500-040S	544	P319-020C	575
PTC-1200	587	PVC27C-030	3, 183	P102-422	535	P107-585	536	P151M-015S	544	P319-030	538
PTC-350	587		725	P102-422C	573	P107-585C	574	P151M-020S	544	P319-030C	575
PTC-5	587	PVC27C-040	3, 183	P102-530C	573	P107-624	536	P151M-030S	544	P319-040	538
PVC00C-005	2, 182		725	P102-532	535	P107-624C	574	P151M-040S	544	P319-040C	575
	724	PVC50B-005	3, 183	P102-532C	573	P107-626	536	P1510-015S	544	P320-015	538
PVC00C-010	2, 182		725	P102-582	535	P107-628	536	P1510-020S	544	P320-015C	575
	724	PVC50B-010	3, 183	P102-582C	573	P107-628C	574	P1510-030S	544	P320-020	538
PVC00C-020	2, 182		725	P102-585	535	P107-666	536	P1510-040S	544	P320-020C	575
	724	PVC50B-020	3, 183	P102-585C	573	P107-668	536	P160M-015S	544	P320-030	538
PVC00C-030	2, 182		725	P102-624C	573	P107-670	536	P160M-020S	544	P320-030C	575
	724	PVC50B-030	3, 183	P102-626	535	P107-670C	574	P160M-030S	544	P320-040	538
PVC00C-040	2, 182		725	P102-626C	573	P108-628	536	P160M-040S	544	P320-040C	575
	724	PVC50B-040	3, 183	P102-628	535	P108-668	536	P1600-015S	544	P321-015	538
PVC02C-005	2, 182		725	P102-628C	573	P108X-628	536	P1600-020S	544	P321-015C	575
	724	PVC95B-030	3, 725	P102-666C	573	P108X-668	536	P1600-030S	544	P321-020	538
PVC02C-010	2, 182		725	P102-668	535	P109-015	536	P1600-040S	544	P321-020C	575
	724	PVC95C-005	3, 725	P102-668C	573	P109-015C	574	P170M-015S	544	P321-030	538
PVC02C-020	2, 182		724	P102-670C	573	P109-020	536	P170M-020S	544	P321-030C	575
	724	PVC95C-010	3, 725	P103-015	535	P109-020C	574	P170M-030S	544	P321-040	538
PVC02C-030	2, 182		724	P103-020	535	P109-030	536	P170M-040S	544	P321-040C	575
	724	PVC95C-040	3, 725	P103P-015	535	P109-030C	574	P1700-015S	544	P321-060	538
PVC02C-040	2, 182		724	P103P-015C	573	P109-040	536	P1700-020S	544	P321-060C	575
	724	P000P-020	536	P103P-020	535	P109-040C	574	P1700-030S	544	P321-080	538
PVC05C-005	2, 182		724	P103P-020C	573	P109-060	536	P1700-040S	544	P321-080C	575
	724	P093-015	573	P103P-212	535	P109-060C	574	P180M-015S	544	P321-100	538
PVC05C-010	2, 182		724	P103R-015	535	P110-015	536	P180M-020S	544	P321-100C	575
	724	P093-030	573	P103X-015	536	P110-015C	574	P180M-030S	544	P321-120	538
PVC05C-020	2, 182		724	P103X-020	536	P110-020	536	P180M-040S	544	P321-120C	575
	724	P093-060	573	P103X-212	536	P110-020C	574	P1800-015S	544	P323-015	538
PVC05C-030	2, 182		724	P104-015	536	P110-025	536	P1800-020S	544	P323-015C	575
	724	P094-015	573	P104-020	536	P110-030	536	P1800-030S	544	P323-020	538
PVC05C-040	2, 182		724	P104P-012	536	P110-030C	574	P1800-040S	544	P323-020C	575
	724	P094-040	573	P104P-015	536	P110-040	537	P300-015	537	P323-030	538
PVC11G-010	3, 183		725	P104P-212	536	P110-040C	574	P300-015C	574	P323-030C	575
	724	P095-015C	573	P104R-015	536	P110-060	537	P300-020	537	P323-040	538
PVC11G-020	3, 183		725	P104R-015C	573	P110-060C	574	P300-020C	574	P323-040C	575
	724	P095-040C	573	P104X-015	536	P116-015	537	P300-030	537	P323-060	538
PVC11G-030	3, 183		725	P104X-015C	574	P116-015C	574	P300-030C	574	P323-060C	575
	724	P096-015C	573	P104X-020	536	P116-020	537	P300-040	537	P323-080	538
PVC11G-040	3, 183		725	P104X-020C	573	P116-020C	574	P300-040C	574	P323-080C	575
	724	P096-030C	573	P104X-212	536	P116-030	537	P300-060	537	P323-080C	575
	725	P096-040C	573	P105-015	536	P116-030C	574	P300-060C	574	P324-015	538
PVC17C-010	4, 183		726	P105-015C	574	P116-040	537	P300-080C	574	P324-015C	575
	726	P097-015C	573	P105-020	536	P116-040C	574	P300-100	537	P324-020	538
PVC17C-020	4, 183		726	P105-020C	574	P116-060	537				
	726	P097-020C	573	P105-030	536						
	726	P097-030C	573								



Spears List Price Part Number Index

P324-020C	575	P403-020	539	P439-420	540	P503-080C	576	P601-624C	577	P711X-015	543
P324-030	538	P403-020C	576	P441-015	540	P503-100	541	P601-626	542	P712-015C	578
P324-030C	575	P403-030	539	P441-020	540	P503-100C	577	P601-626C	577	P712P-015C	578
P324-040	538	P403-030C	576	P441-020C	576	P503-120	541	P601-628	542	P720-015C	578
P324-040C	575	P403-040	539	P441-030	540	P504-241C	577	P601-628C	577	P720-020C	578
P324-060	538	P403-040C	576	P441-030C	576	P504-422	541	P601-661C	577	P720-030C	578
P324-060C	575	P403-060	539	P441-040	540	P504-528C	577	P601-663C	577	P720-040C	578
P324-080	538	P403-060C	576	P441-040C	576	P504-530	541	P601-664	542	P800-040	543
P324-080C	575	P403-080	539	P441-060	540	P504-530C	577	P601-664C	577	P800-422	543
P326-015	538	P403-080C	576	P441-060C	576	P504-532	541	P601-666	542	P800G-040	543
P326-015C	575	P403-100	539	P441-080	540	P504-532C	577	P601-666C	577	P800KO-422	543
P326-020	538	P403-100C	576	P441-080C	576	P504-580	541	P601-668	542	P800S-422	543
P326-020C	575	P403-120	539	P441-100	540	P504-582	541	P601-668C	577	P801-422	543
P326-030	538	P403-120C	576	P441-120	540	P504-582C	577	P601-670	542	P811-040	543
P326-030C	575	P404-241	539	P442-251	540	P504-585	541	P601-670C	577	P811-422	543
P326-040	538	P404-241C	576	P442-532	540	P504-585C	577	P602-015	542	P811KO-422	543
P326-040C	575	P404-251	539	P442-582	540	P504-623	541	P602-020	542	P812-040	543
P326-060	538	P404-251C	576	P442-585	540	P504-623C	577	P602-030	542	P812-422	543
P326-060C	575	P404-257	539	P442-624	540	P504-624	541	P602-040	542	P813-422	543
P326-080	538	P404-337	539	P442-626	540	P504-624C	577	P603-251	542	P815-040	543
P326-080C	575	P404-337C	576	P442-628	540	P504-626	541	P603-420	542	P815KO-040	544
P327-015	538	P404-338	539	P442-664	540	P504-626C	577	P603-422	542	P820-422	544
P327-015C	575	P404-338C	576	P442-666	540	P504-628	541	P611-015	542	RF-64	62, 106
P327-020	538	P404-420	539	P442-668	540	P504-628C	577	P611-015C	577	RF-66	62, 106
P327-020C	575	P404-422	539	P442-670	540	P504-664	541	P611-020	542	RFKS2-005	398
P327-030	538	P416-337	539	P444X-015	540	P504-664C	577	P611-020C	577	RFKS2-005C	398
P327-030C	575	P416-338	539	P444X-015C	576	P504-666	541	P611-030	542	RFKS2-007	398
P327-040	538	P416-420	539	P444X-020	540	P504-668	541	P611-030C	577	RFKS2-007C	398
P327-040C	575	P417-337	539	P444X-020C	576	P504-668C	577	P611-040	542	RFKS2-010	398
P327-241	538	P417-338	539	P444X-030	540	P504-670	541	P611-040C	577	RFKS2-010C	398
P327-241C	575	P417-420	539	P444X-030C	576	P504-670C	577	P611-060	542	RFKS2-012	398
P329-342	538	P418-337	539	P444X-040	540	P507-015	541	P611-060C	577	RFKS2-012C	398
P330-342	538	P418-338	539	P444X-040C	576	P507-020	541	P611S-030	542	RFKS2-015	398
P330X-342	538	P418-420	539	P444X-060	540	P507-020C	577	P612-241C	577	RFKS2-015C	398
P331-015	538	P42-005	178	P444X-060C	576	P507-030	541	P612-251	542	RFKS2-020	398
P331-015C	575	P42-015	178	P445-015	540	P507-030C	577	P612-251C	577	RFKS2-020C	398
P331-020	538	P42-020	178	P445-015C	576	P507-040	541	P612-337	542	RFKS2-025	398
P331-020C	575	P42-025	178	P445-020	540	P507-040C	577	P612-337C	577	RFKS2-025C	399
P331-030	538	P42-030	178	P445-020C	576	P507-060C	577	P612-338	542	RFKS2-030	398
P331-030C	575	P42-035	178	P445-030	540	P507-251	541	P612-338C	577	RFKS2-030C	399
P331-040	538	P42-040	178	P445-030C	576	P507-338	541	P612-420	542	RFKS2-040	398
P331-040C	575	P42-045	178	P445-040	540	P507-338C	577	P612-420C	577	RFKS2-040C	399
P331-060	538	P42-050	178	P445-040C	576	P507-420	541	P612-422	542	RFKS3-005	398
P331-060C	575	P42-055	178	P445-060	540	P507-422	541	P612-422C	577	RFKS3-005C	398
P331-080	538	P42-060	178	P445-060C	576	P507-422C	577	P612-532	542	RFKS3-007	398
P331-100	538	P42-070	178	P445X-015	540	P507-530C	577	P612-532C	577	RFKS3-007C	398
P331-120	538	P42-080	178	P445X-015C	576	P507-532C	577	P700-015	543	RFKS3-010	398
P333-015	539	P42-090	178	P445X-020	540	P515-338	541	P700-015C	577	RFKS3-010C	398
P333-015C	575	P42-100	178	P445X-020C	576	P516-338	542	P700-020	543	RFKS3-012	398
P333-020	539	P42-110	178	P445X-030	540	P517-338	542	P700-020C	577	RFKS3-012C	398
P333-020C	575	P42-120	178	P445X-030C	576	P600-015	542	P700-030	543	RFKS3-015	398
P333-030	539	P42-140	178	P445X-040	540	P600-015C	577	P700-030C	577	RFKS3-015C	398
P333-030C	575	P42-150	178	P445X-040C	576	P600-020	542	P700-040	543	RFKS3-020	398
P333-040	539	P42-160	178	P445X-060	540	P600-020C	577	P700-040C	577	RFKS3-020C	398
P333-040C	575	P42-180	178	P445X-060C	576	P600-030	542	P700-060	543	RFKS3-025	398
P335-030	543	P42-240	178	P447-337	540	P600-030C	577	P700-060C	577	RFKS3-025C	399
P335-030C	577	P428-015	539	P448-030	540	P600-040	542	P700-080	543	RFKS3-030	398
P335-040	543	P428-015C	576	P448-030C	576	P600-040C	577	P700-080C	577	RFKS3-030C	399
P335-040C	577	P428-020	539	P448-040	540	P600-060	542	P704P-015	543	RFKS3-040	398
P400-015	539	P428-020C	576	P448-040C	576	P600-060C	577	P704P-015C	577	RFKS3-040C	399
P400-015C	575	P428-030	539	P500-020	541	P600-080	542	P704X-015	543	RFK2-005	398
P400-020	539	P428-030C	576	P500-020C	576	P600-080C	577	P705-015C	577	RFK2-005C	398
P400-020C	575	P428-040	539	P500-030	541	P600-100	542	P705-020C	577	RFK2-007	398
P400-030	539	P428-040C	576	P500-030C	576	P600-100C	577	P705-030C	577	RFK2-007C	398
P400-030C	575	P429-241C	576	P500-241	541	P600-120	542	P705-040C	577	RFK2-010	398
P400-040	539	P429-251	539	P500-241C	576	P600-120C	577	P705R-015C	577	RFK2-010C	398
P400-040C	575	P429-251C	576	P500-251	541	P601-241	542	P705R-020C	577	RFK2-012	398
P400-060	539	P429-337	540	P500-251C	576	P601-241C	577	P705R-030C	577	RFK2-012C	398
P400-060C	575	P429-337C	576	P500-338	541	P601-251	542	P705R-040C	577	RFK2-015	398
P400-080	539	P429-338	540	P500-338C	576	P601-251C	577	P706X-015	543	RFK2-015C	398
P400-080C	575	P429-338C	576	P501-015	541	P601-257	542	P706X-015C	577	RFK2-020	398
P400-100	539	P429-419	540	P501-015C	576	P601-337	542	P706X-020	543	RFK2-020C	398
P400-100C	576	P429-419C	541	P501-020	541	P601-337C	577	P706X-020C	577	RFK2-025	398
P400-120	539	P429-420	540	P501-020C	576	P601-338	542	P706X-030	543	RFK2-025C	398
P400-120C	576	P429-420C	576	P501-030	541	P601-338C	577	P706X-030C	577	RFK2-030	398
P401-241	539	P429-422	540	P501-030C	576	P601-419	542	P706X-040	543	RFK2-030C	398
P401-241C	576	P429-422C	576	P501-040	541	P601-419C	577	P706X-040C	577	RFK2-040	398
P401-251	539	P43-005	178	P501-040C	576	P601-420	542	P706X-060	543	RFK2-040C	398
P401-251C	576	P43-020	178	P502-251	541	P601-420C	577	P706X-060C	577	RFK3-005	398
P401-257	539	P43-025	178	P502-251C	576	P601-422	542	P706X-080	543	RFK3-005C	398
P401-257C	576	P43-030	178	P502-337	541	P601-422C	577	P706X-080C	577	RFK3-007	398
P401-337	539	P43-035	178	P502-337C	576	P601-528	542	P706X-100	543	RFK3-007C	398
P401-337C	576	P43-040	178	P502-338	541	P601-528C	577	P706X-100C	577	RFK3-010	398
P401-338	539	P43-045	178	P502-338C	576	P601-530	542	P706X-120	543	RFK3-010C	398
P401-338C	576	P43-050	178	P502-420	541	P601-530C	577	P706X-120C	577	RFK3-012	398
P401-420	539	P43-055	178	P502-420C	576	P601-532	542	P707X-015	543	RFK3-012C	398
P401-420C	576	P43-060	178	P502-422	541	P601-532C	577	P707X-015C	577	RFK3-015	398
P401-422	539	P43-070	178	P502-422C	576	P601-578	542	P708P-015	543	RFK3-015C	398
P401-422C	576	P43-080	178	P502-578C	576	P601-580C	577	P708P-015C	577	RFK3-020	398
P401-532	539	P43-090	178	P503-030	541	P601-582	542	P708P-020	543	RFK3-020C	398
P401-532C	576	P43-100	178	P503-040	541	P601-582C	577	P708P-020C	577	RFK3-025	398
P401-582C	576	P43-110	178	P503-060	541	P601-585	542	P711P-015	543	RFK3-025C	398
P403-015	539	P43-120	178	P503-060C	576	P601-585C	577	P711P-015C	577	RFK3-030	398
P403-015C	576	P439-338	540	P503-080	541	P601-624	542	P711P-169	543	RFK3-030C	398

Spears List Price Part Number Index



RFK3-040	398	SE-BRK-040	405	ST1102-010	71, 100	ST9_-412	69, 98	S118E-25G	532	S1520-15FSRSCO	743
RFK3-040C	398	SE-ERK-005	405	ST1105	70, 99	ST9_-415	69, 98	S118E-30G	532	S1520-20	82, 421
RGSK-005	741	SE-ERK-007	405	ST1107	70, 99	ST9_-419	69, 98	S118E-40G	532	S1520-20F	82, 421
RGSK-007	741	SE-ERK-010	405	ST1110	70, 99	ST93PR-208	71, 100	S118E-60G	532	S1520-20FSR	82, 421
RM-64	62, 106	SE-ERK-015	405	ST1205	70, 99	ST93PR-212	71, 100	S118V-05G	532	S1520-25	82, 421
RM-66	62, 106	SE-ERK-020	405	ST1207	70, 99	ST93PR-215	71, 100	S118V-07G	532	S1520-25F	82, 421
RM-66-H	62, 106	SE-ERK-030	405	ST1210	70, 99	ST93PR-219	71, 100	S118V-10G	532	S1520-25FSR	82, 421
RSH-005	401	SE-ERK-040	405	ST1305	70, 99	ST93PR-408	71, 100	S118V-12G	532	S1520-30	82, 421
RSH-007	401	SE-VRK-005	405	ST1307	70, 99	ST93PR-412	71, 100	S118V-15G	532	S1520-30F	82, 421
RSH-010	401	SE-VRK-007	405	ST1310	70, 99	ST93PR-415	71, 100	S118V-20G	532	S1520-30FSR	82, 421
RSH-012	401	SE-VRK-010	405	ST205-020	71, 100	ST93PR-419	71, 100	S118V-25G	532	S1520-40	82, 421
RSH-015	402	SE-VRK-015	405	ST207-020	71, 100	S0301-05	47	S118V-30G	532	S1520-40F	82, 421
RSH-020	402	SE-VRK-020	405	ST207-065	72, 101	S0301-07	47	S118V-40G	532	S1520-40FSR	82, 421
RSH-030	402	SE-VRK-030	405	ST207-105	72, 101	S0301-10	47	S118V-60G	532	S1520-60	82, 421
RSH-040	402	SE-VRK-040	405	ST210-020	71, 100	S0301-100F	47	S119-05	48, 532	S1520-60F	82, 421
RSH2-005	401	SH-120	444	ST210-065	72, 101	S0301-12	47	S119-07	48, 532	S1520-60FSR	82, 421
RSH2-007	401	SHRK-005	743	ST210-105	72, 101	S0301-120F	47	S119-10	48, 532	S1520-80	82, 421
RSH2-010	401	SH118-05	49, 534	ST408-005	72, 101	S0301-15	47	S119-12	48, 532	S1520C05	82, 421
RSH2-012	401	SH118-07	49, 534	ST408-007	72, 101	S0301-20	47	S119-15	48, 532	S1520C05F	82, 421
RSH2-015	402	SH118-07CO	742	ST408-010	72, 101	S0301-25	47		544	S1520C05FSR	82, 421
RSH2-020	402	SH118-10	49, 534	ST410-005	71, 100	S0301-30	47	S119-20	48, 532	S1520C07	82, 421
RSH2-030	402	SH118-10CO	742	ST410-007	71, 100	S0301-40	47		544	S1520C07F	82, 421
RSH2-040	402	SH118-12	49, 534	ST410-010	71, 100	S0301-60F	47	S119-25	48, 532	S1520C07FSR	82, 421
RSH2-060	402	SH118-15	49, 534	ST4105	70, 99	S0301-80F	47		544	S1520C10	82, 421
R4235-101	362, 741	SH118-20	49, 534	ST4107	70, 99	S0302-10	47	S119-30	48, 532	S1520C10F	82, 421
R4235-101SR	361, 741	SH119-05	49, 534	ST4110	70, 99	S0302-15	47		544	S1520C10FSR	82, 421
S-HC-1	61, 106	SH119-07	49, 534	ST412-005	72, 101	S0302-20	47	S119-40	48, 532	S1520C12	82, 421
S-W	59, 116	SH119-10	49, 534	ST412-007	72, 101	S0302-30	47		544	S1520C12F	82, 421
	509	SH119-12	49, 534	ST412-010	72, 101	S0302-40	47	S119-60	48, 532	S1520C12FSR	82, 421
SAEK-020-120	426, 462	SH119-15	49, 534	ST4205	70, 99	S0303-15	47		544	S1520C15	82, 421
	546	SH119-20	49, 534	ST4207	70, 99	S0303-20	47	S119E-05G	532	S1520C15F	82, 421
SAEK-020-160	426, 462	SK-ERK-007	249, 420	ST4210	70, 99	S0304-10	47	S119E-07G	532	S1520C15FSR	82, 421
	546	SK-ERK-010	249, 420	ST425-005	71, 100	S0304-12	47	S119E-10G	532	S1520C20	82, 421
SAEK-020-200	426, 462	SK-ERK-015	249, 420	ST425-007	71, 100	S0304-15	47	S119E-12G	532	S1520C20F	82, 421
	546	SK-ERK-020	249, 420	ST425-010	71, 100	S0304-20	47	S119E-15G	532	S1520C20FSR	82, 421
SAEK-020-240	426, 462	SK-ERK-025	249, 420	ST430-007	71, 100	S0801-100F	224	S119E-20G	532	S1520C25	82, 421
	546	SK-ERK-030	249, 420	ST430-010	71, 100	S0801-120F	224	S119E-25G	532	S1520C25F	82, 421
SAEK-020-360	426, 462	SK-ERK-040	249, 420	ST4305	70, 99	S0801-140F	224	S119E-30G	532	S1520C25FSR	82, 421
	546	SK-ERK-060	249, 420	ST4307	70, 99	S0801-160F	224	S119E-60G	532	S1520C30	82, 421
SAEK-020-480	426, 462	SK-ERK-080	249, 420	ST4310	70, 99	S0801-180F	224	S119V-05G	532	S1520C30F	82, 421
	546	SK-VRK-007	249, 420	ST436-005	71, 100	S0801-20F	224	S119V-07G	532	S1520C30FSR	82, 421
SAEK-030-120	426, 462	SK-VRK-010	249, 420	ST436-007	71, 100	S0801-25F	224	S119V-10G	532	S1520C40	82, 421
	546	SK-VRK-015	249, 420	ST436-010	71, 100	S0801-30F	224	S119V-12G	532	S1520C40F	82, 421
SAEK-030-160	426, 462	SK-VRK-020	249, 420	ST5_-100	68, 97	S0801-40F	224	S119V-15G	532	S1520C40FSR	82, 421
	546	SK-VRK-025	249, 420	ST5_-208	69, 98	S0801-60F	224	S119V-20G	532	S1520C60	82, 421
SAEK-030-200	426, 462	SK-VRK-030	249, 420	ST5_-212	69, 98	S0801-80F	224	S119V-25G	532	S1520C60F	82, 421
	547	SK-VRK-040	249, 420	ST5_-215	69, 98	S110-05	50	S119V-30G	532	S1520C60FSR	82, 421
SAEK-030-240	426, 462	SK-VRK-060	249, 420	ST5_-219	69, 98	S110-07	50	S119V-40G	532	S1520C80	82, 421
	547	SK-VRK-080	249, 420	ST5_-400	68, 97	S110-10	50	S119V-60G	532	S1580-05	83, 423
SAEK-030-360	426, 462	SNK-005	400	ST5_-408	69, 98	S110-12	50	S130-05	52	S1580-05F	83, 423
	547	SNK-005C	400	ST5_-412	69, 98	S110-15	50	S130-07	52	S1580-05FSR	83, 423
SAEK-030-480	426, 462	SNK-007	400	ST5_-415	69, 98	S110-20	50	S130-10	52	S1580-07	83, 423
	547	SNK-007C	400	ST5_-419	69, 98	S110-25	50	S130-12	52	S1580-07F	83, 423
SAEK-040-120	426, 462	SNK-010	400	ST57_-208	69, 98	S110-30	50	S130-15	52	S1580-07FSR	83, 423
	547	SNK-010C	400	ST57_-212	69, 98	S110-40	50	S130-20	52	S1580-10	83, 423
SAEK-040-160	426, 462	SNK-012	400	ST57_-215	69, 98	S110-60	50	S1400-15	429, 465	S1580-10F	83, 423
	547	SNK-012C	400	ST57_-219	69, 98	S110E-05G	50, 224	S1500-05	83, 422	S1580-10FSR	83, 423
SAEK-040-200	426, 462	SNK-015	400	ST57_-408	69, 98	S110E-07G	50, 224	S1500-07	83, 422	S1580-12	83, 423
	547	SNK-015C	400	ST57_-412	69, 98	S110E-10G	50, 224	S1500-10	83, 422	S1580-12F	83, 423
SAEK-040-240	426, 462	SNK-020	400	ST57_-415	69, 98	S110E-12G	50, 224	S1500-12	83, 422	S1580-12FSR	83, 423
	547	SNK-020C	400	ST57_-419	69, 98	S110E-15G	50, 224	S1500-15	83, 422	S1580-15	83, 423
SAEK-040-360	427, 463	SNK-030	400	ST7_-100	68, 97	S110E-20G	50, 224	S1500-20	83, 422	S1580-15F	83, 423
	547	SNK-030C	400	ST7_-208	69, 98	S110E-25G	50, 224	S1500-25	83, 422	S1580-15FSR	83, 423
SAEK-040-480	427, 463	SNK-040	400	ST7_-212	69, 98	S110E-30G	50, 224	S1500-30	83, 422	S1580-20	83, 423
	547	SNK-040C	400	ST7_-215	69, 98	S110E-40G	50, 224	S1500-40	83, 422	S1580-20F	83, 423
SAEK-060-120	427, 463	SSS4-040	272, 527	ST7_-219	69, 98	S110E-60G	50, 224	S1500C05	83, 422	S1580-20FSR	83, 423
	547	SSS4-060	272, 527	ST7_-400	68, 97	S1100-07	84, 250	S1500C07	83, 422	S1580-25	83, 423
SAEK-060-160	427, 463	SSS4-080	272, 527	ST7_-408	69, 98		425	S1500C10	83, 422	S1580-25F	83, 423
	547	SSS4-100	272, 527	ST7_-412	69, 98	S1101-05	84, 250	S1500C12	83, 422	S1580-25FSR	83, 423
SAEK-060-200	427, 463	SSS4-120	272, 527	ST7_-415	69, 98		425	S1500C15	83, 422	S1580-30	83, 423
	547	SS23BS4SG-040	272, 527	ST7_-419	69, 98	S1102-05	84, 250	S1500C20	83, 422	S1580-30F	83, 423
SAEK-060-240	427, 463	SS23BS4SG-060	272, 527	ST73PR-208	71, 100		425	S1500C25	83, 422	S1580-30FSR	83, 423
	547	SS23BS4SG-080	272, 527	ST73PR-212	71, 100	S1102-05-07	84, 250	S1500C30	83, 422	S1580-40	83, 423
SAEK-060-360	427, 463	SS23BS4SG-100	272, 527	ST73PR-215	71, 100		425	S1500C40	83, 422	S1580-40F	83, 423
	547	SS23BS4SG-120	272, 527	ST73PR-219	71, 100	S1102-07	84, 250	S1520-05	82, 421	S1580-40FSR	83, 423
SAEK-060-480	427, 463	SS23BS4SG-420	272, 527	ST73PR-408	71, 100		425	S1520-05F	82, 421	S1580C05	83, 423
	547	SS23BS4SG-421	272, 527	ST73PR-412	71, 100	S1102-10	84, 250	S1520-05FSR	82, 421	S1580C05F	83, 423
SB75-005	365, 723	SS23BS4SG-422	272, 527	ST73PR-415	71, 100		425	S1520-07	82, 421	S1580C05FSR	83, 423
	742	SS23BS4SG-532	272, 527	ST73PR-419	71, 100	S118-05	48, 532	S1520-07F	82, 421	S1580C07	83, 423
SB75-010	365, 723	SS23BS4SG-582	272, 527	ST75_-208	69, 98	S118-07	48, 532	S1520-07FSR	82, 421	S1580C07F	83, 423
	742	SS23BS4SG-585	272, 527	ST75_-212	69, 98	S118-10	48, 532	S1520-10	82, 421	S1580C07FSR	83, 423
SB75-020	365, 723	SS23BS4SG-626	272, 527	ST75_-215	69, 98	S118-12	48, 532	S1520-10CO	743	S1580C10	83, 423
	742	SS23BS4SG-628	272, 527	ST75_-219	69, 98	S118-15	48, 532	S1520-10F	82, 421	S1580C10F	83, 423
SB75-030	365, 723	SS23BS4SG-668	272, 527	ST75_-408	69, 98	S118-20	48, 532	S1520-10FSR	82, 421	S1580C10FSR	83, 423
	742	SS23BS4SG-670	272, 527	ST75_-412	69, 98	S118-25	48, 532	S1520-10FSRSCO	743	S1580C12	83, 423
SC-1	445	ST105-035	71, 100	ST75_-415	69, 98	S118-30	48, 532	S1520-12	82, 421	S1580C12F	83, 423
SDC-040	461, 545	ST107-035	71, 100	ST75_-419	69, 98	S118-40	48, 532	S1520-12CO	743	S1580C12FSR	83, 423
SDCP-040	461, 545	ST110-040	71, 100	ST9_-100	68, 97	S118-60	48, 532	S1520-12F	82, 421	S1580C15	83, 423
SE-BRK-005	405	ST1101-005	71, 100	ST9_-208							



Spears List Price Part Number Index

S1580C25F	83, 423	S1780C07FSR	84, 424		546	TF-16	56, 56	TSK-02003	400	TU2-ERK-015	404
S1580C25FSR	83, 423	S1780C10	84, 424	S675P-AK	427, 463		113, 113	TSK-03003	400, 400	TU2-ERK-020	404
S1580C30	83, 423	S1780C10F	84, 424		547		510, 510	TSK-04003	400, 400	TU2-ERK-030	404
S1580C30F	83, 423	S1780C10FSR	84, 424	S675P-ECK	427, 463	TF-200	56, 113	TSK-06003	400, 400	TU2-ERK-040	404
S1580C30FSR	83, 423	S1780C12	84, 424		547		510	TSK1-00503	400	TU2-ERK-060	404
S1580C40	83, 423	S1780C12F	84, 424	S675P-FRK	427, 463	TF-32	56, 56	TSK1-00703	400	TU2-VRK-005	404
S1580C40F	83, 423	S1780C12FSR	84, 424		547		113, 113	TSK1-01003	400	TU2-VRK-007	404
S1580C40FSR	83, 423	S1780C15	84, 424	S675P-120	426, 462		510, 510	TSK1-01203	400	TU2-VRK-010	404
S1720-05	82, 421	S1780C15F	84, 424		546	TF-50	56, 113	TSK1-01503	400	TU2-VRK-012	404
S1720-05F	82, 421	S1780C15FSR	84, 424	S675P-160	426, 462		510	TSK1-02003	400	TU2-VRK-015	404
S1720-05FSR	82, 421	S1780C20	84, 424		546	TF-76	56, 113	TU-ERK-005	405	TU2-VRK-020	404
S1720-07	82, 421	S1780C20F	84, 424	S675P-200	426, 462		510	TU-ERK-007	405	TU2-VRK-030	404
S1720-07F	82, 421	S1780C20FSR	84, 424		546	TFR-100	56, 113	TU-ERK-010	405	TU2-VRK-040	404
S1720-07FSR	82, 421	S1780C25	84, 424	S675P-240	426, 462		510	TU-ERK-012	405	TU2-VRK-060	404
S1720-10	82, 421	S1780C25F	84, 424		546	TFR-150	56, 113	TU-ERK-015	405	TU2LR-005	402
S1720-10F	82, 421	S1780C25FSR	84, 424	S675P-360	426, 462		510	TU-ERK-020	405	TU2LR-007	402
S1720-10FSR	82, 421	S1780C30	84, 424		546	TFR-200	56, 113	TU-ERK-030	405	TU2LR-010	402
S1720-12	82, 421	S1780C30F	84, 424	S675P-480	426, 462		510	TU-ERK-040	405	TU2LR-012	402
S1720-12F	82, 421	S1780C30FSR	84, 424		546	TFR-50	56, 113	TU-VRK-005	405	TU2LR-015	402
S1720-12FSR	82, 421	S1780C40	84, 424	S854-020	74, 220		510	TU-VRK-007	405	TU2LR-020	402
S1720-15	82, 422	S1780C40F	84, 424	S854-030	74, 220	TFR-76	56, 113	TU-VRK-010	405	TU2LR-030	402
S1720-15F	82, 422	S1780C40FSR	84, 424	S854-030C	305		510	TU-VRK-012	405	TU2LR-040	402
S1720-15FSR	82, 422	S275MA-063	427, 463	S854-040	74, 220	TFR2-100	262, 515	TU-VRK-015	405	TU3-ERK-005	404
S1720-20	82, 422		548	S854-040C	305	TFR2-100C	340, 516	TU-VRK-020	405	TU3-ERK-007	404
S1720-20F	82, 422	S275P	426, 462	S854-060	74, 220	TFR2-150	262, 515	TU-VRK-030	405	TU3-ERK-010	404
S1720-20FSR	82, 422		546	S854-060C	305	TFR2-150C	340, 516	TU-VRK-040	405	TU3-ERK-012	404
S1720-25	82, 422	S275P-AK	427, 463	S854-080	74, 220	TFR2-200	262, 515	TUAK-005	403	TU3-ERK-015	404
S1720-25F	82, 422		547	S854-080C	305	TFR2-200C	340, 516	TUAK-007	403	TU3-ERK-020	404
S1720-25FSR	82, 422	S275P-ECK	427, 463	S854-100	74, 220	TFR2-50	262, 515	TUAK-010	403	TU3-ERK-030	404
S1720-30	82, 422		547	S854-100C	305	TFR2-50C	340, 516	TUAK-012	403	TU3-ERK-040	404
S1720-30F	82, 422	S275P-FRK	427, 463	S854-120	74, 220	TFR2-76	262, 515	TUAK-015	403	TU3-VRK-005	404
S1720-30FSR	82, 422		547	S854-120C	305	TFR2-76C	340, 516	TUAK-020	403	TU3-VRK-007	404
S1720-40	82, 422	S275P-120	426, 462	T-1	62, 106	TFR3-100	262, 515	TUAK-030	403	TU3-VRK-010	404
S1720-40F	82, 422		546	TAW-002	217, 304	TFR3-100C	340, 516	TUAK-040	403	TU3-VRK-012	404
S1720-40FSR	82, 422	S275P-160	426, 462	TAW-003	217, 304	TFR3-150	262, 515	TUAK1-005	403	TU3-VRK-015	404
S1720C05	82, 422		546	TAW-005	217, 304	TFR3-150C	340, 516	TUAK1-007	403	TU3-VRK-020	404
S1720C05F	82, 422	S275P-200	426, 462		570	TFR3-200	262, 515	TUAK1-010	403	TU3-VRK-030	404
S1720C05FSR	82, 422		546	TAW-007	217, 304	TFR3-200C	340, 516	TUAK1-012	403	TU3-VRK-040	404
S1720C07	82, 422	S275P-240	426, 462		570	TFR3-50	262, 515	TUAK1-015	403	T20051414B	583
S1720C07F	82, 422		546	TAW-010	217, 304	TFR3-50C	340, 516	TUAK1-020	403	T20052424B	583
S1720C07FSR	82, 422	S275P-360	426, 462		570	TFR3-76	262, 515	TUAK1-030	403	T20151414B	583
S1720C10	82, 422		546	TAW-012	217, 304	TFR3-76C	340, 516	TUAK1-040	403	T20152424B	583
S1720C10F	82, 422	S275P-480	426, 462		570	TF2-100	262, 515	TUAK2-005	404	T20303434B	583
S1720C10FSR	82, 422		546	TAW-015	217, 304	TF2-100C	340, 515	TUAK2-007	404	T20554444B	583
S1720C12	82, 422	S375MA-090	427, 463		570	TF2-150	262, 515	TUAK2-010	404	T21004444B	583
S1720C12F	82, 422		548	TAW-020	217, 304	TF2-150C	340, 515	TUAK2-012	404	T212C4444B	583
S1720C12FSR	82, 422	S375P	426, 462		570	TF2-16	262, 262	TUAK2-015	404	T212C6363B	583
S1720C15	82, 422		546	TAW-025	217, 304		515, 515	TUAK2-020	404	T21504444B	583
S1720C15F	82, 422	S375P-AK	427, 463	TAW-030	217, 304	TF2-16C	340, 340	TUAK2-030	404	T21754444B	583
S1720C15FSR	82, 422		547		570		515, 516	TUAK2-040	404	T220C4444B	583
S1720C20	82, 422	S375P-ECK	427, 463	TAW-040	217, 304	TF2-200	262, 515	TUAK3-005	404	T220C6363B	583
S1720C20F	82, 422		547		570	TF2-200C	340, 515	TUAK3-007	404	T22004444B	583
S1720C20FSR	82, 422	S375P-FRK	427, 463	TAW1-002	217, 304	TF2-32	262, 262	TUAK3-010	404	T22754444B	583
S1720C25	82, 422		547	TAW1-003	217, 304		515, 515	TUAK3-012	404	T22756363B	583
S1720C25F	82, 422	S375P-120	426, 462	TAW1-005	217, 304	TF2-32C	340, 340	TUAK3-015	404	T230C4444B	583
S1720C25FSR	82, 422		546		570		515, 516	TUAK3-020	404	T230C6363B	583
S1720C30	82, 422	S375P-160	426, 462	TAW1-007	217, 304	TF2-50	262, 515	TUAK3-030	404	T23004444B	583
S1720C30F	82, 422		546		570	TF2-50C	340, 515	TUAK3-040	404	T23006363B	583
S1720C30FSR	82, 422	S375P-200	426, 462	TAW1-010	217, 304	TF2-76	262, 515	TUMB-005	402	T23504444B	583
S1720C40	82, 422		546		570	TF2-76C	340, 515	TUMB-007	402	T23506363B	583
S1720C40F	82, 422	S375P-240	426, 462	TAW1-012	217, 304	TF3-100	262, 515	TUMB-010	402	T25004444B	583
S1720C40FSR	82, 422		546		570	TF3-100C	340, 515	TUMB-012	402	T25006363B	583
S1780-05	84, 424	S375P-360	426, 462	TAW1-015	217, 304	TF3-150	262, 515	TUMB-015	402	T25504444B	583
S1780-05F	84, 424		546		570	TF3-150C	340, 515	TUMB-020	402	T25506363B	583
S1780-05FSR	84, 424	S375P-480	426, 462	TAW1-020	217, 304	TF3-16	262, 262	TUMB-030	402	T26504444B	583
S1780-07	84, 424		546		570		515, 515	TUMB-040	402	T26506363B	583
S1780-07F	84, 424	S401-249	33	TAW1-025	217, 304	TF3-16C	340, 340	TUMB2-005	402	T3001G1515	585
S1780-07FSR	84, 424	S401-251	33	TAW1-030	217, 304		515, 516	TUMB2-007	402	T3001P1515	585
S1780-10	84, 424	S427-020	33		570	TF3-200	262, 515	TUMB2-010	402	T30051212A	584
S1780-10F	84, 424	S475MA-110	427, 463	TAW1-040	217, 304	TF3-200C	340, 515	TUMB2-012	402	T30051212B	584
S1780-10FSR	84, 424		548		570	TF3-32	262, 262	TUMB2-015	402	T30052222A	584
S1780-12	84, 424	S475P	426, 462	TAW2-002	217, 304		515, 515	TUMB2-020	402	T30052222B	584
S1780-12F	84, 424		546	TAW2-003	217, 304	TF3-32C	340, 340	TUMB2-030	402	T30151212A	584
S1780-12FSR	84, 424	S475P-AK	427, 463	TAW2-005	217, 304		515, 516	TUMB2-040	402	T30151212B	584
S1780-15	84, 424		547		570	TF3-50	262, 515	TU1-ERK-005	404	T30152222A	584
S1780-15F	84, 424	S475P-ECK	427, 463	TAW2-007	217, 304	TF3-50C	340, 515	TU1-ERK-007	404	T30152222B	584
S1780-15FSR	84, 424		547		570	TF3-76	262, 515	TU1-ERK-010	404	T30303232A	584
S1780-20	84, 424	S475P-FRK	427, 463	TAW2-010	217, 304	TF3-76C	340, 515	TU1-ERK-012	404	T30303232B	584
S1780-20F	84, 424		547		570	TL-112	63, 108	TU1-ERK-015	404	T30554242A	584
S1780-20FSR	84, 424	S475P-120	426, 462	TAW2-012	217, 304	TL-112-1	63, 108	TU1-ERK-020	404	T30554242B	584
S1780-25	84, 424		546		570	TL-116-1	63, 108	TU1-ERK-030	404	T4001G1612	586
S1780-25F	84, 424	S475P-160	426, 462	TAW2-015	217, 304	TL-120-1	63, 108	TU1-ERK-040	404	T4001P1612	586
S1780-25FSR	84, 424		546		570	TL-123	63, 108	TU1-VRK-005	404	VBA20-A005-A020	623
S1780-30	84, 424	S475P-200	426, 462	TAW2-020	217, 304	TL-123-1	63, 108	TU1-VRK-007	404	VBA20-A005-G020	623
S1780-30F	84, 424		546		570	TRAN94G-005	729	TU1-VRK-010	404	VBA20-A007-A030	623
S1780-30FSR	84, 424	S475P-240	426, 462	TAW2-025	217, 304	TRAN94G-010	729	TU1-VRK-012	404	VBA20-A007-G030	623
S1780-40	84, 424		546	TAW2-030	217, 304	TRAN94G-020	729	TU1-VRK-015	404	VBA20-A010-A030	623
S1780-40F	84, 424	S475P-360	426, 462		570	TRAN94G-030	729	TU1-VRK-020	404	VBA20-A010-G030	623
S1780-40FSR	84, 424		546	TAW2-040	217, 304	TRAN94G-040	729	TU1-VRK-030	404	VBA20-A015-A040	623
S1780C05	84, 424	S475P-480	426, 462		570	TSK-00503	400	TU1-VRK-040	404	VBA20-A015-G040	623
S1780C05F	84, 424		546	TF-100	56, 113	TSK-00703	400	TU2-ERK-005	404	VBA20-A020-A040	623
S1780C05FSR	84, 424	S675MA-160	427, 463		510	TSK-01003	400	TU2-ERK-007	404	VBA20-A020-G040	623
S1780C07	84, 424		548	TF-150	56, 113	TSK-01203	400	TU2-ERK-010	404		

Spears List Price Part Number Index



VBA20-B005-G020	623	VBC2-B010-A030	625	VBD20-B015-B040	627	VTN2-040	402	YS2AS8-012C	343, 521	YS2B58-020CL	267, 521
VBA20-B007-A030	623	VBC2-B010-B030	625	VBD20-B015-G040	627	W-100	59, 60	YS2AS8-012CL	267, 520	YS2B58-020CLSR	268, 521
VBA20-B007-B030	623	VBC2-B010-G030	625	VBD20-B020-A040	627		105, 116	YS2AS8-015	266, 520	YS2B58-020CSR	344, 522
VBA20-B007-G030	623	VBC2-B015-A040	625	VBD20-B020-B040	627		509	YS2AS8-015C	343, 521	YS2B58-020SR	267, 520
VBA20-B010-A030	623	VBC2-B015-B040	625	VBD20-B020-G040	627	W-101	60, 105	YS2AS8-015CL	267, 520	YS2B58-030	266, 520
VBA20-B010-B030	623	VBC2-B015-G040	625	VBD20-C005-A020	628	WBHK-020	444	YS2AS8-020	266, 520	YS2B58-030C	344, 521
VBA20-B010-G030	623	VBC2-B020-A040	626	VBD20-C005-B020	628	WBHK-030	444	YS2AS8-020C	343, 521	YS2B58-030CL	267, 521
VBA20-B015-A040	623	VBC2-B020-B040	626	VBD20-C005-C020	628	WBHK-040	444	YS2AS8-020CL	267, 520	YS2B58-030CLSR	268, 521
VBA20-B015-B040	623	VBC2-B020-G040	626	VBD20-C005-G020	628	WBHK-060	444	YS2AS8-030	266, 520	YS2B58-030CSR	344, 522
VBA20-B015-G040	623	VBC2-C005-A020	626	VBD20-C007-A030	628	WBHK-080	444	YS2AS8-030C	343, 521	YS2B58-030SR	267, 520
VBA20-B020-A040	623	VBC2-C005-B020	626	VBD20-C007-B030	628	WBHK-100	444	YS2AS8-030CL	267, 520	YS2B58-040	267, 520
VBA20-B020-B040	624	VBC2-C005-C020	626	VBD20-C007-C030	628	WBHK-120	444	YS2AS8-040	266, 520	YS2B58-040C	344, 521
VBA20-B020-G040	623	VBC2-C005-G020	626	VBD20-C007-G030	628	WBHK1-020	444	YS2AS8-040C	344, 521	YS2B58-040CL	267, 521
VBA20-C005-A020	624	VBC2-C007-A030	626	VBD20-C010-A030	628	WBHK1-030	444	YS2AS8-040CL	267, 520	YS2B58-040CSR	268, 521
VBA20-C005-B020	624	VBC2-C007-B030	626	VBD20-C010-B030	628	WBHK1-040	444	YS2BC8-005C	344, 521	YS2B58-040CSR	344, 522
VBA20-C005-C020	624	VBC2-C007-C030	626	VBD20-C010-C030	628	WBHK1-060	444	YS2BC8-005CSR	344, 522	YS2B58-040SR	267, 520
VBA20-C005-G020	624	VBC2-C007-G030	626	VBD20-C010-G030	628	WBHK1-080	444	YS2BC8-007C	344, 521	YS21C8-005CSR	343, 519
VBA20-C007-A030	624	VBC2-C010-A030	626	VBD20-C015-A040	628	WBHK1-100	444	YS2BC8-007CSR	344, 522	YS21C8-007CSR	343, 519
VBA20-C007-B030	624	VBC2-C010-B030	626	VBD20-C015-B040	628	WBHK1-120	444	YS2BC8-010C	344, 521	YS21C8-010CSR	343, 519
VBA20-C007-C030	624	VBC2-C010-C030	626	VBD20-C015-C040	628	WBHK2-020	444	YS2BC8-010CSR	344, 522	YS21C8-012CSR	343, 519
VBA20-C007-G030	624	VBC2-C010-G030	626	VBD20-C015-G040	628	WBHK2-030	444	YS2BC8-012C	344, 521	YS21C8-015CSR	343, 519
VBA20-C010-A030	624	VBC2-C015-A040	626	VBD20-C020-A040	628	WBHK2-040	444	YS2BC8-012CSR	344, 522	YS21C8-020CSR	343, 519
VBA20-C010-B030	624	VBC2-C015-B040	626	VBD20-C020-B040	628	WBHK2-060	444	YS2BC8-015C	344, 521	YS21C8-030CSR	343, 519
VBA20-C010-C030	624	VBC2-C015-C040	626	VBD20-C020-C040	628	WBHK2-080	444	YS2BC8-015CSR	344, 522	YS21C8-040CSR	343, 519
VBA20-C010-G030	624	VBC2-C015-G040	626	VBD20-C020-G040	628	WBHK2-100	444	YS2BC8-020C	344, 521	YS21P8-005CLSR	266, 518
VBA20-C015-A040	624	VBC2-C020-A040	626	VBD30-A005-A020	627	WBHK2-120	444	YS2BC8-020CSR	344, 522	YS21P8-005SR	265, 517
VBA20-C015-B040	624	VBC2-C020-B040	626	VBD30-A005-G020	627	W4235-101SR	361, 740	YS2BC8-030C	344, 521	YS21P8-007CLSR	266, 518
VBA20-C015-C040	624	VBC2-C020-C040	626	VBD30-A007-A030	627	W4235-130SR	361, 740	YS2BC8-030CSR	344, 522	YS21P8-007SR	265, 517
VBA20-C015-G040	624	VBC2-C020-G040	626	VBD30-C007-G030	627	YC-ERK-005	415	YS2BC8-040C	344, 521	YS21P8-010CLSR	266, 518
VBA20-C020-A040	624	VBC3-A005-A020	625	VBD30-A010-A030	627	YC-ERK-007	415	YS2BC8-040CSR	344, 522	YS21P8-010SR	265, 517
VBA20-C020-B040	624	VBC3-A005-G020	625	VBD30-A010-G030	627	YC-ERK-010	415	YS2BP8-005	266, 520	YS21P8-012CLSR	266, 518
VBA20-C020-C040	624	VBC3-A007-A030	625	VBD30-A015-A040	627	YC-ERK-012	415	YS2BP8-005CL	267, 521	YS21P8-012SR	265, 517
VBA20-C020-G040	624	VBC3-A007-G030	625	VBD30-A015-G040	627	YC-ERK-015	415	YS2BP8-005CLSR	267, 521	YS21P8-015CLSR	266, 518
VBA30-A005-A020	623	VBC3-A010-A030	625	VBD30-A020-A040	627	YC-ERK-020	415	YS2BP8-005SR	267, 520	YS21P8-015SR	265, 517
VBA30-A005-G020	623	VBC3-A010-G030	625	VBD30-A020-G040	627	YC-ERK-030	415	YS2BP8-007	266, 520	YS21P8-020CLSR	266, 518
VBA30-A007-A030	623	VBC3-A015-A040	625	VBD30-B005-A020	627	YC-ERK-040	415	YS2BP8-007CL	267, 521	YS21P8-020SR	265, 517
VBA30-A007-G030	623	VBC3-A015-G040	625	VBD30-B005-B020	627	YC-URK-005	415	YS2BP8-007CLSR	267, 521	YS21P8-030CLSR	266, 518
VBA30-A010-A030	623	VBC3-A020-A040	625	VBD30-B005-G020	627	YC-URK-007	415	YS2BP8-007SR	267, 520	YS21P8-030SR	265, 518
VBA30-A010-G030	623	VBC3-A020-G040	625	VBD30-B007-A030	627	YC-URK-010	415	YS2BP8-010	266, 520	YS21P8-040CLSR	266, 518
VBA30-A015-A040	623	VBC3-B005-A020	625	VBD30-B007-B030	627	YC-URK-012	415	YS2BP8-010CL	267, 521	YS21P8-040SR	265, 518
VBA30-A015-G040	623	VBC3-B005-B020	625	VBD30-B007-G030	627	YC-URK-015	415	YS2BP8-010CLSR	267, 521	YS21S8-005CLSR	266, 518
VBA30-A020-A040	623	VBC3-B005-G020	625	VBD30-B010-A030	627	YC-URK-020	415	YS2BP8-010SR	267, 520	YS21S8-005CSR	343, 519
VBA30-A020-G040	623	VBC3-B007-A030	625	VBD30-B010-B030	627	YC-URK-030	415	YS2BP8-012	266, 520	YS21S8-005SR	265, 517
VBA30-B005-A020	623	VBC3-B007-B030	625	VBD30-B010-G030	627	YC-URK-040	415	YS2BP8-012CL	267, 521	YS21S8-007CLSR	266, 518
VBA30-B005-B020	623	VBC3-B007-G030	625	VBD30-B015-A040	627	YC-URK-005	415	YS2BP8-012CLSR	267, 521	YS21S8-007CSR	343, 519
VBA30-B005-G020	623	VBC3-B010-A030	625	VBD30-B015-B040	627	YC-URK-007	415	YS2BP8-012SR	267, 520	YS21S8-007SR	265, 517
VBA30-B007-A030	623	VBC3-B010-B030	625	VBD30-B015-G040	627	YC-URK-010	415	YS2BP8-015	266, 520	YS21S8-010CLSR	266, 518
VBA30-B007-B030	623	VBC3-B010-G030	625	VBD30-B020-A040	627	YC-URK-012	415	YS2BP8-015CL	267, 521	YS21S8-010CSR	343, 519
VBA30-B010-A030	623	VBC3-B015-A040	625	VBD30-B020-B040	627	YC-URK-015	415	YS2BP8-015CLSR	267, 521	YS21S8-010SR	265, 517
VBA30-B010-B030	623	VBC3-B015-B040	625	VBD30-B020-G040	627	YC-URK-020	415	YS2BP8-015SR	267, 520	YS21S8-012CLSR	266, 518
VBA30-B010-G030	623	VBC3-B015-G040	625	VBD30-C005-A020	628	YC-URK-030	415	YS2BP8-020	266, 520	YS21S8-012CSR	343, 519
VBA30-B015-A040	623	VBC3-B020-A040	626	VBD30-C005-B020	628	YC-URK-040	415	YS2BP8-020CL	267, 521	YS21S8-012SR	266, 517
VBA30-B015-B040	623	VBC3-B020-B040	626	VBD30-C005-C020	628	YC-VRK-005	415	YS2BP8-020CLSR	268, 521	YS21S8-015CLSR	266, 518
VBA30-B015-G040	623	VBC3-B020-G040	626	VBD30-C005-G020	628	YC-VRK-007	415	YS2BP8-020SR	267, 520	YS21S8-015CSR	343, 519
VBA30-B015-G040	623	VBC3-C005-A020	626	VBD30-C007-A030	628	YC-VRK-010	415	YS2BP8-030	266, 520	YS21S8-015SR	265, 517
VBA30-B020-A040	623	VBC3-C005-B020	626	VBD30-C007-B030	628	YC-VRK-012	415	YS2BP8-030CL	267, 521	YS21S8-020CLSR	266, 518
VBA30-B020-B040	624	VBC3-C005-C020	626	VBD30-C007-G030	628	YC-VRK-015	415	YS2BP8-030CLSR	268, 521	YS21S8-020CSR	343, 519
VBA30-B020-G040	623	VBC3-C005-G020	626	VBD30-C007-G030	628	YC-VRK-020	415	YS2BP8-030SR	267, 520	YS21S8-020SR	265, 517
VBA30-C005-A020	624	VBC3-C007-A030	626	VBD30-C010-A030	628	YC-VRK-030	415	YS2BP8-040	267, 520	YS21S8-030CLSR	266, 518
VBA30-C005-B020	624	VBC3-C007-B030	626	VBD30-C010-B030	628	YC-VRK-040	415	YS2BP8-040CL	267, 521	YS21S8-030CSR	343, 519
VBA30-C005-C020	624	VBC3-C007-C030	626	VBD30-C010-C030	628	YS2AC8-005C	343, 521	YS2BP8-040CLSR	268, 521	YS21S8-030SR	265, 518
VBA30-C005-G020	624	VBC3-C007-G030	626	VBD30-C010-G030	628	YS2AC8-007C	343, 521	YS2BP8-040SR	267, 520	YS21S8-040CLSR	266, 518
VBA30-C007-A030	624	VBC3-C010-A030	626	VBD30-C015-A040	628	YS2AC8-010C	343, 521	YS2B58-005	266, 520	YS21S8-040CSR	343, 519
VBA30-C007-B030	624	VBC3-C010-B030	626	VBD30-C015-B040	628	YS2AC8-012C	343, 521	YS2B58-005C	344, 521	YS21S8-040SR	265, 518
VBA30-C007-G030	624	VBC3-C010-C030	626	VBD30-C015-C040	628	YS2AC8-015C	343, 521	YS2B58-005CL	267, 521	YS22C8-005C	343, 519
VBA30-C007-G030	624	VBC3-C010-G030	626	VBD30-C015-G040	628	YS2AC8-020C	343, 521	YS2B58-005CLSR	267, 521	YS22C8-007C	343, 519
VBA30-C010-A030	624	VBC3-C015-A040	626	VBD30-C020-A040	628	YS2AC8-030C	343, 521	YS2B58-005CSR	344, 522	YS22C8-010C	343, 519
VBA30-C010-B030	624	VBC3-C015-B040	626	VBD30-C020-B040	628	YS2AC8-040C	344, 521	YS2B58-005SR	267, 520	YS22C8-012C	343, 519
VBA30-C010-C030	624	VBC3-C015-C040	626	VBD30-C020-C040	628	YS2AP8-005	266, 519	YS2B58-007	266, 520	YS22C8-015C	343, 519
VBA30-C010-G030	624	VBC3-C015-G040	626	VBD30-C020-G040	628	YS2AP8-005CL	267, 520	YS2B58-007C	344, 521	YS22C8-020C	343, 519
VBA30-C015-A040	624	VBC3-C020-A040	626	VT-025-040	400	YS2AP8-007	266, 519	YS2B58-007CL	267, 521	YS22C8-030C	343, 519
VBA30-C015-B040	624	VBC3-C020-B040	626	VTC18R	587	YS2AP8-007CL	267, 520	YS2B58-007CLSR	267, 521	YS22C8-040C	343, 519
VBA30-C015-G040	624	VBC3-C020-G040	626	VTC24S	587	YS2AP8-010	266, 520	YS2B58-007CSR	344, 522	YS22P8-005	265, 517
VBA30-C015-G040	624	VBC3-C020-G040	626	VTC30R	587	YS2AP8-010CL	267, 520	YS2B58-007SR	267, 520	YS22P8-005CL	265, 518
VBA30-C020-A040	624	VBD20-A005-A020	627	VTC30S	587	YS2AP8-012	266, 520	YS2B58-010	266, 520	YS22P8-007	265, 517
VBA30-C020-B040	624	VBD20-A005-G020	627	VTC36R	587	YS2AP8-012CL	267, 520	YS2B58-010C	344, 521	YS22P8-007CL	265, 518
VBA30-C020-C040	624	VBD20-A007-A030	627	VTC36S	587	YS2AP8-015	266, 520	YS2B58-010CL	267, 521	YS22P8-010	265, 517
VBA30-C020-G040	624	VBD20-A010-A030	627	VTC42R	587	YS2AP8-015CL	267, 520	YS2B58-010CLSR	267, 521	YS22P8-010CL	265, 518
VBC2-A005-A020	625	VBD20-A010-G030	627	VTC42S	587	YS2AP8-020	266, 520	YS2B58-010CSR	344, 522	YS22P8-012	265, 517
VBC2-A005-G020	625	VBD20-A010-B030	627	VTC48R	587	YS2AP8-020CL	267, 520	YS2B58-010SR	267, 520	YS22P8-012CL	265, 518
VBC2-A007-A030	625	VBD20-A015-A040	627	VTC48S	587	YS2					



Spears List Price Part Number Index

YS22S8-010	265, 517	YS3AS8-007C	343, 521	YS3BS8-015CL	267, 521	YS32S8-005	265, 517	YV-UEK-012	460	1401-202	159
YS22S8-010C	343, 519	YS3AS8-007CL	267, 520	YS3BS8-015CLSR	267, 521	YS32S8-005C	343, 519	YV-UEK-012C	460	1401-203	159
YS22S8-010CL	265, 518	YS3AS8-010	266, 520	YS3BS8-015CSR	344, 522	YS32S8-005CL	265, 518	YV-UEK-015	460	1401-209	159
YS22S8-012	265, 517	YS3AS8-010C	343, 521	YS3BS8-015SR	267, 520	YS32S8-007	265, 517	YV-UEK-015C	460	1401-210	159
YS22S8-012C	343, 519	YS3AS8-010CL	267, 520	YS3BS8-020	266, 520	YS32S8-007C	343, 519	YV-UEK-020	460	1401-211	159
YS22S8-012CL	265, 518	YS3AS8-012	266, 520	YS3BS8-020C	344, 521	YS32S8-007CL	265, 518	YV-UEK-020C	460	1401-212	159
YS22S8-015	265, 517	YS3AS8-012C	343, 521	YS3BS8-020CL	267, 521	YS32S8-010	265, 517	YV-UEK-030	460	1401-241	159
YS22S8-015C	343, 519	YS3AS8-012CL	267, 520	YS3BS8-020CLSR	268, 521	YS32S8-010C	343, 519	YV-UEK-030C	460	1401-247	159
YS22S8-015CL	265, 518	YS3AS8-015	266, 520	YS3BS8-020CSR	344, 522	YS32S8-010CL	265, 518	YV-UEK-040	460	1401-248	159
YS22S8-020	265, 517	YS3AS8-015C	343, 521	YS3BS8-020SR	267, 520	YS32S8-012	265, 517	YV-UEK-040C	460	1401-249	159
YS22S8-020C	343, 519	YS3AS8-015CL	267, 520	YS3BS8-030	266, 520	YS32S8-012C	343, 519	YV-UEK-005	460	1401-250	159
YS22S8-020CL	265, 518	YS3AS8-020	266, 520	YS3BS8-030C	344, 521	YS32S8-012CL	265, 518	YV-UEK-005C	460	1401-251	159
YS22S8-030	265, 517	YS3AS8-020C	343, 521	YS3BS8-030CL	267, 521	YS32S8-015	265, 517	YV-UEK-007	460	1401-335	159
YS22S8-030C	343, 519	YS3AS8-020CL	267, 520	YS3BS8-030CLSR	268, 521	YS32S8-015C	343, 519	YV-UEK-007C	460	1401-338	159
YS22S8-030CL	265, 518	YS3AS8-030	266, 520	YS3BS8-030CSR	344, 522	YS32S8-015CL	265, 518	YV-UEK-010	460	1402-005	159
YS22S8-040	265, 517	YS3AS8-030C	343, 521	YS3BS8-030SR	267, 520	YS32S8-020	265, 517	YV-UEK-010C	460	1402-007	159
YS22S8-040C	343, 519	YS3AS8-030CL	267, 520	YS3BS8-040	267, 520	YS32S8-020C	343, 519	YV-UEK-012	460	1402-010	159
YS22S8-040CL	265, 518	YS3AS8-040	266, 520	YS3BS8-040C	344, 521	YS32S8-020CL	265, 518	YV-UEK-012C	460	1402-012	159
YS23C8-005C	343, 519	YS3AS8-040C	344, 521	YS3BS8-040CL	267, 521	YS32S8-030	265, 517	YV-UEK-015	460	1402-015	159
YS23C8-007C	343, 519	YS3AS8-040CL	267, 520	YS3BS8-040CLSR	268, 521	YS32S8-030C	343, 519	YV-UEK-015C	460	1402-020	159
YS23C8-010C	343, 519	YS3BC8-005C	344, 521	YS3BS8-040CSR	344, 522	YS32S8-030CL	265, 518	YV-UEK-020	460	1402-094	159
YS23C8-012C	343, 519	YS3BC8-005CSR	344, 522	YS3BS8-040SR	267, 520	YS32S8-040	265, 517	YV-UEK-020C	460	1402-101	159
YS23C8-015C	343, 519	YS3BC8-007C	344, 521	YS31C8-005CSR	343, 519	YS32S8-040C	343, 519	YV-UEK-030	460	1402-124	159
YS23C8-020C	343, 519	YS3BC8-007CSR	344, 522	YS31C8-007CSR	343, 519	YS32S8-040CL	265, 518	YV-UEK-030C	460	1402-125	159
YS23C8-030C	343, 519	YS3BC8-010C	344, 521	YS31C8-010CSR	343, 519	YS33C8-005C	343, 519	YV-UEK-040	460	1402-130	159
YS23C8-040C	343, 519	YS3BC8-010CSR	344, 522	YS31C8-012CSR	343, 519	YS33C8-007C	343, 519	YV-UEK-040C	460	1402-131	159
YS23P8-005	265, 518	YS3BC8-012C	344, 521	YS31C8-015CSR	343, 519	YS33C8-010C	343, 519	YV-VRK-005	460	1402-156	159
YS23P8-005CL	266, 518	YS3BC8-012CSR	344, 522	YS31C8-020CSR	343, 519	YS33C8-012C	343, 519	YV-VRK-005C	460	1402-157	159
YS23P8-007	265, 518	YS3BC8-015C	344, 521	YS31C8-030CSR	343, 519	YS33C8-015C	343, 519	YV-VRK-007	460	1402-166	159
YS23P8-007CL	266, 518	YS3BC8-015CSR	344, 522	YS31C8-040CSR	343, 519	YS33C8-020C	343, 519	YV-VRK-007C	460	1402-167	159
YS23P8-010	265, 518	YS3BC8-020C	344, 521	YS31P8-005CLSR	266, 518	YS33C8-030C	343, 519	YV-VRK-010	460	1402-168	159
YS23P8-010CL	266, 518	YS3BC8-020CSR	344, 522	YS31P8-005SR	265, 517	YS33C8-040C	343, 519	YV-VRK-010C	460	1402-199	159
YS23P8-012	265, 518	YS3BC8-030C	344, 521	YS31P8-007CLSR	266, 518	YS33P8-005	265, 518	YV-VRK-012	460	1402-201	159
YS23P8-012CL	266, 518	YS3BC8-030CSR	344, 522	YS31P8-007SR	265, 517	YS33P8-005CL	266, 518	YV-VRK-012C	460	1402-202	160
YS23P8-015	265, 518	YS3BC8-040C	344, 521	YS31P8-010CLSR	266, 518	YS33P8-007	265, 518	YV-VRK-015	460	1402-209	160
YS23P8-015CL	266, 519	YS3BC8-040CSR	344, 522	YS31P8-010SR	265, 517	YS33P8-007CL	266, 518	YV-VRK-015C	460	1402-210	160
YS23P8-020	265, 518	YS3BP8-005	266, 520	YS31P8-012CLSR	266, 518	YS33P8-010	265, 518	YV-VRK-020	460	1402-211	160
YS23P8-020CL	266, 519	YS3BP8-005CL	267, 521	YS31P8-012SR	265, 517	YS33P8-010CL	266, 518	YV-VRK-020C	460	1402-212	160
YS23P8-030	265, 518	YS3BP8-005CLSR	267, 521	YS31P8-015CLSR	266, 518	YS33P8-012	265, 518	YV-VRK-030	460	1402-247	160
YS23P8-030CL	266, 519	YS3BP8-005SR	267, 520	YS31P8-015SR	265, 517	YS33P8-012CL	266, 518	YV-VRK-030C	460	1402-248	160
YS23P8-040	265, 518	YS3BP8-007	266, 520	YS31P8-020CLSR	266, 518	YS33P8-015	265, 518	YV-VRK-040	460	1402-249	160
YS23P8-040CL	266, 519	YS3BP8-007CL	267, 521	YS31P8-020SR	265, 517	YS33P8-015CL	266, 519	YV-VRK-040C	460	1402-251	160
YS23S8-005	265, 518	YS3BP8-007CLSR	267, 521	YS31P8-030CLSR	266, 518	YS33P8-020	265, 518	Z4235-101SR	361, 740	1403-005	160
YS23S8-005C	343, 519	YS3BP8-007SR	267, 520	YS31P8-030SR	265, 518	YS33P8-020CL	266, 519	1102-007	8, 60	1403-007	160
YS23S8-005CL	266, 518	YS3BP8-010	266, 520	YS31P8-040CLSR	266, 518	YS33P8-030	265, 518		105	1403-010	160
YS23S8-007	265, 518	YS3BP8-010CL	267, 521	YS31P8-040SR	265, 518	YS33P8-030CL	266, 519	1102-130	8, 60	1403-012	160
YS23S8-007C	343, 519	YS3BP8-010CLSR	267, 521	YS31S8-005CLSR	266, 518	YS33P8-040	265, 518		105	1403-015	160
YS23S8-007CL	266, 518	YS3BP8-010SR	267, 520	YS31S8-005CSR	343, 519	YS33P8-040CL	266, 519	1102-248	8	1403-020	160
YS23S8-010	265, 518	YS3BP8-012	266, 520	YS31S8-005SR	265, 517	YS33S8-005	265, 518	1102-250	8, 60	1403-130	160
YS23S8-010C	343, 519	YS3BP8-012CL	267, 521	YS31S8-007CLSR	266, 518	YS33S8-005C	343, 519		105	1403-131	160
YS23S8-010CL	266, 518	YS3BP8-012CLSR	267, 521	YS31S8-007CSR	343, 519	YS33S8-005CL	266, 518	12501-100	157, 670	1404-010	160
YS23S8-012	265, 518	YS3BP8-012SR	267, 520	YS31S8-007SR	265, 517	YS33S8-007	265, 518	12501-120	157, 670	1404-102	160
YS23S8-012C	343, 519	YS3BP8-015	266, 520	YS31S8-010CLSR	266, 518	YS33S8-007C	343, 519	12506-100	157, 670	1406-005	160
YS23S8-012CL	266, 518	YS3BP8-015CL	267, 521	YS31S8-010CSR	343, 519	YS33S8-007CL	266, 518	12506-120	157, 670	1406-007	160
YS23S8-015	265, 518	YS3BP8-015CLSR	267, 521	YS31S8-010SR	265, 517	YS33S8-010	265, 518	12517-100	157, 670	1406-010	160
YS23S8-015C	343, 519	YS3BP8-015SR	267, 520	YS31S8-012CLSR	266, 518	YS33S8-010C	343, 519	12517-120	157, 670	1406-012	160
YS23S8-015CL	266, 519	YS3BP8-020	266, 520	YS31S8-012CSR	343, 519	YS33S8-010CL	266, 518	12529-100	157, 670	1406-015	160
YS23S8-020	265, 518	YS3BP8-020CL	267, 521	YS31S8-012SR	265, 517	YS33S8-012	265, 518	12529-120	157, 670	1406-020	160
YS23S8-020C	343, 519	YS3BP8-020CLSR	268, 521	YS31S8-015CLSR	266, 518	YS33S8-012C	343, 519	12529-626	157, 670	1406-025	160
YS23S8-020CL	266, 519	YS3BP8-020SR	267, 520	YS31S8-015CSR	343, 519	YS33S8-012CL	266, 518	12529-628	157, 670	1406-040	160
YS23S8-030	265, 518	YS3BP8-030	266, 520	YS31S8-015SR	265, 517	YS33S8-015	265, 518	12529-668	157, 670	1406-101	160
YS23S8-030C	343, 519	YS3BP8-030CL	267, 521	YS31S8-020CLSR	266, 518	YS33S8-015C	343, 519	12529-670	157, 670	1406-131	160
YS23S8-030CL	266, 519	YS3BP8-030CLSR	268, 521	YS31S8-020CSR	343, 519	YS33S8-015CL	266, 519	12537-626	157, 670	1406-168	160
YS23S8-040	265, 518	YS3BP8-030SR	267, 520	YS31S8-020SR	265, 517	YS33S8-020	265, 518	12537-628	157, 670	1406-212	160
YS23S8-040C	343, 519	YS3BP8-040	267, 520	YS31S8-030CLSR	266, 518	YS33S8-020C	343, 519	12537-668	157, 670	1406-251	160
YS23S8-040CL	266, 519	YS3BP8-040CL	267, 521	YS31S8-030CSR	343, 519	YS33S8-020CL	266, 519	12537-670	157, 670	1407-005	160
YS3AC8-005C	343, 521	YS3BP8-040CLSR	268, 521	YS31S8-030SR	265, 518	YS33S8-030	265, 518	1401-003	159	1407-007	160
YS3AC8-007C	343, 521	YS3BP8-040SR	267, 520	YS31S8-040CLSR	266, 518	YS33S8-030C	343, 519	1401-005	159	1407-007C	160
YS3AC8-010C	343, 521	YS3BS8-005	266, 520	YS31S8-040CSR	343, 519	YS33S8-030CL	266, 519	1401-005C	159	1407-010	160
YS3AC8-012C	343, 521	YS3BS8-005C	344, 521	YS31S8-040SR	265, 518	YS33S8-040	265, 518	1401-007	159	1407-012	160
YS3AC8-015C	343, 521	YS3BS8-005CL	267, 521	YS32C8-005C	343, 519	YS33S8-040C	343, 519	1401-010	159	1407-015	160
YS3AC8-020C	343, 521	YS3BS8-005CLSR	267, 521	YS32C8-007C	343, 519	YS33S8-040CL	266, 519	1401-012	159	1407-020	160
YS3AC8-030C	343, 521	YS3BS8-005CSR	344, 522	YS32C8-010C	343, 519	YV-ERK-005	460	1401-015	159	1407-074	160
YS3AC8-040C	344, 521	YS3BS8-005SR	267, 520	YS32C8-012C	343, 519	YV-ERK-005C	460	1401-020	159	1407-074C	160
YS3AP8-005	266, 519	YS3BS8-007	266, 520	YS32C8-015C	343, 519	YV-ERK-007	460	1401-040	159	1407-101	160
YS3AP8-005CL	267, 520	YS3BS8-007C	344, 521	YS32C8-020C	343, 519	YV-ERK-007C	460	1401-060	159	1407-130	160
YS3AP8-007	266, 519	YS3BS8-007CL	267, 521	YS32C8-030C	343, 519	YV-ERK-010	460	1401-074	159	1407-131	160
YS3AP8-007CL	267, 520	YS3BS8-007CLSR	267, 521	YS32C8-040C	343, 519	YV-ERK-010C	460	1401-094	159	1407-166	160

Spears List Price Part Number Index



1413-101	160	1436-060	162	162A-010C	326, 413	1622-007CL	245, 412	163B-015CLSR	246, 413	172A-005C	339, 459
1413-130	160	1436-060C	162	162A-010CL	246, 413	1622-010	244, 411	163B-015CSR	326, 414	172A-005CL	261, 458
1413-131	161	1436-060G	162	162A-012	245, 413	1622-010C	326, 412	163B-015SR	245, 413	172A-007	261, 458
1414-101	161	1436-073	159	162A-012C	326, 413	1622-010CL	245, 412	163B-020	245, 413	172A-007C	339, 459
1414-130	161	1436-073C	162	162A-012CL	246, 413	1622-012	244, 411	163B-020C	326, 414	172A-007CL	261, 458
1414-131	161	1436-074	162	162A-015	245, 413	1622-012C	326, 412	163B-020CL	246, 413	172A-010	261, 458
1416-007	160	1436-074C	162	162A-015C	326, 413	1622-012CL	245, 412	163B-020CLSR	246, 413	172A-010C	339, 459
1416-101	160	1436-075	162	162A-015CL	246, 413	1622-015	244, 411	163B-020CSR	326, 414	172A-010CL	261, 458
1416-130	160	1436-080CF	162	162A-020	245, 413	1622-015C	326, 412	163B-020SR	245, 413	172A-012	261, 458
1416-131	160	1436-099	159	162A-020C	326, 413	1622-015CL	245, 412	163B-030	245, 413	172A-012C	339, 459
1420-005	161	1436-101	162	162A-020CL	246, 413	1622-020	244, 411	163B-030C	326, 414	172A-012CL	261, 458
1420-007	161	1436-101C	162	162A-030	245, 413	1622-020C	326, 412	163B-030CL	246, 413	172A-015	261, 458
1420-010	161	1436-101MHT	162	162A-030C	326, 413	1622-020CL	245, 412	163B-030CLSR	246, 413	172A-015C	339, 459
1429-003	159	1436-102	162	162A-030CL	246, 413	1622-030	244, 412	163B-030CSR	326, 414	172A-015CL	261, 458
1429-005	161	1436-102MHT	162	162A-040	245, 413	1622-030C	326, 412	163B-030SR	245, 413	172A-020	261, 458
1429-005A	60, 105	1436-131	162	162A-040C	326, 413	1622-030CL	245, 412	163B-040	245, 413	172A-020C	339, 459
1429-005C	161	1436-132	162	162A-040CL	246, 413	1622-040	244, 412	163B-040C	326, 414	172A-020CL	261, 458
1429-007	161	1436-133	162	162B-005	245, 413	1622-040C	326, 412	163B-040CL	246, 413	172A-030	261, 458
1429-007C	161	1436-167	162	162B-005C	326, 414	1622-040CL	245, 412	163B-040CLSR	246, 413	172A-030C	339, 459
1429-010	161	1436-168	162	162B-005CL	246, 413	1623-005	245, 412	163B-040CSR	326, 414	172A-030CL	261, 458
1429-010C	161	1436-169	162	162B-005CLSR	246, 413	1623-005C	326, 412	163B-040SR	245, 413	172A-040	261, 458
1429-012	161	1436-204	162	162B-005CSR	326, 414	1623-005CL	245, 412	1631-005CLSR	245, 412	172A-040C	339, 459
1429-015	161	1436-204P	162	162B-005SR	245, 413	1623-007	245, 412	1631-005CSR	326, 412	172A-040CL	261, 458
1429-020	161	1436-211	162	162B-007	245, 413	1623-007C	326, 412	1631-005SR	244, 412	172B-005	261, 458
1429-025	161	1436-212	162	162B-007C	326, 414	1623-007CL	245, 412	1631-007CLSR	245, 412	172B-005C	339, 459
1429-030	161	1436-212C	162	162B-007CL	246, 413	1623-010	245, 412	1631-007CSR	326, 412	172B-005CL	261, 458
1429-040	161	1436-213	162	162B-007CLSR	246, 413	1623-010C	326, 413	1631-007SR	245, 412	172B-005CLSR	261, 459
1429-060	161	1436-251	162	162B-007CSR	326, 414	1623-010CL	245, 412	1631-010CLSR	245, 412	172B-005CSR	339, 459
1429-080	161	1436-252	162	162B-007SR	245, 413	1623-012	245, 412	1631-010CSR	326, 412	172B-005SR	261, 458
1429-099	159	1436-292	162	162B-010	245, 413	1623-012C	326, 413	1631-010SR	245, 412	172B-007	261, 458
1429-101	161	1449-005	162	162B-010C	326, 414	1623-012CL	245, 412	1631-012CLSR	245, 412	172B-007C	339, 459
1429-129	159	1449-007	162	162B-010CL	246, 413	1623-015	245, 412	1631-012CSR	326, 412	172B-007CL	261, 458
1429-130	161	1449-010	162	162B-010CLSR	246, 413	1623-015C	326, 413	1631-012SR	245, 412	172B-007CLSR	261, 459
1429-131	161	1449-012	162	162B-010CSR	326, 414	1623-015CL	245, 412	1631-015CLSR	245, 412	172B-007CSR	339, 459
1429-1315	161	1449-015	162	162B-010SR	245, 413	1623-020	245, 412	1631-015CSR	326, 412	172B-007SR	261, 458
1429-167	161	1449-020	162	162B-012	245, 413	1623-020C	326, 413	1631-015SR	245, 412	172B-010	261, 458
1429-168	161	1449-030LF	163	162B-012C	326, 414	1623-020CL	245, 412	1631-020CLSR	245, 412	172B-010C	339, 459
1429-210	161	1449-040LF	163	162B-012CL	246, 413	1623-030	245, 412	1631-020CSR	326, 412	172B-010CL	261, 458
1429-211	161	1449-060LF	163	162B-012CLSR	246, 413	1623-030C	326, 413	1631-020SR	245, 412	172B-010CLSR	261, 459
1429-212	161	1521-002	241, 394	162B-012CSR	326, 414	1623-030CL	245, 412	1631-030CLSR	245, 412	172B-010CSR	339, 459
1429-249	161		589	162B-012SR	245, 413	1623-040	245, 412	1631-030CSR	326, 412	172B-010SR	261, 458
1429-250	161	1521-002C	323, 394	162B-015	245, 413	1623-040C	326, 413	1631-030SR	245, 412	172B-012	261, 458
1429-251	161		589	162B-015C	326, 414	1623-040CL	245, 412	1631-040CLSR	245, 412	172B-012C	339, 459
1429-291	161	1521-003	241, 394	162B-015CL	246, 413	163A-005	245, 413	1631-040CSR	326, 412	172B-012CL	261, 458
1429-338	161		589	162B-015CLSR	246, 413	163A-005C	326, 413	1631-040SR	245, 412	172B-012CLSR	261, 459
1429-422	161	1521-003C	323, 394	162B-015CSR	326, 414	163A-005CL	246, 413	1632-005	244, 411	172B-012CSR	339, 459
1429-532	161		589	162B-015SR	245, 413	163A-007	245, 413	1632-005C	326, 412	172B-012SR	261, 458
1429TL-005	159	1522-002	241, 394	162B-020	245, 413	163A-007C	326, 413	1632-005CL	245, 412	172B-015	261, 458
1429TL-007	159		589	162B-020C	326, 414	163A-007CL	246, 413	1632-007	244, 411	172B-015C	339, 459
1429TL-010	159	1522-002C	323, 394	162B-020CL	246, 413	163A-010	245, 413	1632-007C	326, 412	172B-015CL	261, 458
1432-060	18, 161		589	162B-020CLSR	246, 413	163A-010C	326, 413	1632-007CL	245, 412	172B-015CLSR	261, 459
1432-060G	161	1522-003	241, 394	162B-020CSR	326, 414	163A-010CL	246, 413	1632-010	244, 411	172B-015CSR	339, 459
1432-080	18, 161		589	162B-020SR	245, 413	163A-012	245, 413	1632-010C	326, 412	172B-015SR	261, 458
1435-005	161	1522-003C	323, 394	162B-030	245, 413	163A-012C	326, 413	1632-010CL	245, 412	172B-020	261, 458
1435-005C	162		589	162B-030C	326, 414	163A-012CL	246, 413	1632-012	244, 411	172B-020C	339, 459
1435-005SR	162	1529-002	241, 394	162B-030CL	246, 413	163A-015	245, 413	1632-012C	326, 412	172B-020CL	261, 458
1435-007	161		589	162B-030CLSR	246, 413	163A-015C	326, 413	1632-012CL	245, 412	172B-020CLSR	261, 459
1435-007C	162	1529-002A	241, 394	162B-030CSR	326, 414	163A-015CL	246, 413	1632-015	244, 411	172B-020CSR	339, 459
1435-007FHT	162		589	162B-030SR	245, 413	163A-020	245, 413	1632-015C	326, 412	172B-020SR	261, 458
1435-007SR	162	1529-002C	323, 394	162B-040	245, 413	163A-020C	326, 413	1632-015CL	245, 412	172B-030	261, 458
1435-010	161		589	162B-040C	326, 414	163A-020CL	246, 413	1632-020	244, 411	172B-030C	339, 459
1435-010C	162	1529-002CA	323, 394	162B-040CL	246, 413	163A-030	245, 413	1632-020C	326, 412	172B-030CL	261, 458
1435-010SR	162		589	162B-040CLSR	246, 413	163A-030C	326, 413	1632-020CL	245, 412	172B-030CLSR	261, 459
1435-012	161	1531-002	241, 394	162B-040CSR	326, 414	163A-030CL	246, 413	1632-030	244, 412	172B-030CSR	339, 459
1435-012C	162		589	162B-040SR	245, 413	163A-040	245, 413	1632-030C	326, 412	172B-030SR	261, 458
1435-015	161	1531-002C	323, 394	1621-005CLSR	245, 412	163A-040C	326, 413	1632-030CL	245, 412	172B-040	261, 458
1435-015C	162		589	1621-005CSR	326, 412	163A-040CL	246, 413	1632-040	244, 412	172B-040C	339, 459
1435-015SR	162	1531-003	241, 394	1621-005SR	244, 412	163B-005	245, 413	1632-040C	326, 412	172B-040CL	261, 458
1435-020	161		589	1621-007CLSR	245, 412	163B-005C	326, 414	1632-040CL	245, 412	172B-040CLSR	261, 459
1435-020C	162	1531-003C	323, 394	1621-007CSR	326, 412	163B-005CL	246, 413	1633-005	245, 412	172B-040CSR	339, 459
1435-074	162		589	1621-007SR	245, 412	163B-005CLSR	246, 413	1633-005C	326, 412	172B-040SR	261, 458
1435-101	162	1532-002	241, 394	1621-010CLSR	245, 412	163B-005CSR	326, 414	1633-005CL	245, 412	1721-005CLSR	260, 457
1435-102	162		589	1621-010CSR	326, 412	163B-005SR	245, 413	1633-007	245, 412	1721-005CSR	339, 458
1435-131	162	1532-002C	323, 394	1621-010SR	245, 412	163B-007	245, 413	1633-007C	326, 412	1721-005SR	260, 457
1436-005	162		589	1621-012CLSR	245, 412	163B-007C	326, 414	1633-007CL	245, 412	1721-007CLSR	260, 457
1436-005A	60, 105	1532-003	241, 394	1621-012CSR	326, 412	163B-007CL	246, 413	1633-010	245, 412	1721-007CSR	339, 458
1436-005C	162		589	1621-012SR	245, 412	163B-007CLSR	246, 413	1633-010C	326, 413	1721-007SR	260, 457
1436-007	162	1532-003C	323, 394	1621-015CLSR	245, 412	163B-007CSR	326, 414	1633-010CL	245, 412	1721-010CLSR	260, 457
1436-007C	162		589	1621-015CSR	326, 412	163B-007SR	245, 413	1633-012	245, 412	1721-010CSR	339, 458
1436-007MHT	162	1539-002	241, 394	1621-015SR	245, 412						



Spears List Price Part Number Index

1721-040SR	260, 457	173B-012CLSR	261, 459	1733-030C	339, 458	1822-080C	312, 376	1824-007C	696	182901-020	233, 383
1722-005	260, 457	173B-012CSR	339, 459	1733-030CL	260, 457	1822R-005	235, 386	1824-010	696	182901-020BL	566
1722-005C	339, 458	173B-012SR	261, 458	1733-040	260, 457	1822R-005C	318, 386	1824-010C	696	182901-020C	316, 383
1722-005CL	260, 457	173B-015	261, 458	1733-040C	339, 458	1822R-007	235, 386	1824-012	696	182901-101	233, 383
1722-007	260, 457	173B-015C	339, 459	1733-040CL	260, 457	1822R-007C	318, 386	1824-012C	696	182901-101BL	566
1722-007C	339, 458	173B-015CL	261, 458	1820-005	405	1822R-010	235, 386	1824-015	696	182901-101C	316, 383
1722-007CL	260, 457	173B-015CSR	261, 459	1820-005C	406	1822R-010C	318, 386	1824-015C	696	182901-130	233, 383
1722-010	260, 457	173B-015CSR	339, 459	1820-007	406	1822R-012	235, 386	1824-020	696	182901-130BL	566
1722-010C	339, 458	173B-015SR	261, 458	1820-007C	406	1822R-012C	318, 386	1824-020C	696	182901-130C	316, 383
1722-010CL	260, 457	173B-020	261, 458	1820-010	406	1822R-015	235, 386	1825-005	696	182901-131	233, 383
1722-012	260, 457	173B-020C	339, 459	1820-010C	406	1822R-015C	318, 386	1825-005C	696	182901-131BL	566
1722-012C	339, 458	173B-020CL	261, 458	1820-012	406	1822R-020	235, 386	1825-007	696	182901-131C	316, 383
1722-012CL	260, 457	173B-020CLSR	261, 459	1820-012C	406	1822R-020C	318, 386	1825-007C	696	182901-166	233, 383
1722-015	260, 457	173B-020CSR	339, 459	1820-015	406	1822R-025	235, 386	1825-010	696	182901-166BL	566
1722-015C	339, 458	173B-020SR	261, 458	1820-015C	406	1822R-025C	318, 386	1825-010C	696	182901-166C	316, 383
1722-015CL	260, 457	173B-030	261, 458	1820-020	406	1822R-030	235, 386	1825-012	696	182901-167	233, 383
1722-020	260, 457	173B-030C	339, 459	1820-020C	406	1822R-030C	318, 386	1825-012C	696	182901-167BL	566
1722-020C	339, 458	173B-030CL	261, 458	1820-025	406	1822R-040	235, 386	1825-015	696	182901-167C	316, 383
1722-020CL	260, 457	173B-030CLSR	261, 459	1820-025C	406	1822R-040C	318, 386	1825-015C	696	182901-168	233, 383
1722-030	260, 457	173B-030CSR	339, 459	1820-030	406	1822RS-005	236, 387	1825-020	696	182901-168BL	566
1722-030C	339, 458	173B-030SR	261, 458	1820-030C	406	1822RS-005C	319, 387	1825-020C	696	182901-168C	316, 383
1722-030CL	260, 457	173B-040	261, 458	1820-040	406	1822RS-007	236, 387	1827-005	229, 375	182901-209	233, 383
1722-040	260, 457	173B-040C	339, 459	1820-040C	406	1822RS-007C	319, 387	1827-005C	312, 376	182901-209BL	566
1722-040C	339, 458	173B-040CL	261, 458	1820-060	406	1822RS-010	236, 387	1827-007	229, 375	182901-209C	316, 383
1722-040CL	260, 457	173B-040CLSR	261, 459	1820-060C	406	1822RS-010C	319, 387	1827-007C	312, 376	182901-210	233, 383
1723-005	260, 457	173B-040CSR	339, 459	18206-060	406	1822RS-012	236, 387	1827-010	229, 375	182901-210BL	566
1723-005C	339, 458	173B-040SR	261, 458	18206-060C	406	1822RS-012C	319, 387	1827-010C	312, 376	182901-210C	316, 383
1723-005CL	260, 457	1731-005CLSR	260, 457	1821-005CSR	312, 376	1822RS-015	236, 387	1827-012	229, 375	182901-211	233, 383
1723-007	260, 457	1731-005CSR	339, 458	1821-005SR	229, 375	1822RS-015C	319, 387	1827-012C	312, 376	182901-211BL	566
1723-007C	339, 458	1731-005SR	260, 457	1821-007CSR	312, 376	1822RS-020	236, 387	1827-015	229, 375	182901-211C	316, 383
1723-007CL	260, 457	1731-007CLSR	260, 457	1821-007SR	229, 375	1822RS-020C	319, 387	1827-015C	312, 376	182901-247	233, 383
1723-010	260, 457	1731-007CSR	339, 458	1821-010CSR	312, 376	1822RS-025	236, 387	1827-020	229, 375	182901-247BL	566
1723-010C	339, 458	1731-007SR	260, 457	1821-010SR	229, 375	1822RS-025C	319, 387	1827-020C	312, 376	182901-247C	316, 383
1723-010CL	260, 457	1731-010CLSR	260, 457	1821-012CSR	312, 376	1822RS-030	236, 387	1827-025	229, 375	182901-248	233, 383
1723-012	260, 457	1731-010CSR	339, 458	1821-012SR	229, 375	1822RS-030C	319, 387	1827-025C	312, 376	182901-248BL	566
1723-012C	339, 458	1731-010SR	260, 457	1821-015CSR	312, 376	1822RS-040	236, 387	1827-030	229, 375	182901-248C	316, 383
1723-012CL	260, 457	1731-012CLSR	260, 457	1821-015SR	229, 375	1822RS-040C	319, 387	1827-030C	312, 376	182901-249	233, 383
1723-015	260, 457	1731-012CSR	339, 458	1821-020CSR	312, 376	1822V-025	230, 377	1827-040	229, 375	182901-249BL	566
1723-015C	339, 458	1731-012SR	260, 457	1821-020SR	229, 375	1822V-025C	313, 378	1827-040C	312, 376	182901-249C	316, 383
1723-015CL	260, 457	1731-015CLSR	260, 457	1821-025	229, 375	1822V-030	230, 377	1827-060	229, 375	182901-251	233, 383
1723-020	260, 457	1731-015CSR	339, 458	1821-025C	312, 376	1822V-030C	313, 378	1827-060C	312, 376	182901-251BL	566
1723-020C	339, 458	1731-015SR	260, 457	1821-025CSR	312, 376	1822V-040	230, 377	1828-005	696	182901-251C	316, 383
1723-020CL	260, 457	1731-020CLSR	260, 457	1821-025SR	229, 375	1822V-040C	313, 378	1828-005C	697	182901-333	233, 383
1723-030	260, 457	1731-020CSR	339, 458	1821-030	229, 375	1822V-060	230, 377	1828-007	696	182901-333BL	566
1723-030C	339, 458	1731-020SR	260, 457	1821-030C	312, 376	1822V-060C	313, 378	1828-007C	697	182901-333C	316, 383
1723-030CL	260, 457	1731-030CLSR	260, 457	1821-030CSR	312, 376	18226-060	229, 376	1828-010	696	182901-335	233, 383
1723-040	260, 457	1731-030CSR	339, 458	1821-030SR	229, 375	18226-060C	312, 376	1828-010C	697	182901-335BL	566
1723-040C	339, 458	1731-030SR	260, 457	1821-040	229, 375	1823-005	229, 375	1828-012	696	182901-335C	316, 383
1723-040CL	260, 457	1731-040CLSR	260, 457	1821-040C	312, 376	1823-005C	312, 376	1828-012C	697	182901-337	233, 383
173A-005	261, 458	1731-040CSR	339, 458	1821-040CSR	312, 376	1823-007	229, 375	1828-015	696	182901-337BL	566
173A-005C	339, 459	1731-040SR	260, 457	1821-040SR	229, 375	1823-007C	312, 376	1828-015C	697	182901-337C	316, 383
173A-005CL	261, 458	1732-005	260, 457	1821-060	229, 375	1823-010	229, 375	1828-020	696	182901-338	233, 383
173A-007	261, 458	1732-005C	339, 458	1821-060C	312, 376	1823-010C	312, 376	1828-020C	697	182901-338BL	566
173A-007C	339, 459	1732-005CL	260, 457	1821-060CSR	312, 376	1823-012	229, 375	1829-005	229, 375	182901-338C	316, 383
173A-007CL	261, 458	1732-007	260, 457	1821-060SR	229, 375	1823-012C	312, 376	1829-005BL	566	182901-417	233, 383
173A-010	261, 458	1732-007C	339, 458	1821V-005CSR	313, 378	1823-015	229, 375	1829-005C	312, 376	182901-417BL	566
173A-010C	339, 459	1732-007CL	260, 457	1821V-005SR	230, 377	1823-015C	312, 376	1829-007	229, 375	182901-417C	316, 383
173A-010CL	261, 458	1732-010	260, 457	1821V-007CSR	313, 378	1823-020	229, 375	1829-007BL	566	182901-419	233, 383
173A-012	261, 458	1732-010C	339, 458	1821V-007SR	230, 377	1823-020C	312, 376	1829-007C	312, 376	182901-419BL	566
173A-012C	339, 459	1732-010CL	260, 457	1821V-010CSR	313, 378	1823-025	229, 375	1829-010	229, 375	182901-419C	316, 383
173A-012CL	261, 458	1732-012	260, 457	1821V-010SR	230, 377	1823-025C	312, 376	1829-010BL	566	182901-420	233, 383
173A-015	261, 458	1732-012C	339, 458	1821V-012CSR	313, 378	1823-030	229, 375	1829-010C	312, 376	182901-420BL	566
173A-015C	339, 459	1732-012CL	260, 457	1821V-012SR	230, 377	1823-030C	312, 376	1829-012	229, 375	182901-420C	316, 383
173A-015CL	261, 458	1732-015	260, 457	1821V-015CSR	313, 378	1823-040	229, 376	1829-012BL	566	182901-528	233, 383
173A-020	261, 458	1732-015C	339, 458	1821V-015SR	230, 377	1823-040C	312, 376	1829-012C	312, 376	182901-528BL	566
173A-020C	339, 459	1732-015CL	260, 457	1821V-020CSR	313, 378	1823-060	229, 376	1829-015	229, 375	182901-528C	316, 383
173A-020CL	261, 458	1732-020	260, 457	1821V-020SR	230, 377	1823-060C	312, 376	1829-015BL	566	182901-578	233, 383
173A-030	261, 458	1732-020C	339, 458	1821V-025CSR	313, 378	1823-080	229, 376	1829-015C	312, 376	182901-578BL	566
173A-030C	339, 459	1732-020CL	260, 457	1821V-025SR	230, 377	1823-080C	312, 376	1829-020	229, 375	182901-578C	316, 383
173A-030CL	261, 458	1732-030	260, 457	1821V-030CSR	313, 378	1823V-005	230, 377	1829-020BL	566	182901M-020	233, 383
173A-040	261, 458	1732-030C	339, 458	1821V-030SR	230, 377	1823V-005C	313, 378	1829-020C	312, 376	182901M-020C	316, 384
173A-040C	339, 459	1732-030CL	260, 457	1821V-040CSR	313, 378	1823V-007	230, 377	1829V-005	230, 377	182901M-025	233, 383
173A-040CL	261, 458	1732-040	260, 457	1821V-040SR	230, 377	1823V-007C	313, 378	1829V-005C	313, 377	182901M-025C	316, 384
173B-005	261, 458	1732-040C	339, 458	18216-060	230, 376	1823V-010	230, 377	1829V-007	230, 377	182901M-032	233, 383
173B-005C	339, 459	1732-040CL	260, 457	18216-060C	313, 376	1823V-010C	313, 378	1829V-007C	313, 377	182901M-032C	316, 384
173B-005CL	261, 458	1733-005	260, 457	18216-060CSR	313, 377	1823V-012	230, 377	1829V-010	230, 377	182901M-040	233,

Spears List Price Part Number Index



1830-025C	406	1832RS-010	236, 387	1837-007	229, 375	183901-210	233, 383	1880-025	164	1881-150	165
1830-030	406	1832RS-010C	319, 387	1837-007C	312, 376	183901-210BL	566	1880-025C	171	1881-150C	172
1830-030C	406	1832RS-012	236, 387	1837-010	229, 375	183901-210C	316, 383	1880-030	164	1881-160	165
1830-040	406	1832RS-012C	319, 387	1837-010C	312, 376	183901-211	233, 383	1880-030C	171	1881-160C	172
1830-040C	406	1832RS-015	236, 387	1837-012	229, 375	183901-211BL	566	1880-035	164	1881-170	165
1830-060	406	1832RS-015C	319, 387	1837-012C	312, 376	183901-211C	316, 383	1880-035C	171	1881-170C	172
1830-060C	406	1832RS-020	236, 387	1837-015	229, 375	183901-247	233, 383	1880-040	164	1881-180	165
18306-060	406	1832RS-020C	319, 387	1837-015C	312, 376	183901-247BL	566	1880-040C	171	1881-180C	172
18306-060C	406	1832RS-025	236, 387	1837-020	229, 375	183901-247C	316, 383	1880-045	164	1881-190	165
1831-005CSR	312, 376	1832RS-025C	319, 387	1837-020C	312, 376	183901-248	233, 383	1880-045C	171	1881-190C	172
1831-005SR	229, 375	1832RS-030	236, 387	1837-025	229, 375	183901-248BL	566	1880-050	164	1881-200	165
1831-007CSR	312, 376	1832RS-030C	319, 387	1837-025C	312, 376	183901-248C	316, 383	1880-050C	171	1881-200C	172
1831-007SR	229, 375	1832RS-040	236, 387	1837-030	229, 375	183901-249	233, 383	1880-055	164	1881-220	165
1831-010CSR	312, 376	1832RS-040C	319, 387	1837-030C	312, 376	183901-249BL	566	1880-055C	172	1881-220C	172
1831-010SR	229, 375	1832V-025	230, 377	1837-040	229, 375	183901-249C	316, 383	1880-060	164	1881-240	165
1831-012CSR	312, 376	1832V-025C	313, 378	1837-040C	312, 376	183901-251	233, 383	1880-060C	172	1881-240C	172
1831-012SR	229, 375	1832V-030	230, 377	1837-060	229, 375	183901-251BL	566	1880-070	164	1881-300	165
1831-015CSR	312, 376	1832V-030C	313, 378	1837-060C	312, 376	183901-251C	316, 383	1880-070C	172	1881-300C	172
1831-015SR	229, 375	1832V-040	230, 377	1838-005	696	183901-333	233, 383	1880-080	164	1881-360	165
1831-020CSR	312, 376	1832V-040C	313, 378	1838-005C	697	183901-333BL	566	1880-080C	172	1881-360C	172
1831-020SR	229, 375	1832V-060	230, 377	1838-007	696	183901-333C	316, 383	1880-090	164	1881-420	165
1831-025	229, 375	1832V-060C	313, 378	1838-007C	697	183901-335	233, 383	1880-090C	172	1881-420C	172
1831-025C	312, 376	18326-060	229, 376	1838-010	696	183901-335BL	566	1880-100	164	1881-480	165
1831-025CSR	312, 376	18326-060C	312, 376	1838-010C	697	183901-335C	316, 383	1880-100C	172	1881-480C	172
1831-025SR	229, 375	1833-005	229, 375	1838-012	696	183901-337	233, 383	1880-110	164	1882-005	165
1831-030	229, 375	1833-005C	312, 376	1838-012C	697	183901-337BL	566	1880-110C	172	1882-005C	172
1831-030C	312, 376	1833-007	229, 375	1838-015	696	183901-337C	316, 383	1880-120	164	1882-015	165
1831-030CSR	312, 376	1833-007C	312, 376	1838-015C	697	183901-338	233, 383	1880-120C	172	1882-015C	172
1831-030SR	229, 375	1833-010	229, 375	1838-020	696	183901-338BL	566	1880-130	164	1882-020	165
1831-040	229, 375	1833-010C	312, 376	1838-020C	697	183901-338C	316, 383	1880-130C	172	1882-020C	172
1831-040C	312, 376	1833-012	229, 375	1839-005	229, 375	183901-417	233, 383	1880-140	164	1882-025	165
1831-040CSR	312, 376	1833-012C	312, 376	1839-005BL	566	183901-417BL	566	1880-140C	172	1882-025C	172
1831-040SR	229, 375	1833-015	229, 375	1839-005C	312, 376	183901-417C	316, 383	1880-150	164	1882-030	165
1831-060	229, 375	1833-015C	312, 376	1839-007	229, 375	183901-419	233, 383	1880-150C	172	1882-030C	172
1831-060C	312, 376	1833-020	229, 375	1839-007BL	566	183901-419BL	566	1880-160	164	1882-035	165
1831-060CSR	312, 376	1833-020C	312, 376	1839-007C	312, 376	183901-419C	316, 383	1880-160C	172	1882-035C	172
1831-060SR	229, 375	1833-025	229, 375	1839-010	229, 375	183901-420	233, 383	1880-170	164	1882-040	165
1831V-005CSR	313, 378	1833-025C	312, 376	1839-010BL	566	183901-420BL	566	1880-170C	172	1882-040C	172
1831V-005SR	230, 377	1833-030	229, 375	1839-010C	312, 376	183901-420C	316, 383	1880-180	164	1882-045	165
1831V-007CSR	313, 378	1833-030C	312, 376	1839-012	229, 375	183901-528	233, 383	1880-180C	172	1882-045C	172
1831V-007SR	230, 377	1833-040	229, 376	1839-012BL	566	183901-528BL	566	1880-190	164	1882-050	165
1831V-010CSR	313, 378	1833-040C	312, 376	1839-012C	312, 376	183901-528C	316, 383	1880-190C	172	1882-050C	172
1831V-010SR	230, 377	1833-060	229, 376	1839-015	229, 375	183901-578	233, 383	1880-200	164	1882-055	165
1831V-012CSR	313, 378	1833-060C	312, 376	1839-015BL	566	183901-578BL	566	1880-200C	172	1882-055C	172
1831V-012SR	230, 377	1833-080	229, 376	1839-015C	312, 376	183901-578C	316, 383	1880-220	164	1882-060	165
1831V-015CSR	313, 378	1833-080C	312, 376	1839-020	229, 375	183901M-020	233, 383	1880-220C	172	1882-060C	172
1831V-015SR	230, 377	1833V-005	230, 377	1839-020BL	566	183901M-020C	316, 384	1880-240	164	1882-070	165
1831V-020CSR	313, 378	1833V-005C	313, 378	1839-020C	312, 376	183901M-025	233, 383	1880-240C	172	1882-070C	172
1831V-020SR	230, 377	1833V-007	230, 377	1839V-005	230, 377	183901M-025C	316, 384	1880-300	164	1882-080	165
1831V-025CSR	313, 378	1833V-007C	313, 378	1839V-005C	313, 377	183901M-032	233, 383	1880-300C	172	1882-080C	172
1831V-025SR	230, 377	1833V-010	230, 377	1839V-007	230, 377	183901M-032C	316, 384	1880-360	164	1882-090	165
1831V-030CSR	313, 378	1833V-010C	313, 378	1839V-007C	313, 377	183901M-040	233, 383	1880-360C	172	1882-090C	172
1831V-030SR	230, 377	1833V-012	230, 377	1839V-010	230, 377	183901M-040C	316, 384	1880-420	164	1882-100	165
1831V-040CSR	313, 378	1833V-012C	313, 378	1839V-010C	313, 377	183901M-050	233, 384	1880-420C	172	1882-100C	172
1831V-040SR	230, 377	1833V-015	230, 377	1839V-012	230, 377	183901M-050C	316, 384	1880-480	164	1882-110	165
18316-060	230, 376	1833V-015C	313, 378	1839V-012C	313, 377	183901M-063	233, 384	1880-480C	172	1882-110C	172
18316-060C	313, 376	1833V-020	230, 377	1839V-015	230, 377	183901M-063C	316, 384	1881-005	164	1882-120	165
18316-060CSR	313, 377	1833V-020C	313, 378	1839V-015C	313, 378	1879-005	164	1881-005C	172	1882-120C	172
18316-060SR	230, 376	1833V-025	230, 377	1839V-020	230, 377	1879-015	164	1881-015	164	1882-130	165
1832-025	229, 375	1833V-025C	313, 378	1839V-020C	313, 378	1879-020	164	1881-015C	172	1882-130C	172
1832-025C	312, 376	1833V-030	230, 377	183901-005	233, 383	1879-025	164	1881-020	164	1882-140	165
1832-030	229, 375	1833V-030C	313, 378	183901-005BL	566	1879-030	164	1881-020C	172	1882-140C	172
1832-030BL	566	1833V-040	230, 377	183901-005C	316, 383	1879-035	164	1881-025	164	1882-150	165
1832-030C	312, 376	1833V-040C	313, 378	183901-007	233, 383	1879-040	164	1881-025C	172	1882-150C	173
1832-040	229, 375	1833V-060	230, 377	183901-007BL	566	1879-045	164	1881-030	164	1882-160	165
1832-040BL	566	1833V-060C	313, 378	183901-007C	316, 383	1879-050	164	1881-030C	172	1882-160C	173
1832-040C	312, 376	18336-060	230, 376	183901-010	233, 383	1879-055	164	1881-035	164	1882-170	165
1832-060	229, 375	18336-060C	313, 377	183901-010BL	566	1879-060	164	1881-035C	172	1882-170C	173
1832-060BL	566	1834-005	696	183901-010C	316, 383	1879-070	164	1881-040	164	1882-180	165
1832-060C	312, 376	1834-005C	696	183901-015BL	566	1879-080	164	1881-040C	172	1882-180C	173
1832-080	229, 375	1834-007	696	183901-020	233, 383	1879-090	164	1881-045	164	1882-190	165
1832-080C	312, 376	1834-007C	696	183901-020BL	566	1879-100	164	1881-045C	172	1882-190C	173
1832R-005	235, 386	1834-010	696	183901-020C	316, 383	1879-110	164	1881-050	164	1882-200	165
1832R-005C	318, 386	1834-010C	696	183901-101	233, 383	1879-120	164	1881-050C	172	1882-200C	173
1832R-007	235, 386	1834-012	696	183901-101BL	566	1879-130	164	1881-055	164	1882-210	165
1832R-007C	318, 386	1834-012C	696	183901-101C	316, 383	1879-140	164	1881-055C	172	1882-220C	173
1832R-010	235, 386	1834-015	696	183901-130	233, 383	1879-150	164	1881-060	165	1882-240	165
1832R-010C	318, 386	1834-015C	696	183901-130BL	566	1879-160	164	1881-060C	172	1882-240C	173
1832R-012	235, 386	1834-020	696	183901-130C	316, 383	1879-170	164	1881-070	165	1882-300	165
1832R-012C	318, 386	1834-020C	696	183901-131	233, 383	1879-180	164	1881-070C	172	1882-300C	173
1832R-015	235, 386	1835-005	696	183901-131BL	566	1879-190	164	1881-080	165		



Spears List Price Part Number Index

1883-030	165	1884-160C	173	1886-045C	174	1887-200C	175	1889-110	168	1892-045	169
1883-030C	173	1884-170	166	1886-050	167	1887-220	167	1889-110C	175	1892-045C	176
1883-035	165	1884-170C	173	1886-050C	174	1887-220C	175	1889-120	168	1892-050	169
1883-035C	173	1884-180	166	1886-055	167	1887-240	167	1889-120C	175	1892-050C	176
1883-040	165	1884-180C	173	1886-055C	174	1887-240C	175	1889-130	168	1892-055	169
1883-040C	173	1884-190	166	1886-060	167	1887-300	167	1889-130C	175	1892-055C	176
1883-045	165	1884-190C	173	1886-060C	174	1887-300C	175	1889-140	168	1892-060	169
1883-045C	173	1884-200	166	1886-070	167	1887-360	167	1889-140C	175	1892-060C	176
1883-050	165	1884-200C	173	1886-070C	174	1887-360C	175	1889-150	168	1892-070	169
1883-050C	173	1884-220	166	1886-080	167	1887-420	167	1889-150C	175	1892-070C	176
1883-055	165	1884-220C	173	1886-080C	174	1887-420C	175	1889-160	168	1892-080	169
1883-055C	173	1884-240	166	1886-090	167	1887-480	167	1889-160C	175	1892-080C	176
1883-060	165	1884-240C	173	1886-090C	174	1887-480C	175	1889-170	168	1892-090	169
1883-060C	173	1884-300	166	1886-100	167	1888-005	167	1889-170C	175	1892-090C	176
1883-070	165	1884-300C	173	1886-100C	174	1888-005C	175	1889-180	168	1892-100	169
1883-070C	173	1884-360	166	1886-110	167	1888-025	167	1889-180C	175	1892-100C	176
1883-080	165	1884-360C	173	1886-110C	174	1888-030	167	1889-190	168	1892-110	169
1883-080C	173	1884-420	166	1886-120	167	1888-030C	175	1889-190C	175	1892-110C	176
1883-090	165	1884-420C	173	1886-120C	174	1888-035	167	1889-200	168	1892-120	169
1883-090C	173	1884-480	166	1886-130	167	1888-035C	175	1889-200C	175	1892-120C	176
1883-100	165	1884-480C	174	1886-130C	174	1888-040	167	1889-220	168	1892-130	169
1883-100C	173	1885-005	166	1886-140	167	1888-040C	175	1889-220C	175	1892-130C	176
1883-110	165	1885-005C	174	1886-140C	174	1888-045	167	1889-240	168	1892-140	169
1883-110C	173	1885-020	166	1886-150	167	1888-045C	175	1889-240C	175	1892-140C	176
1883-120	165	1885-020C	174	1886-150C	174	1888-050	167	1889-300	168	1892-150	169
1883-120C	173	1885-025	166	1886-160	167	1888-050C	175	1889-300C	175	1892-150C	176
1883-130	165	1885-025C	174	1886-160C	174	1888-055	167	1889-360	168	1892-160	169
1883-130C	173	1885-030	166	1886-170	167	1888-055C	175	1889-360C	175	1892-160C	176
1883-140	165	1885-030C	174	1886-170C	174	1888-060	167	1889-420	168	1892-170	169
1883-140C	173	1885-035	166	1886-180	167	1888-060C	175	1889-420C	175	1892-170C	176
1883-150	165	1885-035C	174	1886-180C	174	1888-070	167	1889-480	168	1892-180	169
1883-150C	173	1885-040	166	1886-190	167	1888-070C	175	1889-480C	175	1892-180C	176
1883-160	166	1885-040C	174	1886-190C	174	1888-080	167	1890-005	168	1892-190	169
1883-160C	173	1885-045	166	1886-200	167	1888-080C	175	1890-005C	175	1892-190C	176
1883-170	166	1885-045C	174	1886-200C	174	1888-090	167	1890-025	168	1892-200	169
1883-170C	173	1885-050	166	1886-220	167	1888-090C	175	1890-030	168	1892-200C	176
1883-180	166	1885-050C	174	1886-220C	174	1888-100	168	1890-030C	175	1892-220	169
1883-180C	173	1885-055	166	1886-240	167	1888-100C	175	1890-035	168	1892-220C	176
1883-190	166	1885-055C	174	1886-240C	174	1888-110	168	1890-035C	175	1892-240	169
1883-190C	173	1885-060	166	1886-300	167	1888-110C	175	1890-040	168	1892-240C	176
1883-200	166	1885-060C	174	1886-300C	174	1888-120	168	1890-040C	175	1892-300	169
1883-200C	173	1885-070	166	1886-360	167	1888-120C	175	1890-045	168	1892-300C	176
1883-220	166	1885-070C	174	1886-360C	174	1888-130	168	1890-045C	175	1892-360	169
1883-220C	173	1885-080	166	1886-420	167	1888-130C	175	1890-050	168	1892-360C	176
1883-240	166	1885-080C	174	1886-420C	174	1888-140	168	1890-050C	175	1892-420	169
1883-240C	173	1885-090	166	1886-480	167	1888-140C	175	1890-055	168	1892-420C	176
1883-300	166	1885-090C	174	1886-480C	174	1888-150	168	1890-055C	175	1892-480	169
1883-300C	173	1885-100	166	1887-005	167	1888-150C	175	1890-060	168	1892-480C	176
1883-360	166	1885-100C	174	1887-005C	174	1888-160	168	1890-060C	175	1893-005	169
1883-360C	173	1885-110	166	1887-020	167	1888-160C	175	1890-070	168	1893-005C	176
1883-420	166	1885-110C	174	1887-020C	174	1888-170	168	1890-070C	175	1893-045	169
1883-420C	173	1885-120	166	1887-025	167	1888-170C	175	1890-080	168	1893-045C	176
1883-480	166	1885-120C	174	1887-025C	174	1888-180	168	1890-080C	175	1893-050	169
1883-480C	173	1885-130	166	1887-030	167	1888-180C	175	1890-090	168	1893-050C	176
1884-005	166	1885-130C	174	1887-030C	174	1888-190	168	1890-090C	175	1893-055	169
1884-005C	173	1885-140	166	1887-035	167	1888-190C	175	1890-100	168	1893-055C	176
1884-015	166	1885-140C	174	1887-035C	174	1888-200	168	1890-100C	175	1893-060	169
1884-020	166	1885-150	166	1887-040	167	1888-200C	175	1890-110	168	1893-060C	176
1884-020C	173	1885-150C	174	1887-040C	174	1888-220	168	1890-110C	175	1893-070	169
1884-025	166	1885-160	166	1887-045	167	1888-220C	175	1890-120	168	1893-070C	176
1884-025C	173	1885-160C	174	1887-045C	174	1888-240	168	1890-120C	175	1893-080	169
1884-030	166	1885-170	166	1887-050	167	1888-240C	175	1890-130	168	1893-080C	176
1884-030C	173	1885-170C	174	1887-050C	174	1888-300	168	1890-130C	175	1893-090	169
1884-035	166	1885-180	166	1887-055	167	1888-300C	175	1890-140	168	1893-090C	176
1884-035C	173	1885-180C	174	1887-055C	174	1888-360	168	1890-140C	175	1893-100	169
1884-040	166	1885-190	166	1887-060	167	1888-360C	175	1890-150	168	1893-100C	176
1884-040C	173	1885-190C	174	1887-060C	174	1888-420	168	1890-150C	175	1893-110	169
1884-045	166	1885-200	166	1887-070	167	1888-420C	175	1890-160	168	1893-110C	176
1884-045C	173	1885-200C	174	1887-070C	174	1888-480	168	1890-160C	175	1893-120	169
1884-050	166	1885-220	166	1887-080	167	1888-480C	175	1890-170	168	1893-120C	176
1884-050C	173	1885-220C	174	1887-080C	175	1889-005	168	1890-170C	175	1893-130	169
1884-055	166	1885-240	166	1887-090	167	1889-005C	175	1890-180	168	1893-130C	176
1884-055C	173	1885-240C	174	1887-090C	174	1889-030	168	1890-180C	175	1893-140	169
1884-060	166	1885-300	166	1887-100	167	1889-030C	175	1890-190	168	1893-140C	176
1884-060C	173	1885-300C	174	1887-100C	175	1889-035	168	1890-190C	175	1893-150	169
1884-070	166	1885-360	166	1887-110	167	1889-035C	175	1890-200	168	1893-150C	176
1884-070C	173	1885-360C	174	1887-110C	175	1889-040	168	1890-200C	175	1893-160	169
1884-080	166	1885-420	166	1887-120	167	1889-040C	175	1890-220	168	1893-160C	177
1884-080C	173	1885-420C	174	1887-120C	175	1889-045	168	1890-220C	175	1893-170	169
1884-090	166	1885-480	166	1887-130	167	1889-045C	175	1890-240	168	1893-170C	176
1884-090C	173	1885-480C	174	1887-130C	175	1889-050	168	1890-240C	175	1893-180	169
1884-100	166	1886-005	167	1887-140	167	1889-050C	175	1890-300	168	1893-180C	177
1884-100C	173	1886-005C	174	1887-140C	175	1889-055	168	1890-300C	175	1893-190	169
1884-110	166	1886-020	167	1887-150	167	1889-055C	175	1890-360	168	1893-190C	176
1884-110C	173	1886-020C	174	1887-150C	175	1889-060	168	1890-360C	175	1893-200	169
1884-120	166	1886-025	167	1887-160	167	1889-060C	175	1890-420	169	1893-200C	177
1884-120C	173	1886-025C	174	1887-160C	175	1889-070	168	1890-420C	175	1893-220	169
1884-130	166	1886-030	167	1887-170	167	1889-070C	175	1890-480	169	1893-220C	177
1884-130C	173	1886-030C	174	1887-170C	175	1889-080	168	1890-480C	175	1893-240	169
1884-140	166	1886-035	167	1887-180	167	1889-080C	175	1892-005	169	1893-240C	177
1884-140C	173	1886-035C	174	1887-180C	175	1889-090	168	1892-005C	175	1893-300	169
1884-150	166	1886-040	167	1887-190	167	1889-090C	175	1892-030C	175	1893-300C	177
1884-150C	173	1886-040C	174	1							

Spears List Price Part Number Index



1893-420	169	1895-240C	177	2015-010	708	2031-025	251, 431	2110J101-040	474	2121-007	240, 393
1893-420C	177	1895-300	170	2015-012	708	2031-025C	330, 431	2110J101-060	474	2121-007C	322, 393
1893-480	169	1895-300C	177	2015-015	708	2031-030CSR	330, 431	2110A111-025	473	2121-010	240, 393
1893-480C	177	1895-360	170	2015-020	708	2031-030SR	251, 431	2110A111-030	473	2121-010C	322, 393
1894-005	169	1895-360C	177	2021-005	251, 431	2031-040CSR	330, 431	2110A112-005	473	2121-012	240, 393
1894-005C	177	1895-420	170	2021-005C	330, 431	2031-040SR	251, 431	2110A112-007	473	2121-012C	322, 393
1894-020	169	1895-420C	177	2021-007	251, 431	2032-005	251, 431	2110A112-010	473	2121-015	240, 393
1894-045	169	1895-480	170	2021-007C	330, 431	2032-005C	330, 431	2110A112-012	473	2121-015C	322, 393
1894-045C	177	1895-480C	177	2021-010	251, 431	2032-007	251, 431	2110A112-015	473	2121-020	240, 393
1894-050	169	1922-005	397, 563	2021-010C	330, 431	2032-007C	330, 431	2110A112-020	473	2121-020C	322, 393
1894-050C	177	1922-007	397, 563	2021-012	251, 431	2032-010	251, 431	2110A121-040	473	2121-030	240, 393
1894-055	169	1922-010	397, 563	2021-012C	330, 431	2032-010C	330, 431	2110A121-060	473	2121-030C	322, 393
1894-055C	177	1922-012	397, 563	2021-015	251, 431	2032-012	251, 431	2110H101-005	474	2121-040	240, 393
1894-060	169	1922-015	397, 563	2021-015C	330, 431	2032-012C	330, 431	2110H101-007	474	2121-040C	322, 393
1894-060C	177	1922-020	397, 563	2021-020	251, 431	2032-015	251, 431	2110H101-010	475	2122-005	240, 393
1894-070	169	2E-005	217, 303	2021-020C	330, 431	2032-015C	330, 431	2110H101-012	475	2122-005C	322, 393
1894-070C	177	2E-007	217, 303	2021-025	251, 431	2032-020	251, 431	2110H101-015	475	2122-007	240, 393
1894-080	169	2E-010	217, 303	2021-025C	330, 431	2032-020C	330, 431	2110H101-020	475	2122-007C	322, 393
1894-080C	177	2E-015	217, 303	2021-030CSR	330, 431	2032-025	251, 431	2110H101-025	475	2122-010	240, 393
1894-090	169	2E-020	217, 303	2021-030SR	251, 431	2032-025C	330, 431	2110H101-030	475	2122-010C	322, 393
1894-090C	177	2E-030	217, 303	2021-040CSR	330, 431	2032-030	251, 431	2110H101-040	475	2122-012	240, 393
1894-100	169	2E-040	217, 303	2021-040SR	251, 431	2032-030C	330, 431	2110H101-060	475	2122-012C	322, 393
1894-100C	177	2E-060	217, 303	2022-005	251, 431	2032-040	251, 431	2110J101-005	474	2122-015	240, 393
1894-110	169	2N-005	217, 303	2022-005C	330, 431	2032-040C	330, 431	2110J101-007	474	2122-015C	322, 393
1894-110C	177	2N-007	217, 303	2022-007	251, 431	2033-005	251, 431	2110J101-010	475	2122-020	240, 393
1894-120	169	2N-010	217, 303	2022-007C	330, 431	2033-005C	330, 432	2110J101-012	475	2122-020C	322, 393
1894-120C	177	2N-015	217, 303	2022-010	251, 431	2033-007	251, 431	2110J101-015	475	2122-030	240, 393
1894-130	169	2N-020	217, 303	2022-010C	330, 431	2033-007C	330, 432	2110J101-020	475	2122-030C	322, 393
1894-130C	177	2N-030	217, 303	2022-012	251, 431	2033-010	251, 431	2110J101-025	475	2122-040	240, 393
1894-140	169	2N-040	217, 303	2022-012C	330, 431	2033-010C	330, 432	2110J101-030	475	2122-040C	322, 393
1894-140C	177	2N-060	216, 303	2022-015	251, 431	2033-012	251, 431	2110J101-040	475	2122-060	240, 393
1894-150	169	2V-060	217, 303	2022-015C	330, 431	2033-012C	330, 432	2110J101-060	475	2122-060C	322, 393
1894-150C	177	2011-005	251, 431	2022-020	251, 431	2033-015	251, 431	2120A111-025	473	2122-060	240, 393
1894-160	169	2011-005C	330, 431	2022-020C	330, 431	2033-015C	330, 432	2120A111-030	473	2122-060C	322, 393
1894-160C	177	2011-007	251, 431	2022-025	251, 431	2033-020	251, 431	2120A112-005	473	2123-005	240, 393
1894-170	169	2011-007C	330, 431	2022-025C	330, 431	2033-020C	330, 432	2120A112-007	473	2123-005C	322, 393
1894-170C	177	2011-010	251, 431	2022-030	251, 431	2033-025	251, 431	2120A112-010	473	2123-007	240, 393
1894-180	169	2011-010C	330, 431	2022-030C	330, 431	2033-025C	330, 432	2120A112-012	473	2123-007C	322, 393
1894-180C	177	2011-012	251, 431	2022-040	251, 431	2033-030	251, 431	2120A112-015	473	2123-010	240, 393
1894-190	169	2011-012C	330, 431	2022-040C	330, 431	2033-030C	330, 432	2120A112-020	473	2123-010C	322, 393
1894-190C	177	2011-015	251, 431	2023-005	251, 431	2033-040	251, 431	2120A121-040	473	2123-012	240, 393
1894-200	170	2011-015C	330, 431	2023-005C	330, 432	2033-040C	330, 432	2120A121-060	473	2123-012C	322, 393
1894-200C	177	2011-020	251, 431	2023-007	251, 431	2034-005	708	2120H101-005	474	2123-015	240, 393
1894-220	170	2011-020C	330, 431	2023-007C	330, 432	2034-005C	709	2120H101-007	474	2123-015C	322, 393
1894-220C	177	2011-025	251, 431	2023-010	251, 431	2034-007	708	2120H101-010	474	2123-020	240, 393
1894-240	170	2011-025C	330, 431	2023-010C	330, 432	2034-007C	709	2120H101-012	474	2123-020C	322, 393
1894-240C	177	2011-030CSR	330, 431	2023-012	251, 431	2034-010	708	2120H101-015	474	2123-030	240, 393
1894-300	170	2011-030SR	251, 431	2023-012C	330, 432	2034-010C	709	2120H101-020	474	2123-030C	322, 393
1894-300C	177	2011-040CSR	330, 431	2023-015	251, 431	2034-012	708	2120H101-025	474	2123-040	240, 393
1894-360	170	2011-040SR	251, 431	2023-015C	330, 432	2034-012C	709	2120H101-030	474	2123-040C	322, 393
1894-360C	177	2012-005	251, 431	2023-020	251, 431	2034-015	708	2120H101-040	474	2123-060	240, 393
1894-420	170	2012-005C	330, 431	2023-020C	330, 432	2034-015C	709	2120H101-060	474	2123-060C	322, 393
1894-420C	177	2012-007	251, 431	2023-025	251, 431	2034-020	708	2120J101-005	474	2123-060	240, 393
1894-480	170	2012-007C	330, 431	2023-025C	330, 432	2034-020C	709	2120J101-007	474	2123-060C	322, 393
1894-480C	177	2012-010	251, 431	2023-030	251, 431	2035-005	709	2120J101-010	474	2131-005	240, 393
1895-005	170	2012-010C	330, 431	2023-030C	330, 432	2035-005C	709	2120J101-012	474	2131-005C	322, 393
1895-005C	177	2012-012	251, 431	2023-040	251, 431	2035-007	709	2120J101-015	474	2131-007	240, 393
1895-050	170	2012-012C	330, 431	2023-040C	330, 432	2035-007C	709	2120J101-020	474	2131-007C	322, 393
1895-050C	177	2012-015	251, 431	2024-005	708	2035-010	709	2120J101-025	474	2131-010	240, 393
1895-055	170	2012-015C	330, 431	2024-005C	709	2035-010C	709	2120J101-030	474	2131-010C	322, 393
1895-055C	177	2012-020	251, 431	2024-007	708	2035-012	709	2120J101-040	474	2131-012	240, 393
1895-060	170	2012-020C	330, 431	2024-007C	709	2035-012C	709	2120J101-060	474	2131-012C	322, 393
1895-060C	177	2012-025	251, 431	2024-010	708	2035-015	709	2120A111-025	473	2131-015	240, 393
1895-070	170	2012-025C	330, 431	2024-010C	709	2035-015C	709	2120A111-030	473	2131-015C	322, 393
1895-070C	177	2012-030	251, 431	2024-012	708	2035-020	709	2120A112-005	473	2131-020	240, 393
1895-080	170	2012-030C	330, 431	2024-012C	709	2035-020C	709	2120A112-007	473	2131-020C	322, 393
1895-080C	177	2012-040	251, 431	2024-015	708	2110A111-025	473	2120A112-010	473	2131-030	240, 393
1895-090	170	2012-040C	330, 431	2024-015C	709	2110A111-030	473	2120A112-012	473	2131-030C	322, 393
1895-090C	177	2013-005	251, 431	2024-020	708	2110A112-005	473	2120A112-015	473	2131-040	240, 393
1895-100	170	2013-005C	330, 432	2024-020C	709	2110A112-007	473	2120A112-020	473	2131-040C	322, 393
1895-100C	177	2013-007	251, 431	2025-005	708	2110A112-010	473	2120A121-040	473	2132-005	240, 393
1895-110	170	2013-007C	330, 432	2025-005C	709	2110A112-012	473	2120A121-060	473	2132-005C	322, 393
1895-110C	177	2013-010	251, 431	2025-007	708	2110A112-015	473	2120H101-005	474	2132-007	240, 393
1895-120	170	2013-010C	330, 432	2025-007C	709	2110A112-020	473	2120H101-007	474	2132-007C	322, 393
1895-120C	177	2013-012	251, 431	2025-010	708	2110A121-040	473	2120H101-010	475	2132-010	240, 393
1895-130	170	2013-012C	330, 432	2025-010C	709	2110A121-060	473	2120H101-012	475	2132-010C	322, 393
1895-130C	177	2013-015	251, 431	2025-012	708	2110H101-005	474	2120H101-015	475	2132-012	240, 393
1895-140	170	2013-015C	330, 432	2025-012C	709	2110H101-007	474	2120H101-020	475	2132-012C	322, 393
1895-140C	177	2013-020	251, 431	2025-015	708	2110H101-010	474	2120H101-025	475	2132-015	240, 393
1895-150	170	2013-020C	330, 432	2025-015C	709	2110H101-012	474	2120H101-030	475	2132-015C	322, 393
1895-150C	177	2013-025	2								



Spears List Price Part Number Index

2133-010	240, 393	2230-030	407	23102H101-015	475	2321-030	238, 390	2333-015	238, 390	24102J101-040	475
2133-010C	322, 393	2230-030C	407	23102H101-020	475	2321-030C	321, 390	2333-015C	321, 390	24102J101-060	475
2133-012	240, 393	2230-040	407	23102H101-025	475	2321-040	238, 390	2333-020	238, 390	2411-005G	238, 391
2133-012C	322, 393	2230-040C	407	23102H101-030	475	2321-040C	321, 390	2333-020C	321, 390	2411-005W	80, 391
2133-015	240, 393	2231-025	243, 410	23102H101-040	475	2322-025	238, 389	2333-025	238, 390	2411-007G	238, 391
2133-015C	322, 393	2231-025C	325, 410	23102H101-060	475	2322-025C	321, 390	2333-025C	321, 390	2411-007W	80, 391
2133-020	240, 393	2231-030	243, 410	23102J101-005	474	2322-030	238, 390	2333-030	238, 390	2411-010G	238, 391
2133-020C	322, 394	2231-030C	325, 410	23102J101-007	474	2322-030C	321, 390	2333-030C	321, 390	2411-010W	80, 391
2133-030	240, 393	2231-040	243, 410	23102J101-010	475	2322-040	238, 390	2333-040	238, 390	2411-012G	238, 391
2133-030C	322	2231-040C	325, 410	23102J101-012	475	2322-040C	321, 390	2333-040C	321, 390	2411-012W	80, 391
2133-040	240, 393	2232-025	243, 410	23102J101-015	475	2322-060	238, 390	2333-060	238, 390	2411-015G	239, 391
2133-040C	322, 394	2232-025C	325, 410	23102J101-020	475	2322-060C	321, 390	2333-060C	321, 390	2411-015W	80, 391
2133-060	240, 393	2232-030	243, 410	23102J101-025	475	2323-005	238, 390	2334-025	695	2411-020G	239, 391
2133-060C	322, 394	2232-030C	325, 410	23102J101-030	475	2323-005C	321, 390	2334-025C	695	2411-020W	80, 391
21336-060	240, 393	2232-040	243, 410	23102J101-040	475	2323-007	238, 390	2334-030	695	2411-030G	239, 391
21336-060C	322, 394	2232-040C	325, 410	23102J101-060	475	2323-007C	321, 390	2334-030C	695	2411-030W	80, 391
2220-005	407	2232-060	243, 410	2320-005	406	2323-010	238, 390	2334-040	695	2411-040G	239, 391
2220-005C	407	2232-060C	325, 410	2320-005C	407	2323-010C	321, 390	2334-040C	695	2411-040W	80, 391
2220-007	407	2233-005	243, 410	2320-007	406	2323-012	238, 390	2335-025	695	2412-005G	239, 391
2220-007C	407	2233-005C	325, 410	2320-007C	407	2323-012C	321, 390	2335-025C	695	2412-005W	80, 391
2220-010	407	2233-007	243, 410	2320-010	406	2323-015	238, 390	2335-030	695	2412-007G	239, 391
2220-010C	407	2233-007C	325, 410	2320-010C	407	2323-015C	321, 390	2335-030C	695	2412-007W	80, 391
2220-012	407	2233-010	243, 410	2320-012	407	2323-020	238, 390	2335-040	695	2412-010G	239, 391
2220-012C	407	2233-010C	325, 410	2320-012C	407	2323-020C	321, 390	2335-040C	695	2412-010W	80, 391
2220-015	407	2233-012	243, 410	2320-015	407	2323-025	238, 390	2339-005	238, 389	2412-012G	239, 391
2220-015C	407	2233-012C	325, 410	2320-015C	407	2323-025C	321, 390	2339-005C	321, 390	2412-012W	80, 391
2220-020	407	2233-015	243, 410	2320-020	407	2323-030	238, 390	2339-007	238, 389	2412-015G	239, 391
2220-020C	407	2233-015C	325, 410	2320-020C	407	2323-030C	321, 390	2339-007C	321, 390	2412-015W	80, 391
2220-025	407	2233-020	243, 410	2320-030	407	2323-040	238, 390	2339-010	238, 389	2412-020G	239, 391
2220-025C	407	2233-020C	325, 410	2320-030C	407	2323-040C	321, 390	2339-010C	321, 390	2412-020W	80, 391
2220-030	407	2233-025	243, 410	2320-040	407	2323-060	238, 390	2339-012	238, 389	2412-030G	239, 391
2220-030C	407	2233-025C	325, 410	2320-040C	407	2323-060C	321, 390	2339-012C	321, 390	2412-030W	80, 391
2220-040	407	2233-030	243, 410	23201A111-025	473	2324-025	695	2339-015	238, 389	2412-040G	239, 391
2220-040C	407	2233-030C	325, 410	23201A111-030	473	2324-025C	695	2339-015C	321, 390	2412-040W	80, 391
2221-025	243, 410	2233-040	243, 410	23201A112-005	473	2324-030	695	2339-020	238, 389	24201A111-025	473
2221-025C	325, 410	2233-040C	325, 410	23201A112-007	473	2324-030C	695	2339-020C	321, 390	24201A111-030	473
2221-030	243, 410	2233-060	243, 410	23201A112-010	473	2324-040	695	24101A111-025	473	24201A112-005	473
2221-030C	325, 410	2233-060C	325, 410	23201A112-012	473	2324-040C	695	24101A111-030	473	24201A112-007	473
2221-040	243, 410	2239-005	243, 410	23201A112-015	473	2325-025	695	24101A112-005	473	24201A112-010	473
2221-040C	325, 410	2239-005C	325, 410	23201A112-020	473	2325-025C	695	24101A112-007	473	24201A112-012	473
2222-025	243, 410	2239-007	243, 410	23201A121-040	473	2325-030	695	24101A112-010	473	24201A112-015	473
2222-025C	325, 410	2239-007C	325, 410	23201A121-060	473	2325-030C	695	24101A112-012	473	24201A112-020	473
2222-030	243, 410	2239-010	243, 410	23201H101-005	474	2325-040	695	24101A112-015	473	24201A121-040	473
2222-030C	325, 410	2239-010C	325, 410	23201H101-007	474	2325-040C	695	24101A112-020	473	24201A121-060	473
2222-040	243, 410	2239-012	243, 410	23201H101-010	474	2329-005	238, 389	24101A121-040	473	24201H101-005	474
2222-040C	325, 410	2239-012C	325, 410	23201H101-012	474	2329-005C	321, 390	24101A121-060	473	24201H101-007	474
2222-060	243, 410	2239-015	243, 410	23201H101-015	474	2329-007	238, 389	24101H101-005	474	24201H101-010	474
2222-060C	325, 410	2239-015C	325, 410	23201H101-020	474	2329-007C	321, 390	24101H101-007	474	24201H101-012	474
2223-005	243, 410	2239-020	243, 410	23201H101-025	474	2329-010	238, 389	24101H101-010	474	24201H101-015	474
2223-005C	325, 410	2239-020C	325, 410	23201H101-030	474	2329-010C	321, 390	24101H101-012	474	24201H101-020	474
2223-007	243, 410	23101A111-025	473	23201H101-040	474	2329-012	238, 389	24101H101-015	474	24201H101-025	474
2223-007C	325, 410	23101A111-030	473	23201H101-060	474	2329-012C	321, 390	24101H101-020	474	24201H101-030	474
2223-010	243, 410	23101A112-005	473	23201J101-005	474	2329-015	238, 389	24101H101-025	474	24201H101-040	474
2223-010C	325, 410	23101A112-007	473	23201J101-007	474	2329-015C	321, 390	24101H101-030	474	24201H101-060	474
2223-012	243, 410	23101A112-010	473	23201J101-010	474	2329-020	238, 389	24101H101-040	474	24201J101-005	474
2223-012C	325, 410	23101A112-012	473	23201J101-012	474	2329-020C	321, 390	24101H101-060	474	24201J101-007	474
2223-015	243, 410	23101A112-015	473	23201J101-015	474	2330-005	406	24101J101-005	474	24201J101-010	474
2223-015C	325, 410	23101A112-020	473	23201J101-020	474	2330-005C	407	24101J101-007	474	24201J101-012	474
2223-020	243, 410	23101A121-040	473	23201J101-025	474	2330-007	406	24101J101-010	474	24201J101-015	474
2223-020C	325, 410	23101A121-060	473	23201J101-030	474	2330-007C	407	24101J101-012	474	24201J101-020	474
2223-025	243, 410	23101H101-005	474	23201J101-040	474	2330-010	406	24101J101-015	474	24201J101-025	474
2223-025C	325, 410	23101H101-007	474	23201J101-060	474	2330-010C	407	24101J101-020	474	24201J101-030	474
2223-030	243, 410	23101H101-010	474	23202A111-010	473	2330-012	407	24101J101-025	474	24201J101-040	474
2223-030C	325, 410	23101H101-012	474	23202A111-030	473	2330-012C	407	24101J101-030	474	24201J101-060	474
2223-040	243, 410	23101H101-015	474	23202A112-005	473	2330-015	407	24101J101-040	474	24202A111-025	473
2223-040C	325, 410	23101H101-020	474	23202A112-007	473	2330-015C	407	24101J101-060	474	24202A111-030	473
2223-060	243, 410	23101H101-025	474	23202A112-010	473	2330-020	407	24102A111-025	473	24202A112-005	473
2223-060C	325, 410	23101H101-030	474	23202A112-012	473	2330-020C	407	24102A111-030	473	24202A112-007	473
2229-005	243, 410	23101H101-040	474	23202A112-015	473	2330-030	407	24102A112-005	473	24202A112-010	473
2229-005C	325, 410	23101H101-060	474	23202A112-020	473	2330-030C	407	24102A112-007	473	24202A112-012	473
2229-007	243, 410	23101J101-005	474	23202A121-040	473	2330-040	407	24102A112-010	473	24202A112-015	473
2229-007C	325, 410	23101J101-007	474	23202A121-060	473	2330-040C	407	24102A112-012	473	24202A112-020	473
2229-010	243, 410	23101J101-010	474	23202H101-005	474	2331-025	238, 390	24102A112-015	473	24202A121-040	473
2229-010C	325, 410	23101J101-012	474	23202H101-007	474	2331-025C	321, 390	24102A112-020	473	24202A121-060	473
2229-012	243, 410	23101J101-015	474	23202H101-010	475	2331-030	238, 390	24102A121-040	473	24202H101-005	474
2229-012C	325, 410	23101J101-020	474	23202H101-012	475	2331-030C	321, 390	24102A121-060	473	24202H101-007	474
2229-015	243, 410	23101J101-025	474	23202H101-015	475	2331-040	238, 390	24102H101-005	474	24202H101-010	475
2229-015C	325, 410	23101J101-030	474	23202H101-020	475	2331-040C	321, 390	24102H101-007	474	24202H101-012	475
2229-020	243, 410	23101J101-040	474</								

Spears List Price Part Number Index



2421-005G	238, 391		395	2721-020SR	258, 452	2729-005	258, 452	2733-020	259, 453	2739VT-010C	337, 453
2421-005W	80, 391	2621-030	79, 395	2721T-005CSR	337, 453	2729-005C	337, 453	2733-020C	338, 454	2739VT-012	258, 452
2421-007G	238, 391	2621-030G	79, 241	2721T-005PSR	374, 454	2729-007	258, 452	2733-025	259, 453	2739VT-012C	337, 453
2421-007W	80, 391		395	2721T-005SR	258, 452	2729-007C	337, 453	2733-025C	338, 454	2739VT-015	258, 452
2421-010G	238, 391	2621-040	79, 395	2721T-007CSR	337, 453	2729-010	258, 452	2733-025P	374, 454	2739VT-015C	337, 453
2421-010W	80, 391	2621-040G	79, 241	2721T-007PSR	374, 454	2729-010C	337, 453	2733-030	259, 453	2739VT-020	258, 452
2421-012G	238, 391		395	2721T-007SR	258, 452	2729-012	258, 452	2733-030C	338, 454	2739VT-020C	337, 453
2421-012W	80, 391	2622-005	79, 395	2721T-010CSR	337, 453	2729-012C	337, 453	2733-030P	374, 454	2793T-005	258, 453
2421-015G	239, 391	2622-005C	323, 395	2721T-010PSR	374, 454	2729-015	258, 452	2733-040	259, 453	2793T-005C	337, 454
2421-015W	80, 391	2622-005G	79, 241	2721T-010SR	258, 452	2729-015C	337, 453	2733-040C	338, 454	2793T-007	258, 453
2421-020G	239, 391		395	2721T-012CSR	337, 453	2729-020	258, 452	2733-040P	374, 454	2793T-007C	337, 454
2421-020W	80, 391	2622-007	79, 395	2721T-012PSR	374, 454	2729-020C	337, 453	2733-060	259, 453	2793T-010	258, 453
2421-030G	239, 391	2622-007C	323, 395	2721T-012SR	258, 452	2729T-005	258, 452	2733-060C	338, 454	2793T-010C	337, 454
2421-030W	80, 391	2622-007G	79, 241	2721T-015CSR	337, 453	2729T-005BL	567	2733-060P	374, 454	2793T-012	258, 453
2421-040G	239, 391		395	2721T-015PSR	374, 454	2729T-005C	337, 453	2733-080	259, 453	2793T-012C	337, 454
2421-040W	80, 391	2622-010	79, 395	2721T-015SR	258, 452	2729T-007	258, 452	2733-080C	338, 454	2793T-015	258, 453
2422-005G	239, 391	2622-010C	323, 395	2721T-020CSR	337, 453	2729T-007BL	567	2733-080P	374, 454	2793T-015C	337, 454
2422-005W	80, 391	2622-010G	79, 241	2721T-020PSR	374, 454	2729T-007C	337, 453	2734-005	710	2793T-020	259, 453
2422-007G	239, 391		395	2721T-020SR	258, 452	2729T-010	258, 452	2734-005C	710	2793T-020C	338, 454
2422-007W	80, 391	2622-012	79, 395	2723-005	258, 453	2729T-010BL	567	2734-007	710	2793T-025	259, 453
2422-010G	239, 391	2622-012C	323, 395	2723-005C	337, 454	2729T-010C	337, 453	2734-007C	710	2793T-025C	338, 454
2422-010W	80, 391	2622-012G	79, 241	2723-007	258, 453	2729T-012	258, 452	2734-010	710	2793T-025P	374, 454
2422-012G	239, 391		395	2723-007C	337, 454	2729T-012BL	567	2734-010C	710	2793T-030	259, 453
2422-012W	80, 391	2622-015	79, 395	2723-010	258, 453	2729T-012C	337, 453	2734-012	710	2793T-030C	338, 454
2422-015G	239, 391	2622-015C	323, 395	2723-010C	337, 454	2729T-015	258, 452	2734-012C	710	2793T-030P	374, 454
2422-015W	80, 391	2622-015G	79, 241	2723-012	258, 453	2729T-015BL	567	2734-015	710	2793T-040	259, 453
2422-020G	239, 391		395	2723-012C	337, 454	2729T-015C	337, 453	2734-015C	710	2793T-040C	338, 454
2422-020W	80, 391	2622-020	79, 395	2723-015	258, 453	2729T-020	258, 452	2734-020	710	2793T-040P	374, 454
2422-030G	239, 391	2622-020C	323, 395	2723-015C	337, 454	2729T-020BL	567	2734-020C	710	2793T-060	259, 453
2422-030W	80, 391	2622-020G	79, 241	2723-020	259, 453	2729T-020C	337, 453	2735-005	710	2793T-060C	338, 454
2422-040G	239, 391		395	2723-020C	338, 454	2731-005CSR	337, 453	2735-005C	710	2793T-060P	374, 454
2422-040W	80, 391	2622-025	79, 395	2723-025	259, 453	2731-005PSR	374, 454	2735-007	710	2793T-080	259, 453
2431-005G	238, 391	2622-025G	79, 241	2723-025C	338, 454	2731-005SR	258, 452	2735-007C	710	2793T-080C	338, 454
2431-005W	80, 391		395	2723-025P	374, 454	2731-007CSR	337, 453	2735-010	710	2793T-080P	374, 454
2431-007G	238, 391	2622-030	79, 395	2723-030	259, 453	2731-007PSR	374, 454	2735-010C	710	2793VT-005	258, 453
2431-007W	80, 391	2622-030G	79, 241	2723-030C	338, 454	2731-007SR	258, 452	2735-012	710	2793VT-005C	337, 454
2431-010G	238, 391		395	2723-030P	374, 454	2731-010CSR	337, 453	2735-012C	710	2793VT-007	258, 453
2431-010W	80, 391	2622-040	79, 395	2723-040	259, 453	2731-010PSR	374, 454	2735-015	710	2793VT-007C	337, 454
2431-012G	238, 391	2622-040G	79, 241	2723-040C	338, 454	2731-010SR	258, 452	2735-015C	710	2793VT-010	258, 453
2431-012W	80, 391		395	2723-040P	374, 454	2731-012CSR	337, 453	2735-020	710	2793VT-010C	337, 454
2431-015G	239, 391	2622-060	79, 395	2723-060	259, 453	2731-012PSR	374, 454	2735-020C	710	2793VT-012	258, 453
2431-015W	80, 391	27-39-00541A	456	2723-060C	338, 454	2731-012SR	258, 452	2737-005	258, 452	2793VT-012C	337, 454
2431-020G	239, 391	27-39-00542A	456	2723-060P	374, 454	2731-015CSR	337, 453	2737-005C	337, 453	2793VT-015	258, 453
2431-020W	80, 391	27-39-00565A	456	2723-080	259, 453	2731-015PSR	374, 454	2737-007	258, 452	2793VT-015C	337, 454
2431-030G	239, 391	27-39-00566A	456	2723-080C	338, 454	2731-015SR	258, 452	2737-007C	337, 453	2793VT-020	259, 453
2431-030W	80, 391	27-39-00741A	456	2723-080P	374, 454	2731-020CSR	337, 453	2737-010	258, 452	2793VT-020C	338, 454
2431-040G	239, 391	27-39-00742A	456	2724-005	710	2731-020PSR	374, 454	2737-010C	337, 453	2793VT-025	259, 453
2431-040W	80, 391	27-39-00765A	456	2724-005C	710	2731-020SR	258, 452	2737-012	258, 452	2793VT-025C	338, 454
2432-005G	239, 391	27-39-00766A	456	2724-007	710	2731T-005CSR	337, 453	2737-012C	337, 453	2793VT-025P	374, 454
2432-005W	80, 391	27-39-01041A	456	2724-007C	710	2731T-005PSR	374, 454	2737-015	258, 452	2793VT-030	259, 453
2432-007G	239, 391	27-39-01042A	456	2724-010	710	2731T-005SR	258, 452	2737-015C	337, 453	2793VT-030C	338, 454
2432-007W	80, 391	27-39-01065A	456	2724-010C	710	2731T-007CSR	337, 453	2737-020	258, 452	2793VT-030P	374, 454
2432-010G	239, 391	27-39-01066A	456	2724-012	710	2731T-007PSR	374, 454	2737-020C	337, 453	2793VT-040	259, 453
2432-010W	80, 391	27-39-01541	456	2724-012C	710	2731T-007SR	258, 452	2738-005	710	2793VT-040C	338, 454
2432-012G	239, 391	27-39-01542	456	2724-015	710	2731T-010CSR	337, 453	2738-005C	711	2793VT-040P	374, 454
2432-012W	80, 391	27-39-01565	456	2724-015C	710	2731T-010PSR	374, 454	2738-007	710	2793VT-060	259, 453
2432-015G	239, 391	27-39-01566	456	2724-020	710	2731T-010SR	258, 452	2738-007C	711	2793VT-060C	338, 454
2432-015W	80, 391	27-39-02041	456	2724-020C	710	2731T-012CSR	337, 453	2738-010	710	2793VT-060P	374, 454
2432-020G	239, 391	27-39-02042	456	2725-005	710	2731T-012PSR	374, 454	2738-010C	711	2793VT-080	259, 453
2432-020W	80, 391	27-39-02065	456	2725-005C	710	2731T-012SR	258, 452	2738-012	710	2793VT-080C	338, 454
2432-030G	239, 391	27-39-02066	456	2725-007	710	2731T-015CSR	337, 453	2738-012C	711	2793VT-080P	374, 454
2432-030W	80, 391	27-39-03041	456	2725-007C	710	2731T-015PSR	374, 454	2738-015	710	2797T-005	258, 452
2432-040G	239, 391	27-39-03042	456	2725-010	710	2731T-015SR	258, 452	2738-015C	711	2797T-005C	337, 453
2432-040W	80, 391	27-39-03065	456	2725-010C	710	2731T-020CSR	337, 453	2738-020	710	2797T-007	258, 452
253322-020	442	27-39-03066	456	2725-012	710	2731T-020PSR	374, 454	2738-020C	711	2797T-007C	337, 453
253322-030	442	27-39-04041	456	2725-012C	710	2731T-020SR	258, 452	2739-005	258, 452	2797T-010	258, 452
253322-040	442	27-39-04042	456	2725-015	710	2731VT-005CSR	337, 453	2739-005C	337, 453	2797T-010C	337, 453
253322-060	442	27-39-04065	456	2725-015C	710	2731VT-005PSR	374, 454	2739-007	258, 452	2797T-012	258, 452
2621-005	79, 395	27-39-04066	456	2725-020	710	2731VT-005SR	258, 452	2739-007C	337, 453	2797T-012C	337, 453
2621-005C	323, 395	27-39-06041	456	2725-020C	710	2731VT-007CSR	337, 453	2739-010	258, 452	2797T-015	258, 452
2621-005G	79, 241	27-39-06042	456	2727-005	258, 452	2731VT-007PSR	374, 454	2739-010C	337, 453	2797T-015C	337, 453
	395	27-39-06065	456	2727-005C	337, 453	2731VT-007SR	258, 452	2739-012	258, 452	2797T-020	258, 452
2621-007	79, 395	27-39-06066	456	2727-007	258, 452	2731VT-010CSR	337, 453	2739-012C	337, 453	2797T-020C	337, 453
2621-007C	323, 395	27-39-08041	456	2727-007C	337, 453	2731VT-010PSR	374, 454	2739-015	258, 452	2797TZD-005BL	567
2621-007G	79, 241	27-39-08042	456	2727-010	258, 452	2731VT-010SR	258, 452	2739-015C	337, 453	2797TZD-007BL	567
	395	27-39-08065	456	2727-010C	337, 453	2731VT-012CSR	337, 453	2739-020	258, 452	2797TZD-010BL	567
2621-010	79, 395	27-39-08066	456	2727-012	258, 452	2731VT-012PSR	374, 454	2739-020C	337, 453	2797TZD-015BL	567
2621-010C	323, 395	2721-005CSR	337, 453	2727-012C	337, 453	2731VT-012SR	258, 452				

Page 765

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Spears® Manufacturing Company

Spears List Price Part Number Index



290-100005	134, 647	290-100547	133, 646	290-102514	128, 641	290-103196	129, 642	290-104030	139, 652	2906-2702	132, 645
290-100006	134, 647	290-100548	133, 646	290-102515	128, 641	290-103197	129, 642	290-104031	139, 652	2906-27023	131, 644
290-100007	134, 647	290-100549	133, 646	290-102516	128, 641	290-103198	129, 642	290-104032	139, 652	2911-2402	132, 645
290-100009	134, 647	290-100550	133, 646	290-102517	128, 641	290-103199	129, 642	290-104033	139, 652	2911-24023	132, 645
290-100010	134, 647	290-100551	133, 646	290-102518	128, 641	290-103200	129, 642	290-104034	139, 652	2911-270	132, 645
290-100068	134, 647	290-100553	133, 646	290-102519	128, 641	290-103203	129, 642	290-104036	139, 652	2911-2702	132, 645
290-100069	134, 647	290-100570	133, 646	290-102520	128, 641	290-103204	129, 642	290-104049	139, 652	2911-27023	132, 645
290-100070	134, 647	290-100571	133, 646	290-102521	128, 641	290-103205	129, 642	290-104050	139, 652	2915-2402	133, 646
290-100071	134, 647	290-100572	133, 646	290-102522	128, 641	290-103206	130, 643	290-104051	139, 652	2915-24023	133, 646
290-100072	134, 647	290-100573	133, 646	290-102523	128, 641	290-103207	130, 643	290-104052	139, 652	2915-270	133, 646
290-100073	134, 647	290-100574	133, 646	290-102524	128, 641	290-103208	130, 643	290-104053	139, 652	2915-2702	133, 646
290-100075	134, 647	290-100575	133, 646	290-102525	128, 641	290-103209	129, 642	290-104057	139, 652	2915-27023	133, 646
290-100090	134, 647	290-100577	133, 646	290-102526	128, 641	290-103222	130, 643	290-104072	139, 652	2916-2402	133, 646
290-100091	134, 647	290-100592	133, 646	290-102527	128, 641	290-103223	130, 643	290-104073	139, 652	2916-24023	133, 646
290-100092	134, 647	290-100593	133, 646	290-102528	128, 641	290-103224	130, 643	290-104074	139, 652	2916-270	132, 645
290-100093	134, 647	290-100594	133, 646	290-102529	128, 641	290-103225	130, 643	290-104075	139, 652	2916-2702	133, 646
290-100094	134, 647	290-100595	133, 646	290-102530	128, 641	290-103226	130, 643	290-104076	139, 652	2916-27023	133, 646
290-100095	134, 647	290-100596	133, 646	290-102531	128, 641	290-103227	130, 643	290-104078	139, 652	2917-2402	134, 647
290-100097	134, 647	290-100597	133, 646	290-102532	128, 641	290-103228	130, 643	290-104080	139, 652	2917-24023	133, 646
290-100114	132, 645	290-100599	133, 646	290-102533	128, 641	290-103230	130, 643	290-104082	139, 652	2917-270	133, 646
290-100115	132, 645	290-100600	133, 646	290-102534	128, 641	290-103283	137, 650	2901-060PXI	131, 644	2917-2702	134, 647
290-100116	132, 645	290-100658	133, 646	290-102535	128, 641	290-103284	137, 650	2901-080PXI	131, 644	2917-27023	133, 646
290-100117	132, 645	290-100659	133, 646	290-102536	128, 641	290-103285	137, 650	2901-100PXI	131, 644	2918-2402	132, 645
290-100118	132, 645	290-100660	133, 646	290-102537	128, 641	290-103286	137, 650	2901-120PXI	131, 644	2918-24023	132, 645
290-100119	132, 645	290-100661	133, 646	290-102548	128, 641	290-103287	137, 650	2901-210232	129, 642	2918-270	132, 645
290-100121	132, 645	290-100662	133, 646	290-102549	128, 641	290-103288	137, 650	2901-2402	130, 643	2918-2702	132, 645
290-100122	132, 645	290-100663	133, 646	290-102550	128, 641	290-103289	137, 650	2901-240232	129, 642	2918-27023	132, 645
290-100186	132, 645	290-100665	133, 646	290-102551	128, 641	290-103290	138, 651	2901-270	128, 641	2920-060PXI	139, 652
290-100187	132, 645	290-100680	133, 646	290-102552	128, 641	290-103291	137, 650	2901-2702	130, 643	2920-080PXI	139, 652
290-100188	132, 645	290-100681	133, 646	290-102553	128, 641	290-103292	138, 651	2901-270232	129, 642	2920-100PXI	139, 652
290-100189	132, 645	290-100682	133, 646	290-102554	128, 641	290-103293	138, 651	2901-585PXI	131, 644	2920-120PXI	139, 652
290-100190	132, 645	290-100683	133, 646	290-102555	128, 641	290-103294	138, 651	2901-626PXI	131, 644	2920-2402	139, 652
290-100191	132, 645	290-100684	134, 647	290-102556	128, 641	290-103295	138, 651	2901-628PXI	131, 644	2920-270	138, 651
290-100193	132, 645	290-100685	134, 647	290-102558	128, 641	290-103296	138, 651	2901-666PXI	131, 644	2920-2702	139, 652
290-100210	132, 645	290-100687	134, 647	290-102559	128, 641	290-103297	138, 651	2901-668PXI	131, 644	2920-585PXI	139, 652
290-100211	132, 645	290-100702	134, 647	290-102560	128, 641	290-103298	138, 651	2901-670PXI	131, 644	2920-626PXI	139, 652
290-100212	132, 645	290-100703	134, 647	290-102561	128, 641	290-103299	138, 651	2901-726PXI	131, 644	2920-628PXI	139, 652
290-100213	132, 645	290-100704	134, 647	290-102562	128, 641	290-103300	138, 651	2901-728PXI	131, 644	2920-666PXI	139, 652
290-100214	132, 645	290-100705	134, 647	290-102563	128, 641	290-103301	138, 651	2901-730PXI	131, 644	2920-668PXI	139, 652
290-100215	132, 645	290-100706	134, 647	290-102564	128, 641	290-103302	138, 651	2901-732PXI	131, 644	2920-670PXI	139, 652
290-100217	132, 645	290-100707	134, 647	290-102565	128, 641	290-103303	138, 651	2901-786PXI	131, 644	2920-726PXI	139, 652
290-100234	132, 645	290-100709	134, 647	290-102566	128, 641	290-103304	138, 651	2901-788PXI	131, 644	2920-728PXI	139, 652
290-100235	132, 645	290-100710	134, 647	290-102567	128, 641	290-103313	138, 651	2901-790PXI	131, 644	2920-730PXI	139, 652
290-100236	132, 645	290-100768	134, 647	290-102569	128, 641	290-103314	138, 651	2901-792PXI	131, 644	2920-732PXI	139, 652
290-100237	132, 645	290-100769	134, 647	290-102570	128, 641	290-103315	138, 651	2901-846PXI	131, 644	2920-786PXI	139, 652
290-100238	132, 645	290-100770	134, 647	290-103061	128, 641	290-103316	138, 651	2901-848PXI	131, 644	2920-788PXI	139, 652
290-100239	132, 645	290-100771	134, 647	290-103062	128, 641	290-103317	138, 651	2901-850PXI	131, 644	2920-790PXI	139, 652
290-100241	132, 645	290-100772	134, 647	290-103065	129, 642	290-103318	138, 651	2901-852PXI	131, 644	2920-792PXI	139, 652
290-100242	132, 645	290-100773	134, 647	290-103066	129, 642	290-103319	138, 651	2901-906PXI	131, 644	2920-7952	139, 652
290-100306	132, 645	290-100775	134, 647	290-103067	128, 641	290-103321	138, 651	2901-9062	130, 643	2920-846PXI	139, 652
290-100307	132, 645	290-100790	134, 647	290-103070	129, 642	290-103332	138, 651	2901-906232	129, 642	2920-848PXI	139, 652
290-100308	132, 645	290-100791	134, 647	290-103071	129, 642	290-103333	138, 651	2901-908PXI	131, 644	2920-850PXI	139, 652
290-100309	132, 645	290-100792	134, 647	290-103072	129, 642	290-103334	138, 651	2901-9082	130, 643	2920-852PXI	139, 652
290-100310	132, 645	290-100793	134, 647	290-103073	129, 642	290-103335	138, 651	2901-908232	129, 642	2920-9042	139, 652
290-100311	132, 645	290-100794	134, 647	290-103076	129, 642	290-103336	138, 651	2901-910PXI	131, 644	2920-906PXI	139, 652
290-100313	132, 645	290-100795	134, 647	290-103077	129, 642	290-103337	138, 651	2901-9102	130, 643	2920-9062	139, 652
290-100330	132, 645	290-100797	134, 647	290-103078	129, 642	290-103338	138, 651	2901-910232	129, 642	2920-908PXI	139, 652
290-100331	132, 645	290-100812	131, 644	290-103079	129, 642	290-103340	138, 651	2901-912PXI	131, 644	2920-9082	139, 652
290-100332	132, 645	290-100813	131, 644	290-103080	129, 642	290-103342	138, 651	2901-9122	130, 643	2920-910PXI	139, 652
290-100333	132, 645	290-100814	131, 644	290-103083	129, 642	290-103355	138, 651	2901-912232	129, 642	2920-9102	139, 652
290-100334	132, 645	290-100815	131, 644	290-103084	129, 642	290-103356	138, 651	2901-9152	130, 643	2920-912PXI	139, 652
290-100335	132, 645	290-100816	131, 644	290-103085	129, 642	290-103357	138, 651	2901-915232	129, 642	2920-9122	139, 652
290-100336	132, 645	290-100817	131, 644	290-103086	129, 642	290-103358	138, 651	2901-9182	130, 643	2920-9152	139, 652
290-100354	132, 645	290-100819	131, 644	290-103087	129, 642	290-103359	138, 651	2901-918232	129, 642	2920-9182	139, 652
290-100355	132, 645	290-100820	131, 644	290-103088	129, 642	290-103360	138, 651	2901-9212	130, 643	2920-9212	139, 652
290-100356	132, 645	290-100878	131, 644	290-103091	129, 642	290-103361	138, 651	2901-921232	129, 642	2920-934	138, 651
290-100357	132, 645	290-100879	131, 644	290-103092	129, 642	290-103363	138, 651	2901-934	128, 641	2920-9342	139, 652
290-100358	132, 645	290-100880	131, 644	290-103093	129, 642	290-103365	138, 651	2901-936	128, 641	2920-936	138, 651
290-100359	132, 645	290-100881	131, 644	290-103094	129, 642	290-103367	138, 651	2901-9362	130, 643	2920-9362	139, 652
290-100361	132, 645	290-100882	131, 644	290-103095	129, 642	290-103368	138, 651	2901-936232	129, 642	2920-938	138, 651
290-100362	132, 645	290-100883	131, 644	290-103096	129, 642	290-103369	138, 651	2901-938	128, 641	2920-9382	139, 652
290-100426	133, 646	290-100885	13								



Spears List Price Part Number Index

2928-210	134, 647	2929-79232	136, 649	2929-987	135, 648	300-100186	132, 645	300-100665	133, 646	300-101650	137, 650
2928-240	134, 647	2929-795	135, 648	2975-060	139, 652	300-100187	132, 645	300-100680	133, 646	300-101651	137, 650
2928-270	134, 647	2929-7952	137, 650	2975-080	139, 652	300-100188	132, 645	300-100681	133, 646	300-101652	137, 650
2929-2402	135, 648	2929-79523	136, 649	2975-100	140, 653	300-100189	132, 645	300-100682	133, 646	300-101747	137, 650
2929-24023	134, 647	2929-79532	136, 649	2975-120	140, 653	300-100190	132, 645	300-100683	133, 646	300-101748	137, 650
2929-270	134, 647	2929-843	135, 648	2975-150	140, 653	300-100191	132, 645	300-100684	134, 647	300-101749	137, 650
2929-2702	135, 648	2929-844	135, 648	2975-187	140, 653	300-100193	132, 645	300-100685	134, 647	300-101750	137, 650
2929-27023	134, 647	2929-846	135, 648	2975-532	139, 652	300-100210	132, 645	300-100687	134, 647	300-101789	142, 655
2929-300	134, 647	2929-8462	137, 650	2975-582	139, 652	300-100211	132, 645	300-100702	134, 647	300-101790	142, 655
2929-528	135, 648	2929-84623	136, 649	2975-585	140, 653	300-100212	132, 645	300-100703	134, 647	300-101791	142, 655
2929-532	135, 137	2929-84632	136, 649	2975-624	140, 653	300-100213	132, 645	300-100704	134, 647	300-101792	142, 655
	648, 650	2929-848	135, 648	2975-626	140, 653	300-100214	132, 645	300-100705	134, 647	300-101793	142, 655
2929-5322	137, 650	2929-8482	137, 650	2975-628	140, 653	300-100215	132, 645	300-100706	134, 647	300-101794	142, 655
2929-53223	135, 648	2929-84823	136, 649	2975-664	140, 653	300-100217	132, 645	300-100707	134, 647	300-101797	142, 655
2929-53232	136, 649	2929-84832	136, 649	2975-666	140, 653	300-100234	132, 645	300-100709	134, 647	300-101798	142, 655
2929-578	135, 648	2929-850	135, 648	2975-668	140, 653	300-100235	132, 645	300-100710	134, 647	300-101799	142, 655
2929-582	135, 648	2929-8502	137, 650	2975-670	140, 653	300-100236	132, 645	300-100768	134, 647	300-101800	142, 655
2929-5822	137, 650	2929-85023	136, 649	2975-724	140, 653	300-100237	132, 645	300-100769	134, 647	300-101801	142, 655
2929-58223	135, 648	2929-85032	136, 649	2975-726	140, 653	300-100238	132, 645	300-100770	134, 647	300-101802	142, 655
2929-58232	136, 649	2929-852	135, 648	2975-728	140, 653	300-100239	132, 645	300-100771	134, 647	300-101804	142, 655
2929-585	135, 648	2929-8522	137, 650	2975-730	140, 653	300-100241	132, 645	300-100772	134, 647	300-101805	142, 655
2929-5852	137, 650	2929-85223	136, 649	2975-732	140, 653	300-100242	132, 645	300-100773	134, 647	300-101806	142, 655
2929-58523	135, 648	2929-85232	136, 649	2975-784	140, 653	300-100306	132, 645	300-100775	134, 647	300-101807	142, 655
2929-58532	136, 649	2929-855	135, 648	2975-786	140, 653	300-100307	132, 645	300-100790	134, 647	300-101808	142, 655
2929-621	135, 648	2929-8552	137, 650	2975-788	140, 653	300-100308	132, 645	300-100791	134, 647	300-101809	142, 655
2929-624	135, 648	2929-85523	136, 649	2975-790	140, 653	300-100309	132, 645	300-100792	134, 647	300-101811	142, 655
2929-6242	137, 650	2929-85532	136, 649	2975-792	140, 653	300-100310	132, 645	300-100793	134, 647	300-101812	142, 655
2929-62423	135, 648	2929-858	135, 648	2975-795	140, 653	300-100311	132, 645	300-100794	134, 647	300-101813	142, 655
2929-62432	136, 649	2929-8582	137, 650	3E-002	216, 303	300-100313	132, 645	300-100795	134, 647	300-101814	142, 655
2929-626	135, 648	2929-85823	136, 649	3E-003	216, 303	300-100330	132, 645	300-100797	134, 647	300-101815	142, 655
2929-6262	137, 650	2929-85832	136, 649	3E-005	216, 303	300-100331	132, 645	300-100812	131, 644	300-101817	142, 655
2929-62623	135, 648	2929-903	135, 648	3E-007	216, 303	300-100332	132, 645	300-100813	131, 644	300-101818	142, 655
2929-62632	136, 649	2929-906	135, 648	3E-010	216, 303	300-100333	132, 645	300-100814	131, 644	300-101819	142, 655
2929-628	135, 648	2929-9062	137, 650	3E-012	216, 303	300-100334	132, 645	300-100815	131, 644	300-101820	142, 655
2929-6282	137, 650	2929-90623	136, 649	3E-015	216, 303	300-100335	132, 645	300-100816	131, 644	300-101822	142, 655
2929-62823	136, 649	2929-90632	136, 649	3E-020	216, 303	300-100336	132, 645	300-100817	131, 644	300-101823	142, 655
2929-62832	136, 649	2929-908	135, 648	3E-025	216, 303	300-100354	132, 645	300-100819	131, 644	300-101824	142, 655
2929-664	135, 648	2929-9082	137, 650	3E-030	216, 303	300-100355	132, 645	300-100820	131, 644	300-101826	142, 655
2929-6642	137, 650	2929-90823	136, 649	3E-040	217, 303	300-100356	132, 645	300-100878	131, 644	300-101827	142, 655
2929-66423	136, 649	2929-90832	136, 649	3E-080	217, 303	300-100357	132, 645	300-100879	131, 644	300-101829	142, 655
2929-66432	136, 649	2929-910	135, 648	3N-002	216, 303	300-100358	132, 645	300-100880	131, 644	300-101884	142, 655
2929-666	135, 648	2929-9102	137, 650	3N-003	216, 303	300-100359	132, 645	300-100881	131, 644	300-101885	142, 655
2929-6662	137, 650	2929-91023	136, 649	3N-005	216, 303	300-100361	132, 645	300-100882	131, 644	300-101886	142, 655
2929-66623	136, 649	2929-91032	136, 649	3N-007	216, 303	300-100362	132, 645	300-100883	131, 644	300-101887	142, 655
2929-66632	136, 649	2929-912	135, 648	3N-010	216, 303	300-100426	133, 646	300-100885	131, 644	300-101888	143, 656
2929-668	135, 648	2929-9122	137, 650	3N-012	216, 303	300-100427	133, 646	300-100900	131, 644	300-101889	143, 656
2929-6682	137, 650	2929-91223	136, 649	3N-015	216, 303	300-100428	133, 646	300-100901	131, 644	300-101892	142, 655
2929-66823	136, 649	2929-91232	136, 649	3N-020	216, 303	300-100429	133, 646	300-100902	131, 644	300-101893	142, 655
2929-66832	136, 649	2929-915	135, 648	3N-025	216, 303	300-100430	133, 646	300-100903	131, 644	300-101894	142, 655
2929-670	135, 648	2929-9152	137, 650	3N-030	216, 303	300-100431	133, 646	300-100904	131, 644	300-101895	142, 655
2929-6702	137, 650	2929-91523	136, 649	3N-040	216, 303	300-100433	133, 646	300-100905	131, 644	300-101896	143, 656
2929-67023	136, 649	2929-91532	136, 649	3N-080	216, 303	300-100450	133, 646	300-100907	131, 644	300-101897	143, 656
2929-67032	136, 649	2929-918	135, 648	3V-002	217, 303	300-100451	133, 646	300-100927	135, 135	300-101899	142, 655
2929-721	135, 648	2929-9182	137, 650	3V-003	217, 303	300-100452	133, 646		648, 648	300-101900	142, 655
2929-723	135, 648	2929-91823	136, 649	3V-005	217, 303	300-100453	133, 646	300-100928	135, 648	300-101901	142, 655
2929-724	135, 648	2929-91832	136, 649	3V-007	217, 303	300-100454	133, 646	300-100930	135, 135	300-101902	142, 655
2929-7242	137, 650	2929-921	135, 648	3V-010	217, 303	300-100455	133, 646		648, 648	300-101903	143, 656
2929-72423	136, 649	2929-9212	137, 650	3V-012	217, 303	300-100457	133, 646	300-100931	135, 648	300-101904	143, 656
2929-72432	136, 649	2929-92123	136, 649	3V-015	217, 303	300-100474	133, 646	300-100933	135, 136	300-101906	142, 655
2929-726	135, 648	2929-92132	136, 649	3V-020	217, 303	300-100475	133, 646		648, 649	300-101907	142, 655
2929-7262	137, 650	2929-936	135, 648	3V-025	217, 303	300-100476	133, 646	300-100934	135, 136	300-101908	143, 656
2929-72623	136, 649	2929-9362	137, 650	3V-030	217, 303	300-100477	133, 646		648, 649	300-101909	143, 656
2929-72632	136, 649	2929-93623	136, 649	3V-040	217, 303	300-100478	133, 646	300-100935	135, 648	300-101910	143, 656
2929-728	135, 648	2929-93632	136, 649	3V-080	217, 303	300-100479	133, 646	300-100940	135, 648	300-101912	142, 655
2929-7282	137, 650	2929-938	135, 648	300-100002	134, 647	300-100481	133, 646	300-100946	135, 648	300-101913	143, 656
2929-72823	136, 649	2929-9382	137, 650	300-100003	134, 647	300-100482	133, 646	300-100960	135, 648	300-101914	143, 656
2929-72832	136, 649	2929-93823	136, 649	300-100004	134, 647	300-100546	133, 646	300-100969	135, 648	300-101915	143, 656
2929-730	135, 648	2929-93832	136, 649	300-100005	134, 647	300-100547	133, 646	300-101310	135, 648	300-101917	143, 656
2929-7302	137, 650	2929-940	135, 648	300-100006	134, 647	300-100548	133, 646	300-101312	135, 648	300-101918	143, 656
2929-73023	136, 649	2929-9402	137, 650	300-100007	134, 647	300-100549	133, 646	300-101315	136, 649	300-101919	143, 656
2929-73032	136, 649	2929-94023	136, 649	300-100009	134, 647	300-100550	133, 646	300-101319	136, 649	300-101921	143, 656
2929-732	135, 648	2929-94032	136, 649	300-100010	134, 647	300-100551	133, 646	300-101324	136, 649	300-101922	143, 656
2929-7322	137, 650	2929-942	135, 648	300-100068	134, 647	300-100553	133, 646	300-101330	136, 649	300-101924	143, 656
2929-73223	136, 649	2929-9422	137, 650	300-100069	134, 647	300-100570	133, 64				

Spears List Price Part Number Index



300-102069	140, 653	300-103083	129, 642	300-103355	138, 651	300-202362	130, 643	3001-954232	129, 642	3020-786PXi	139, 652
300-102070	140, 653	300-103084	129, 642	300-103356	138, 651	300-202364	130, 643	30040-532	140, 653	3020-788PXi	139, 652
300-102071	140, 653	300-103085	129, 642	300-103357	138, 651	300-202365	130, 643	30040-582	140, 653	3020-790PXi	139, 652
300-102072	140, 653	300-103086	129, 642	300-103358	138, 651	300-202367	130, 643	30040-585	140, 653	3020-792PXi	139, 652
300-102073	140, 653	300-103087	129, 642	300-103359	138, 651	300-202369	130, 643	30040-624	140, 653	3020-7952	139, 652
300-102074	140, 653	300-103088	129, 642	300-103360	138, 651	300-202370	130, 643	30040-626	140, 653	3020-846PXi	139, 652
300-102088	140, 653	300-103091	129, 642	300-103361	138, 651	300-202372	130, 643	30040-628	140, 653	3020-848PXi	139, 652
300-102089	140, 653	300-103092	129, 642	300-103363	138, 651	300-202374	130, 643	30040-664	140, 653	3020-850PXi	139, 652
300-102090	140, 653	300-103093	129, 642	300-103365	138, 651	300-202375	130, 643	30040-666	140, 653	3020-852PXi	139, 652
300-102091	140, 653	300-103094	129, 642	300-103367	138, 651	300-202377	130, 643	30040-668	140, 653	3020-9042	139, 652
300-102092	140, 653	300-103095	129, 642	300-103368	138, 651	300-202379	130, 643	30040-670	140, 653	3020-906PXi	139, 652
300-102093	140, 653	300-103096	129, 642	300-103369	138, 651	300-202380	130, 643	30040-724	140, 653	3020-9062	139, 652
300-102094	140, 653	300-103097	129, 642	300-103370	138, 651	300-202382	130, 643	30040-726	140, 653	3020-908PXi	139, 652
300-102095	140, 653	300-103110	129, 642	300-103371	138, 651	300-202384	130, 643	30040-728	140, 653	3020-9082	139, 652
300-102499	128, 641	300-103111	129, 642	300-103372	138, 651	300-202385	131, 644	30040-730	140, 653	3020-910PXi	139, 652
300-102500	128, 641	300-103112	129, 642	300-103373	138, 651	300-202432	131, 644	30040-732	141, 654	3020-9102	139, 652
300-102501	128, 641	300-103113	129, 642	300-103374	138, 651	300-202434	131, 644	30040-784	141, 654	3020-912PXi	139, 652
300-102502	128, 641	300-103114	129, 642	300-103376	138, 651	300-202435	131, 644	30040-786	141, 654	3020-9122	139, 652
300-102503	128, 641	300-103115	129, 642	300-103378	138, 651	300-202437	131, 644	30040-788	141, 654	3020-9152	139, 652
300-102504	128, 641	300-103116	129, 642	300-103380	138, 651	300-202439	131, 644	30040-790	141, 654	3020-9182	139, 652
300-102505	128, 641	300-103173	129, 642	300-103381	138, 651	300-202440	131, 644	30040-792	141, 654	3020-9212	139, 652
300-102506	128, 641	300-103174	129, 642	300-103700	139, 652	300-202442	131, 644	30040-795	141, 654	3020-934	138, 651
300-102507	128, 641	300-103177	129, 642	300-104000	138, 651	300-202444	131, 644	30040-844	141, 654	3020-9342	139, 652
300-102508	128, 641	300-103178	129, 642	300-104001	138, 651	300-202445	131, 644	30040-846	141, 654	3020-936	138, 651
300-102509	128, 641	300-103179	129, 642	300-104004	138, 651	300-202447	131, 644	30040-848	141, 654	3020-9362	139, 652
300-102510	128, 641	300-103182	129, 642	300-104005	138, 651	300-202449	131, 644	30040-850	141, 654	3020-938	138, 651
300-102511	128, 641	300-103183	129, 642	300-104006	138, 651	300-202450	131, 644	30040-852	141, 654	3020-9382	139, 652
300-102512	128, 641	300-103184	129, 642	300-104009	138, 651	300-202452	131, 644	30040-855	141, 654	3020-940	138, 651
300-102513	128, 641	300-103185	129, 642	300-104010	138, 651	300-202454	131, 644	30040-858	141, 654	3020-9402	139, 652
300-102514	128, 641	300-103188	129, 642	300-104011	138, 651	300-202455	131, 644	30040-904	141, 654	3020-942	138, 651
300-102515	128, 641	300-103189	129, 642	300-104012	138, 651	3001-060PXi	131, 644	30040-906	141, 654	3020-9422	139, 652
300-102516	128, 641	300-103190	129, 642	300-104015	138, 651	3001-080PXi	131, 644	30040-908	141, 654	3020-945	138, 651
300-102517	128, 641	300-103191	129, 642	300-104016	139, 652	3001-100PXi	131, 644	30040-910	141, 654	3020-9452	139, 652
300-102518	128, 641	300-103192	129, 642	300-104017	139, 652	3001-120PXi	131, 644	30040-912	141, 654	3020-948	138, 651
300-102519	128, 641	300-103195	129, 642	300-104018	139, 652	3001-210232	129, 642	30040-915	141, 654	3020-9482	139, 652
300-102520	128, 641	300-103196	129, 642	300-104019	138, 651	3001-2402	130, 643	30040-918	141, 654	3020-951	138, 651
300-102521	128, 641	300-103197	129, 642	300-104030	139, 652	3001-240232	129, 642	30040-921	141, 654	3020-9512	139, 652
300-102522	128, 641	300-103198	129, 642	300-104031	139, 652	3001-270	128, 641	3006-2402	131, 644	3020-954	138, 651
300-102523	128, 641	300-103199	129, 642	300-104032	139, 652	3001-2702	130, 643	3006-24023	131, 644	3020-9542	139, 652
300-102524	128, 641	300-103200	129, 642	300-104033	139, 652	3001-270232	129, 642	3006-270	131, 644	3024-2402	134, 647
300-102525	128, 641	300-103203	129, 642	300-104034	139, 652	3001-585PXi	131, 644	3006-2702	132, 645	3024-24023	134, 647
300-102526	128, 641	300-103204	129, 642	300-104036	139, 652	3001-628PXi	131, 644	3006-27023	131, 644	3024-270	134, 647
300-102527	128, 641	300-103205	129, 642	300-104049	139, 652	3001-670PXi	131, 644	3011-2402	132, 645	3024-2702	134, 647
300-102528	128, 641	300-103206	130, 643	300-104050	139, 652	3001-730PXi	131, 644	3011-24023	132, 645	3024-27023	134, 647
300-102529	128, 641	300-103207	130, 643	300-104051	139, 652	3001-786PXi	131, 644	3011-270	132, 645	3028-060	134, 647
300-102530	128, 641	300-103208	130, 643	300-104052	139, 652	3001-788PXi	131, 644	3011-2702	132, 645	3028-080	134, 647
300-102531	128, 641	300-103209	129, 642	300-104053	139, 652	3001-790PXi	131, 644	3011-27023	132, 645	3028-100	134, 647
300-102532	128, 641	300-103222	130, 643	300-104057	139, 652	3001-792PXi	131, 644	3015-2402	133, 646	3028-120	134, 647
300-102533	128, 641	300-103223	130, 643	300-104072	139, 652	3001-846PXi	131, 644	3015-24023	133, 646	3028-150	134, 647
300-102534	128, 641	300-103224	130, 643	300-104073	139, 652	3001-848PXi	131, 644	3015-270	133, 646	3028-180	134, 647
300-102535	128, 641	300-103225	130, 643	300-104074	139, 652	3001-850PXi	131, 644	3015-2702	133, 646	3028-210	134, 647
300-102536	128, 641	300-103226	130, 643	300-104075	139, 652	3001-852PXi	131, 644	3015-27023	133, 646	3028-240	134, 647
300-102537	128, 641	300-103227	130, 643	300-104076	139, 652	3001-906PXi	131, 644	3016-2402	133, 646	3028-270	134, 647
300-102548	128, 641	300-103228	130, 643	300-104078	139, 652	3001-9062	130, 643	3016-24023	133, 646	3029-2402	135, 648
300-102549	128, 641	300-103230	130, 643	300-104080	139, 652	3001-906232	129, 642	3016-270	132, 645	3029-24023	134, 647
300-102550	128, 641	300-103283	137, 650	300-104082	139, 652	3001-908PXi	131, 644	3016-2702	133, 646	3029-270	134, 647
300-102551	128, 641	300-103284	137, 650	300-107540	142, 655	3001-9082	130, 643	3016-27023	133, 646	3029-2702	135, 648
300-102552	128, 641	300-103285	137, 650	300-107541	142, 655	3001-908232	129, 642	3017-2402	134, 647	3029-27023	135, 648
300-102553	128, 641	300-103286	137, 650	300-107542	142, 655	3001-910PXi	131, 644	3017-24023	133, 646	3029-300	134, 647
300-102554	128, 641	300-103287	137, 650	300-107543	142, 655	3001-9102	130, 643	3017-270	133, 646	3029-528	135, 648
300-102555	128, 641	300-103288	137, 650	300-107545	142, 655	3001-910232	129, 642	3017-2702	134, 647	3029-529	135, 648
300-102556	128, 641	300-103289	137, 650	300-107547	142, 655	3001-912PXi	131, 644	3017-27023	133, 646	3029-530	135, 648
300-102558	128, 641	300-103290	138, 651	300-107549	142, 655	3001-9122	130, 643	3018-2402	132, 645	3029-532	135, 648
300-102559	128, 641	300-103291	137, 650	300-107550	142, 655	3001-912232	129, 642	3018-24023	132, 645	3029-579	135, 648
300-102560	128, 641	300-103292	138, 651	300-202152	130, 643	3001-9152	130, 643	3018-270	132, 645	3029-580	135, 648
300-102561	128, 641	300-103293	138, 651	300-202154	130, 643	3001-915232	129, 642	3018-2702	132, 645	3029-5822	137, 650
300-102562	128, 641	300-103294	138, 651	300-202155	130, 643	3001-9182	130, 643	3018-27023	132, 645	3029-58232	136, 649
300-102563	128, 641	300-103295	138, 651	300-202157	130, 643	3001-918232	129, 642	302-007	693	3029-621	135, 648
300-102564	128, 641	300-103296	138, 651	300-202159	130, 643	3001-9212	130, 643	302-010	693	3029-622	135, 648
300-102565	128, 641	300-103297	138, 651	300-202160	130, 643	3001-921232	129, 642	302-010G	693	3029-623	135, 648
300-102566	128, 641	300-103298	138, 651	300-202162	130, 643	3001-934	128, 641	302-012G	693	3029-624	135, 648
300-102567	128, 641	300-103299	138, 651	300-202164	130, 643	3001-936	128, 641	302-131	693	3029-6242	137, 650
300-102569											



Spears List Price Part Number Index

3029-7262	137, 650	3029-9422	137, 650	310-100114	148, 661	310-102028	154, 667	320-100210	149, 662	320-102501	145, 658
3029-72623	136, 649	3029-94223	136, 649	310-100115	148, 661	310-102029	155, 668	320-100211	149, 662	320-102502	145, 658
3029-72632	136, 649	3029-94232	137, 650	310-100116	148, 661	310-102031	155, 668	320-100212	149, 662	320-102503	145, 658
3029-728	135, 648	3029-945	135, 648	310-100117	148, 661	310-102033	155, 668	320-100213	149, 662	320-102504	145, 658
3029-7282	137, 650	3029-9452	137, 650	310-100118	149, 662	310-102034	155, 668	320-100234	149, 662	320-102505	145, 658
3029-72823	136, 649	3029-94523	136, 649	310-100234	149, 662	310-102035	155, 668	320-100235	149, 662	320-102506	145, 658
3029-72832	136, 649	3029-94532	137, 650	310-100235	149, 662	310-102036	155, 668	320-100236	149, 662	320-102507	145, 658
3029-730	135, 648	3029-948	135, 648	310-100236	149, 662	310-102037	155, 668	320-100237	149, 662	320-102508	145, 658
3029-7302	137, 650	3029-9482	137, 650	310-100237	149, 662	310-102499	145, 658	320-100306	149, 662	320-102509	145, 658
3029-73023	136, 649	3029-94823	136, 649	310-100238	149, 662	310-102500	145, 658	320-100307	149, 662	320-102510	145, 658
3029-73032	136, 649	3029-94832	137, 650	310-100354	150, 663	310-102501	145, 658	320-100308	149, 662	320-102511	145, 658
3029-784	135, 648	3029-951	135, 648	310-100355	150, 663	310-102502	145, 658	320-100309	149, 662	320-102512	145, 658
3029-7842	137, 650	3029-9512	137, 650	310-100356	150, 663	310-102503	145, 658	320-100330	149, 662	320-102513	145, 658
3029-78423	136, 649	3029-95123	136, 649	310-100357	150, 663	310-102504	145, 658	320-100331	149, 662	320-102514	145, 658
3029-78432	136, 649	3029-95132	137, 650	310-100358	150, 663	310-102505	145, 658	320-100332	149, 662	320-102515	145, 658
3029-786	135, 648	3029-954	135, 648	310-100474	150, 663	310-102506	145, 658	320-100333	149, 662	320-102516	145, 658
3029-7862	137, 650	3029-9542	137, 650	310-100475	150, 663	310-102507	145, 658	320-100354	150, 663	320-102517	145, 658
3029-78623	136, 649	3029-95423	136, 649	310-100476	150, 663	310-102508	145, 658	320-100355	150, 663	320-102518	145, 658
3029-78632	136, 649	3029-95432	137, 650	310-100477	150, 663	310-102509	145, 658	320-100356	150, 663	320-102519	145, 658
3029-788	135, 648	3029-978	135, 648	310-100478	150, 663	310-102510	145, 658	320-100357	150, 663	320-102520	145, 658
3029-7882	137, 650	3029-981	135, 648	310-100592	151, 664	310-102511	145, 658	320-100426	150, 663	320-103058	146, 659
3029-78823	136, 649	3029-984	135, 648	310-100593	151, 664	310-102512	145, 658	320-100427	150, 663	320-103061	146, 659
3029-78832	136, 649	3029-987	135, 648	310-100594	151, 664	310-102513	145, 658	320-100428	150, 663	320-103062	146, 659
3029-790	135, 648	3040-528E	141, 654	310-100595	151, 664	310-102514	145, 658	320-100429	150, 663	320-103065	146, 659
3029-7902	137, 650	3040-530E	141, 654	310-100596	151, 664	310-102515	145, 658	320-100450	150, 663	320-103066	146, 659
3029-79023	136, 649	3040-532E	141, 654	310-100702	151, 664	310-102516	145, 658	320-100451	150, 663	320-103067	146, 659
3029-79032	136, 649	3040-578E	141, 654	310-100703	151, 664	310-102517	145, 658	320-100452	150, 663	320-103070	146, 659
3029-792	135, 648	3040-580E	141, 654	310-100704	151, 664	310-102518	145, 658	320-100453	150, 663	320-103071	146, 659
3029-7922	137, 650	3040-582E	141, 654	310-100705	151, 664	310-102519	145, 658	320-100474	150, 663	320-103072	146, 659
3029-79223	136, 649	3040-585E	141, 654	310-100706	151, 664	310-102520	145, 658	320-100475	150, 663	320-103073	146, 659
3029-79232	136, 649	3040-621E	141, 654	310-100812	148, 661	310-102521	145, 658	320-100476	150, 663	320-103076	146, 659
3029-844	135, 648	3040-623E	141, 654	310-100813	148, 661	310-102522	145, 658	320-100477	150, 663	320-103077	146, 659
3029-846	135, 648	3040-624E	141, 654	310-100814	148, 661	310-102523	145, 658	320-100546	150, 663	320-103078	146, 659
3029-8462	137, 650	3040-626E	141, 654	310-100815	148, 661	310-102524	145, 658	320-100547	150, 663	320-103079	146, 659
3029-84623	136, 649	3040-628E	141, 654	310-100816	148, 661	310-102525	145, 658	320-100548	150, 663	320-103080	146, 659
3029-84632	136, 649	3040-661E	141, 654	310-100926	152, 665	310-102526	145, 658	320-100549	150, 663	320-103170	146, 659
3029-848	135, 648	3040-664E	141, 654	310-100928	152, 665	310-102527	146, 659	320-100570	150, 663	320-103173	146, 659
3029-8482	137, 650	3040-666E	141, 654	310-100931	152, 665	310-102528	146, 659	320-100571	150, 663	320-103174	146, 659
3029-84823	136, 649	3040-668E	141, 654	310-100935	152, 665	310-103283	153, 666	320-100572	150, 663	320-103177	146, 659
3029-84832	136, 649	3040-721E	141, 654	310-100940	152, 665	310-103284	153, 666	320-100573	150, 663	320-103178	146, 659
3029-850	135, 648	3040-723E	141, 654	310-101789	155, 668	310-103285	153, 666	320-100592	151, 664	320-103179	146, 659
3029-8502	137, 650	3040-724E	141, 654	310-101790	155, 668	310-103286	153, 666	320-100593	151, 664	320-103182	146, 659
3029-85023	136, 649	3040-726E	141, 654	310-101791	155, 668	310-103287	153, 666	320-100594	151, 664	320-103183	146, 659
3029-85032	136, 649	3040-728E	141, 654	310-101792	155, 668	310-103288	153, 666	320-100595	151, 664	320-103184	146, 659
3029-852	135, 648	3040-730E	141, 654	310-101797	155, 668	310-103289	153, 666	320-100658	151, 664	320-103185	146, 659
3029-8522	137, 650	3040-732E	141, 654	310-101798	155, 668	310-103290	153, 666	320-100659	151, 664	320-103188	146, 659
3029-85223	136, 649	3040-781E	141, 654	310-101799	155, 668	310-103291	153, 666	320-100660	151, 664	320-103189	146, 659
3029-85232	136, 649	3040-783E	141, 654	310-101800	155, 668	310-103292	153, 666	320-100661	151, 664	320-103190	146, 659
3029-855	135, 648	3040-784E	141, 654	310-101804	155, 668	310-103293	153, 666	320-100680	151, 664	320-103191	146, 659
3029-8552	137, 650	3040-786E	141, 654	310-101805	155, 668	310-103294	153, 666	320-100681	151, 664	320-103192	146, 659
3029-85523	136, 649	3040-788E	141, 654	310-101806	155, 668	310-103295	153, 666	320-100682	151, 664	320-103280	153, 666
3029-85532	136, 649	3040-790E	141, 654	310-101807	155, 668	310-103296	153, 666	320-100683	151, 664	320-103281	153, 666
3029-903	135, 648	3040-792E	141, 654	310-101811	155, 668	310-103297	153, 666	320-100702	151, 664	320-103283	153, 666
3029-906	135, 648	3040-795E	141, 654	310-101812	155, 668	310-103298	153, 666	320-100703	151, 664	320-103284	153, 666
3029-9062	137, 650	3040-841E	141, 654	310-101813	155, 668	310-103299	153, 666	320-100704	151, 664	320-103285	153, 666
3029-90623	136, 649	3040-843E	141, 654	310-101817	155, 668	310-103300	153, 666	320-100705	151, 664	320-103286	153, 666
3029-90632	136, 649	3040-844E	141, 654	310-101818	155, 668	310-103301	153, 666	320-100768	151, 664	320-103287	153, 666
3029-908	135, 648	3040-846E	141, 654	310-101822	155, 668	310-103302	153, 666	320-100769	151, 664	320-103288	153, 666
3029-9082	137, 650	3040-848E	141, 654	310-101884	155, 668	310-103303	153, 666	320-100770	151, 664	320-103289	153, 666
3029-90823	136, 649	3040-850E	141, 654	310-101885	155, 668	310-103304	153, 666	320-100771	151, 664	320-103290	153, 666
3029-90832	136, 649	3040-852E	141, 654	310-101886	155, 668	310-103313	154, 667	320-100790	151, 664	320-103291	153, 666
3029-910	135, 648	3040-855E	141, 654	310-101887	155, 668	310-103314	154, 667	320-100791	151, 664	320-103292	153, 666
3029-9102	137, 650	3040-858E	141, 654	310-101892	155, 668	310-103315	154, 667	320-100792	151, 664	320-103293	153, 666
3029-91023	136, 649	3040-901E	141, 654	310-101893	155, 668	310-103316	154, 667	320-100793	151, 664	320-103294	153, 666
3029-91032	136, 649	3040-903E	141, 654	310-101894	155, 668	310-103317	154, 667	320-100812	148, 661	320-103295	153, 666
3029-912	135, 648	3040-906E	141, 654	310-101895	155, 668	310-103318	154, 667	320-100813	148, 661	320-103296	153, 666
3029-9122	137, 650	3040-908E	141, 654	310-101899	155, 668	310-103319	154, 667	320-100814	148, 661	320-103297	153, 666
3029-91223	136, 649	3040-910E	141, 654	310-101900	155, 668	310-103321	154, 667	320-100815	148, 661	320-103298	153, 666
3029-91232	136, 649	3040-912E	141, 654	310-101901	155, 668	310-107540	155, 668	320-100878	148, 661	320-103299	153, 666
3029-915	135, 648	3040-915E	141, 654	310-101902	155, 668	310-107541	155, 668	320-100879	148, 661	320-103300	153, 666
3029-9152	137, 650	3040-918E	141, 654	310-101906	155, 668	310-107542	155, 668	320-100880	148, 661	320-103301	153, 666
3029-91523	136, 649	3040-921E	141, 654	310-101907	155, 668	310-107543	155, 668	320-100881	148, 661	320-103302	153, 666
3029-91532	136, 64										

Spears List Price Part Number Index



3228-140	153, 666	330-100705	151, 664	330-102500	145, 658	330-107565	155, 668	3301-585P	128, 641	3301-8502P	130, 643
3228-160	153, 666	330-100767	151, 664	330-102501	145, 658	330-107566	155, 668	3301-585PXI	131, 644	3301-850232P	129, 642
330-100002	152, 665	330-100768	151, 664	330-102502	145, 658	330-107567	155, 668	3301-5852P	129, 642	3301-852P	128, 641
330-100003	152, 665	330-100769	151, 664	330-102503	145, 658	330-107568	155, 668	3301-585232P	129, 642	3301-852PXI	131, 644
330-100004	152, 665	330-100770	151, 664	330-102504	145, 658	330-107569	155, 668	3301-621P	128, 641	3301-8522P	130, 643
330-100005	152, 665	330-100771	151, 664	330-102505	145, 658	330-202152	147, 660	3301-623P	128, 641	3301-852232P	129, 642
330-100067	152, 665	330-100789	151, 664	330-102506	145, 658	330-202154	147, 660	3301-624P	128, 641	3301-855P	128, 641
330-100068	152, 665	330-100790	151, 664	330-102507	145, 658	330-202155	147, 660	3301-6242P	129, 642	3301-8552P	130, 643
330-100069	152, 665	330-100791	151, 664	330-102508	145, 658	330-202157	147, 660	3301-624232P	129, 642	3301-855232P	129, 642
330-100070	152, 665	330-100792	151, 664	330-102509	145, 658	330-202159	147, 660	3301-626P	128, 641	3301-858P	128, 641
330-100071	152, 665	330-100793	151, 664	330-102510	145, 658	330-202160	147, 660	3301-626PXI	131, 644	3301-8582P	130, 643
330-100089	152, 665	330-100812	148, 661	330-102511	145, 658	330-202162	147, 660	3301-6262P	129, 642	3301-858232P	129, 642
330-100090	152, 665	330-100813	148, 661	330-102512	145, 658	330-202164	147, 660	3301-626232P	129, 642	3301-901P	128, 641
330-100091	152, 665	330-100814	148, 661	330-102513	145, 658	330-202165	147, 660	3301-628P	128, 641	3301-903P	128, 641
330-100092	152, 665	330-100815	148, 661	330-102514	145, 658	330-202167	147, 660	3301-628PXI	131, 644	3301-904P	128, 641
330-100093	152, 665	330-100877	148, 661	330-102515	145, 658	330-202169	147, 660	3301-6282P	129, 642	3301-906P	128, 641
330-100113	148, 661	330-100878	148, 661	330-102516	145, 658	330-202170	147, 660	3301-628232P	129, 642	3301-906PXI	131, 644
330-100114	148, 661	330-100879	148, 661	330-102517	145, 658	330-202222	147, 660	3301-661P	128, 641	3301-9062P	130, 643
330-100115	148, 661	330-100880	148, 661	330-102518	145, 658	330-202224	147, 660	3301-663P	128, 641	3301-906232P	129, 642
330-100116	148, 661	330-100881	148, 661	330-102519	145, 658	330-202225	147, 660	3301-664P	128, 641	3301-908P	128, 641
330-100117	148, 661	330-100899	148, 661	330-102520	145, 658	330-202227	147, 660	3301-6642P	129, 642	3301-908PXI	131, 644
330-100185	149, 662	330-100900	148, 661	330-103058	146, 659	330-202229	147, 660	3301-664232P	129, 642	3301-9082P	130, 643
330-100186	149, 662	330-100901	148, 661	330-103061	146, 659	330-202230	147, 660	3301-666P	128, 641	3301-908232P	129, 642
330-100187	149, 662	330-100902	148, 661	330-103062	146, 659	330-202232	147, 660	3301-666PXI	131, 644	3301-910P	128, 641
330-100188	149, 662	330-100903	148, 661	330-103065	146, 659	330-202234	147, 660	3301-6662P	129, 642	3301-910PXI	131, 644
330-100189	149, 662	330-100926	152, 665	330-103066	146, 659	330-202235	147, 660	3301-666232P	129, 642	3301-9102P	130, 643
330-100209	149, 662	330-100928	152, 665	330-103067	146, 659	330-202237	147, 660	3301-668P	128, 641	3301-910232P	129, 642
330-100210	149, 662	330-100931	152, 665	330-103070	146, 659	330-202239	147, 660	3301-668PXI	131, 644	3301-912P	128, 641
330-100211	149, 662	330-100935	152, 665	330-103071	146, 659	330-202240	147, 660	3301-6682P	129, 642	3301-912PXI	131, 644
330-100212	149, 662	330-101310	152, 665	330-103072	146, 659	330-202362	147, 660	3301-668232P	129, 642	3301-9122P	130, 643
330-100213	149, 662	330-101312	152, 665	330-103073	146, 659	330-202364	147, 660	3301-670P	128, 641	3301-912232P	129, 642
330-100233	149, 662	330-101315	152, 665	330-103076	146, 659	330-202365	147, 660	3301-670PXI	131, 644	3301-915P	128, 641
330-100234	149, 662	330-101319	152, 665	330-103077	146, 659	330-202367	147, 660	3301-6702P	129, 642	3301-9152P	130, 643
330-100235	149, 662	330-101383	152, 665	330-103078	146, 659	330-202369	147, 660	3301-670232P	129, 642	3301-915232P	129, 642
330-100236	149, 662	330-101385	152, 665	330-103079	146, 659	330-202370	147, 660	3301-721P	128, 641	3301-918P	128, 641
330-100237	149, 662	330-101388	152, 665	330-103080	146, 659	330-202372	147, 660	3301-723P	128, 641	3301-9182P	130, 643
330-100305	149, 662	330-101392	152, 665	330-103170	146, 659	330-202374	147, 660	3301-724P	128, 641	3301-918232P	129, 642
330-100306	149, 662	330-101456	153, 666	330-103173	146, 659	330-202375	147, 660	3301-7242P	129, 642	3301-921P	128, 641
330-100307	149, 662	330-101458	153, 666	330-103174	146, 659	330-202377	147, 660	3301-724232P	129, 642	3301-9212P	130, 643
330-100308	149, 662	330-101461	153, 666	330-103177	146, 659	330-202379	147, 660	3301-726P	128, 641	3301-921232P	129, 642
330-100309	149, 662	330-101465	153, 666	330-103178	146, 659	330-202380	147, 660	3301-726PXI	131, 644	3301-924P	128, 641
330-100329	149, 662	330-101789	155, 668	330-103179	146, 659	330-202432	148, 661	3301-7262P	129, 642	3301-936P	128, 641
330-100330	149, 662	330-101790	155, 668	330-103182	146, 659	330-202434	148, 661	3301-726232P	129, 642	3301-9362P	130, 643
330-100331	149, 662	330-101791	155, 668	330-103183	146, 659	330-202435	148, 661	3301-728P	128, 641	3301-936232P	129, 642
330-100332	149, 662	330-101792	155, 668	330-103184	146, 659	330-202437	148, 661	3301-728PXI	131, 644	3301-938P	128, 641
330-100333	149, 662	330-101797	155, 668	330-103185	146, 659	330-202439	148, 661	3301-7282P	129, 642	3301-9382P	130, 643
330-100353	150, 663	330-101798	155, 668	330-103188	146, 659	330-202440	148, 661	3301-728232P	129, 642	3301-938232P	129, 642
330-100354	150, 663	330-101799	155, 668	330-103189	146, 659	330-202442	148, 661	3301-730P	128, 641	3301-940P	128, 641
330-100355	150, 663	330-101800	156, 669	330-103190	146, 659	330-202444	148, 661	3301-730PXI	131, 644	3301-9402P	130, 643
330-100356	150, 663	330-101804	155, 668	330-103191	146, 659	330-202445	148, 661	3301-7302P	129, 642	3301-940232P	129, 642
330-100357	150, 663	330-101805	155, 668	330-103192	146, 659	330-202447	148, 661	3301-730232P	129, 642	3301-942P	128, 641
330-100425	150, 663	330-101806	155, 668	330-103280	153, 666	330-202449	148, 661	3301-732P	128, 641	3301-9422P	130, 643
330-100426	150, 663	330-101807	156, 669	330-103281	153, 666	330-202450	148, 661	3301-732PXI	131, 644	3301-942232P	129, 642
330-100427	150, 663	330-101811	155, 668	330-103283	153, 666	3301-060P	128, 641	3301-7322P	129, 642	3301-945P	128, 641
330-100428	150, 663	330-101812	155, 668	330-103284	153, 666	3301-060PXI	131, 644	3301-732232P	129, 642	3301-9452P	130, 643
330-100429	150, 663	330-101813	156, 669	330-103285	153, 666	3301-0602P	129, 642	3301-781P	128, 641	3301-945232P	129, 642
330-100449	150, 663	330-101817	155, 668	330-103286	153, 666	3301-060232P	128, 641	3301-783P	128, 641	3301-948P	128, 641
330-100450	150, 663	330-101818	156, 669	330-103287	153, 666	3301-080P	128, 641	3301-784P	128, 641	3301-9482P	130, 643
330-100451	150, 663	330-101822	156, 669	330-103288	153, 666	3301-080PXI	131, 644	3301-7842P	129, 642	3301-948232P	129, 642
330-100452	150, 663	330-101884	156, 669	330-103289	153, 666	3301-0802P	129, 642	3301-784232P	129, 642	3301-951P	128, 641
330-100453	150, 663	330-101885	156, 669	330-103290	153, 666	3301-080232P	128, 641	3301-786P	128, 641	3301-9512P	130, 643
330-100473	150, 663	330-101886	156, 669	330-103291	153, 666	3301-100P	128, 641	3301-786PXI	131, 644	3301-951232P	129, 642
330-100474	150, 663	330-101887	156, 669	330-103292	153, 666	3301-100PXI	131, 644	3301-7862P	129, 642	3301-954P	128, 641
330-100475	150, 663	330-101892	156, 669	330-103293	153, 666	3301-1002P	129, 642	3301-786232P	129, 642	3301-9542P	130, 643
330-100476	150, 663	330-101893	156, 669	330-103294	153, 666	3301-100232P	129, 642	3301-788P	128, 641	3301-954232P	129, 642
330-100477	150, 663	330-101894	156, 669	330-103295	153, 666	3301-120P	128, 641	3301-788PXI	131, 644	3302-528P	130, 643
330-100545	150, 663	330-101895	156, 669	330-103296	153, 666	3301-120PXI	131, 644	3301-7882P	129, 642	3302-530P	130, 643
330-100546	150, 663	330-101899	156, 669	330-103297	153, 666	3301-1202P	129, 642	3301-788232P	129, 642	3302-532P	130, 643
330-100547	150, 663	330-101900	156, 669	330-103298	153, 666	3301-120232P	129, 642	3301-790P	128, 641	3302-578P	130, 643
330-100548	150, 663	330-101901	156, 669	330-103299	153, 666	3301-150P	128, 641	3301-790PXI	131, 644	3302-580P	130, 643
330-100549	150, 663	330-101902	156, 669	330-103300	153, 666	3301-1502P	129, 642	3301-7902P	130, 6		



Spears List Price Part Number Index

3306-08023P	131, 644	3316-210P	132, 645	3320-585PXI	139, 652	3320-9122P	139, 652	3329-27023P	134, 647	3329-850P	135, 648
3306-100P	131, 644	3316-2102P	133, 646	3320-5852P	138, 651	3320-915P	138, 651	3329-532P	135, 648	3329-8502P	137, 650
3306-1002P	131, 644	3316-21023P	133, 646	3320-621P	138, 651	3320-9152P	139, 652	3329-5322P	137, 650	3329-85023P	136, 649
3306-10023P	131, 644	3316-240P	132, 645	3320-623P	138, 651	3320-918P	138, 651	3329-53223P	135, 648	3329-85032P	136, 649
3306-120P	131, 644	3316-2402P	133, 646	3320-624P	138, 651	3320-9182P	139, 652	3329-53232P	136, 649	3329-852P	135, 648
3306-1202P	131, 644	3316-24023P	133, 646	3320-6242P	138, 651	3320-921P	138, 651	3329-582P	135, 648	3329-8522P	137, 650
3306-12023P	131, 644	3316-270P	132, 645	3320-626P	138, 651	3320-9212P	139, 652	3329-58223P	137, 650	3329-85223P	136, 649
3306-150P	131, 644	3316-2702P	133, 646	3320-626PXI	139, 652	3320-934P	138, 651	3329-58223P	135, 648	3329-85232P	136, 649
3306-1502P	131, 644	3316-27023P	133, 646	3320-6262P	138, 651	3320-9342P	139, 652	3329-58232P	136, 649	3329-8523P	135, 648
3306-15023P	131, 644	3317-060P	133, 646	3320-628P	138, 651	3320-936P	138, 651	3329-585P	135, 648	3329-8552P	137, 650
3306-180P	131, 644	3317-0602P	133, 646	3320-628PXI	139, 652	3320-9362P	139, 652	3329-5852P	137, 650	3329-85523P	136, 649
3306-1802P	131, 644	3317-06023P	133, 646	3320-6282P	138, 651	3320-938P	138, 651	3329-58523P	135, 648	3329-85532P	136, 649
3306-18023P	131, 644	3317-080P	133, 646	3320-661P	138, 651	3320-9382P	139, 652	3329-58532P	136, 649	3329-858P	135, 648
3306-210P	131, 644	3317-0802P	133, 646	3320-663P	138, 651	3320-940P	138, 651	3329-624P	135, 648	3329-8582P	137, 650
3306-2102P	131, 644	3317-08023P	133, 646	3320-664P	138, 651	3320-9402P	139, 652	3329-6242P	137, 650	3329-85823P	136, 649
3306-21023P	131, 644	3317-100P	133, 646	3320-6642P	138, 651	3320-942P	138, 651	3329-62423P	135, 648	3329-85832P	136, 649
3306-240P	131, 644	3317-1002P	133, 646	3320-666P	138, 651	3320-9422P	139, 652	3329-62432P	136, 649	3329-906P	135, 648
3306-2402P	131, 644	3317-10023P	133, 646	3320-666PXI	139, 652	3320-945P	138, 651	3329-626P	135, 648	3329-9062P	137, 650
3306-24023P	131, 644	3317-120P	133, 646	3320-6662P	139, 652	3320-9452P	139, 652	3329-6262P	137, 650	3329-90623P	136, 649
3306-270P	131, 644	3317-1202P	133, 646	3320-668P	138, 651	3320-948P	138, 651	3329-62623P	135, 648	3329-90632P	136, 649
3306-2702P	132, 645	3317-12023P	133, 646	3320-668PXI	139, 652	3320-9482P	139, 652	3329-62632P	136, 649	3329-908P	135, 648
3306-27023P	131, 644	3317-150P	133, 646	3320-6682P	139, 652	3320-951P	138, 651	3329-628P	135, 648	3329-9082P	137, 650
3311-060P	132, 645	3317-1502P	134, 647	3320-670P	138, 651	3320-9512P	139, 652	3329-6282P	137, 650	3329-90823P	136, 649
3311-0602P	132, 645	3317-15023P	133, 646	3320-670PXI	139, 652	3320-954P	138, 651	3329-62823P	136, 649	3329-90832P	136, 649
3311-06023P	132, 645	3317-180P	133, 646	3320-6702P	139, 652	3320-9542P	139, 652	3329-62832P	136, 649	3329-910P	135, 648
3311-080P	132, 645	3317-1802P	134, 647	3320-721P	138, 651	3324-060P	134, 647	3329-664P	135, 648	3329-9102P	137, 650
3311-0802P	132, 645	3317-18023P	133, 646	3320-723P	138, 651	3324-0602P	134, 647	3329-6642P	137, 650	3329-91023P	136, 649
3311-08023P	132, 645	3317-210P	133, 646	3320-724P	138, 651	3324-06023P	134, 647	3329-66423P	136, 649	3329-91032P	136, 649
3311-100P	132, 645	3317-2102P	134, 647	3320-7242P	139, 652	3324-080P	134, 647	3329-66432P	136, 649	3329-912P	135, 648
3311-1002P	132, 645	3317-21023P	133, 646	3320-726P	138, 651	3324-0802P	134, 647	3329-666P	135, 648	3329-9122P	137, 650
3311-10023P	132, 645	3317-240P	133, 646	3320-726PXI	139, 652	3324-08023P	134, 647	3329-6662P	137, 650	3329-91223P	136, 649
3311-120P	132, 645	3317-2402P	134, 647	3320-7262P	139, 652	3324-100P	134, 647	3329-66623P	136, 649	3329-91232P	136, 649
3311-1202P	132, 645	3317-24023P	133, 646	3320-728P	138, 651	3324-1002P	134, 647	3329-66632P	136, 649	3329-915P	135, 648
3311-12023P	132, 645	3317-270P	133, 646	3320-728PXI	139, 652	3324-10023P	134, 647	3329-668P	135, 648	3329-9152P	137, 650
3311-150P	132, 645	3317-2702P	134, 647	3320-7282P	139, 652	3324-120P	134, 647	3329-6682P	137, 650	3329-91523P	136, 649
3311-1502P	132, 645	3317-27023P	133, 646	3320-730P	138, 651	3324-1202P	134, 647	3329-66823P	136, 649	3329-91532P	136, 649
3311-15023P	132, 645	3318-060P	132, 645	3320-730PXI	139, 652	3324-12023P	134, 647	3329-66832P	136, 649	3329-918P	135, 648
3311-180P	132, 645	3318-0602P	132, 645	3320-7302P	139, 652	3324-150P	134, 647	3329-670P	135, 648	3329-9182P	137, 650
3311-1802P	132, 645	3318-06023P	132, 645	3320-732P	138, 651	3324-1502P	134, 647	3329-6702P	137, 650	3329-91823P	136, 649
3311-18023P	132, 645	3318-080P	132, 645	3320-732PXI	139, 652	3324-15023P	134, 647	3329-67023P	136, 649	3329-91832P	136, 649
3311-210P	132, 645	3318-0802P	132, 645	3320-7322P	139, 652	3324-180P	134, 647	3329-67032P	136, 649	3329-921P	135, 648
3311-2102P	132, 645	3318-08023P	132, 645	3320-781P	138, 651	3324-1802P	134, 647	3329-724P	135, 648	3329-9212P	137, 650
3311-21023P	132, 645	3318-100P	132, 645	3320-783P	138, 651	3324-18023P	134, 647	3329-7242P	137, 650	3329-92123P	136, 649
3311-240P	132, 645	3318-1002P	132, 645	3320-784P	138, 651	3324-210P	134, 647	3329-72423P	136, 649	3329-92132P	136, 649
3311-2402P	132, 645	3318-10023P	132, 645	3320-7842P	139, 652	3324-2102P	134, 647	3329-72432P	136, 649	3329-936P	135, 648
3311-24023P	132, 645	3318-120P	132, 645	3320-786P	138, 651	3324-21023P	134, 647	3329-726P	135, 648	3329-9362P	137, 650
3311-270P	132, 645	3318-1202P	132, 645	3320-786PXI	139, 652	3324-240P	134, 647	3329-7262P	137, 650	3329-93623P	136, 649
3311-2702P	132, 645	3318-12023P	132, 645	3320-7862P	139, 652	3324-2402P	134, 647	3329-72623P	136, 649	3329-93632P	136, 649
3311-27023P	132, 645	3318-150P	132, 645	3320-788P	138, 651	3324-24023P	134, 647	3329-72632P	136, 649	3329-938P	135, 648
3315-060P	133, 646	3318-1502P	132, 645	3320-788PXI	139, 652	3324-270P	134, 647	3329-728P	135, 648	3329-9382P	137, 650
3315-0602P	133, 646	3318-15023P	132, 645	3320-7882P	139, 652	3324-2702P	134, 647	3329-7282P	137, 650	3329-93823P	136, 649
3315-06023P	133, 646	3318-180P	132, 645	3320-790P	138, 651	3324-27023P	134, 647	3329-72823P	136, 649	3329-93832P	136, 649
3315-080P	133, 646	3318-1802P	132, 645	3320-790PXI	139, 652	3328-040	153, 666	3329-72832P	136, 649	3329-940P	135, 648
3315-0802P	133, 646	3318-18023P	132, 645	3320-7902P	139, 652	3328-060	153, 666	3329-730P	135, 648	3329-9402P	137, 650
3315-08023P	133, 646	3318-210P	132, 645	3320-792P	138, 651	3328-060P	134, 647	3329-7302P	137, 650	3329-94023P	136, 649
3315-100P	133, 646	3318-2102P	132, 645	3320-792PXI	139, 652	3328-080	153, 666	3329-73023P	136, 649	3329-94032P	136, 649
3315-1002P	133, 646	3318-21023P	132, 645	3320-7922P	139, 652	3328-080P	134, 647	3329-73032P	136, 649	3329-942P	135, 648
3315-10023P	133, 646	3318-240P	132, 645	3320-795P	138, 651	3328-100	153, 666	3329-732P	135, 648	3329-9422P	137, 650
3315-120P	133, 646	3318-2402P	132, 645	3320-7952P	139, 652	3328-100P	134, 647	3329-7322P	137, 650	3329-94223P	136, 649
3315-1202P	133, 646	3318-24023P	132, 645	3320-841P	138, 651	3328-120	153, 666	3329-73223P	136, 649	3329-94232P	137, 650
3315-12023P	133, 646	3318-270P	132, 645	3320-843P	138, 651	3328-120P	134, 647	3329-73232P	136, 649	3329-945P	135, 648
3315-150P	133, 646	3318-2702P	132, 645	3320-844P	138, 651	3328-140	153, 666	3329-784P	135, 648	3329-9452P	137, 650
3315-1502P	133, 646	3318-27023P	132, 645	3320-8442P	139, 652	3328-150P	134, 647	3329-7842P	137, 650	3329-94523P	136, 649
3315-15023P	133, 646	3320-060P	137, 650	3320-846P	138, 651	3328-160	153, 666	3329-78423P	136, 649	3329-94532P	137, 650
3315-180P	133, 646	3320-060PXI	139, 652	3320-846PXI	139, 652	3328-180P	134, 647	3329-78432P	136, 649	3329-948P	135, 648
3315-1802P	133, 646	3320-0602P	138, 651	3320-8462P	139, 652	3328-210P	134, 647	3329-786P	135, 648	3329-9482P	137, 650
3315-18023P	133, 646	3320-080P	137, 650	3320-848P	138, 651	3328-240P	134, 647	3329-7862P	137, 650	3329-94823P	136, 649
3315-210P	133, 646	3320-080PXI	139, 652	3320-848PXI	139, 652	3328-270P	134, 647	3329-78623P	136, 649	3329-94832P	137, 650
3315-2102P	133, 646	3320-0802P	138, 651	3320-8482P	139, 652	3329-060P	134, 647	3329-78632P	136, 649	3329-951P	135, 648
3315-21023P	133, 646	3320-100P	138, 651	3320-850P	138, 651	3329-0602P	134, 647	3329-788P	135, 648	3329-9512P	137, 650
3315-240P	133, 646	3320-100PXI	139, 652	3320-850PXI	139, 652	3329-06023P	134, 647	3329-7882P	137, 650	3329-95123P	136, 649
3315-2402P	133, 646	3320-1002P	138, 651	3320-8502P	139, 652	3329-080P	134,				

100



Spears List Price Part Number Index

361-005G	693	3622R-030	237, 388	3627-030	77, 234	384	3637-007C	317, 385	3701-626	549, 671
361-007G	693	3622R-030C	320, 388		384	3632-040C	317, 385	3637-010	77, 234	682
361-010G	693	3622R-040	237, 388	3627-030C	317, 385	3632R-005	237, 388	384	3701-628	549, 671
361-012G	693	3622R-040C	320, 388	3627-040	77, 234	3632R-005C	320, 388	3637-010C	317, 385	682
361-015G	693	3622RS-005	237, 389		384	3632R-007	237, 388	3637-012	77, 234	3701-661
361-020G	693	3622RS-005C	320, 389	3627-040C	317, 385	3632R-007C	320, 388	384	671, 682	
361-168G	693	3622RS-007	237, 389	3628-005	697	3632R-010	237, 388	3637-012C	317, 385	3701-663
361-212G	693	3622RS-007C	320, 389	3628-005C	698	3632R-010C	320, 388	3637-015	77, 234	671, 682
361-251G	693	3622RS-010	237, 389	3628-007	697	3632R-012	237, 388	384	3701-664	549, 671
3620-005	406	3622RS-010C	320, 389	3628-007C	698	3632R-012C	320, 388	3637-015C	317, 385	682
3620-005C	406	3622RS-012	237, 389	3628-010	697	3632R-015	237, 388	3637-020	77, 234	3701-666
3620-007	406	3622RS-012C	320, 389	3628-012	697	3632R-015C	320, 388	384	549, 671	682
3620-007C	406	3622RS-015	237, 389	3628-012C	698	3632R-020	237, 388	3637-020C	317, 385	3701-668
3620-010	406	3622RS-015C	320, 389	3628-015	697	3632R-020C	320, 388	3637-025	77, 234	682
3620-010C	406	3622RS-020	237, 389	3628-015C	698	3632R-025	237, 388	384	3701-670	549, 671
3620-012	406	3622RS-020C	320, 389	3628-020	697	3632R-025C	320, 388	3637-025C	317, 385	682
3620-012C	406	3622RS-025	237, 389	3628-020C	698	3632R-030	237, 388	3637-030	77, 234	3701-691
3620-015	406	3622RS-025C	320, 389	3629-005	77, 234	3632R-030C	320, 388	384	671, 682	
3620-015C	406	3622RS-030	237, 389		384	3632R-040	237, 388	3637-030C	317, 385	3701-693
3620-020	406	3622RS-030C	320, 389	3629-005C	317, 385	3632R-040C	320, 388	3637-040	77, 234	671, 682
3620-020C	406	3622RS-040	237, 389	3629-007	77, 234	3632RS-005	237, 389	384	3701-694	540, 549
3620-030	406	3622RS-040C	320, 389		384	3632RS-005C	320, 389	3637-040C	317, 385	671, 682
3620-030C	406	3623-005	77, 234	3629-007C	317, 385	3632RS-007	237, 389	3638-005	697	3701-696
3620-040	406		384	3629-010	77, 234	3632RS-007C	320, 389	3638-005C	698	540, 549
3620-040C	406	3623-005C	317, 385		384	3632RS-010	237, 389	3638-007	697	3701-698
3621-005CSR	317, 385	3623-007	77, 234	3629-010C	317, 385	3632RS-010C	320, 389	3638-007C	698	540, 549
3621-005SR	77, 234		384	3629-012	77, 234	3632RS-012	237, 389	3638-010	697	3701-700
	384	3623-007C	317, 385		384	3632RS-012C	320, 389	3638-010C	698, 698	540, 549
3621-007CSR	317, 385	3623-010	77, 234	3629-012C	317, 385	3632RS-015	237, 389	3638-012	697	3701-702
3621-007SR	77, 234		384	3629-015	77, 234	3632RS-015C	320, 389	3638-012C	698	671, 682
	384	3623-010C	317, 385		384	3632RS-020	237, 389	3638-015	697	3701-751
3621-010CSR	317, 385	3623-012	77, 234	3629-015C	317, 385	3632RS-020C	320, 389	3638-015C	698	682
3621-010SR	77, 234		384	3629-020	77, 234	3632RS-025	237, 389	3638-020	697	3701-753
	384	3623-012C	317, 385		384	3632RS-025C	320, 389	3638-020C	698	682
3621-012CSR	317, 385	3623-015	77, 234	3629-020C	317, 385	3632RS-030	237, 389	3639-005	77, 234	3701-754
3621-012SR	77, 234		384	3630-005	406	3632RS-030C	320, 389	384	549, 671	682
	384	3623-015C	317, 385	3630-005C	406	3632RS-040	237, 389	3639-005C	317, 385	3701-756
3621-015CSR	317, 385	3623-020	77, 234	3630-007	406	3632RS-040C	320, 389	3639-007	77, 234	682
3621-015SR	77, 234		384	3630-007C	406	3633-005	77, 234	384	3701-758	549, 671
	384	3623-020C	317, 385	3630-010	406		384	3639-007C	317, 385	682
3621-015WSR	34, 77	3623-025	78, 234	3630-010C	406	3633-005C	317, 385	3639-010	77, 234	3701-760
	385		385	3630-012	406	3633-007	77, 234	384	317, 385	3701-762
3621-020CSR	317, 385	3623-025C	317, 385	3630-012C	406		384	3639-010C	317, 385	549, 671
3621-020SR	77, 234	3623-030	78, 234	3630-015	406	3633-007C	317, 385	3639-012	77, 234	682
	384		385	3630-015C	406	3633-010	77, 234	384	317, 385	3701-764
3621-020WSR	34, 77	3623-030C	317, 385	3630-020	406		384	3639-012C	317, 385	682
	385	3623-040	78, 234	3630-020C	406	3633-010C	317, 385	3639-015	77, 234	3701-784
3621-025	77, 234		385	3630-030	406	3633-012	77, 234	384	317, 385	682
	384	3623-040C	317, 385	3630-030C	406		384	3639-015C	317, 385	3701-786
3621-025C	317, 385	3624-005	697	3630-040	406	3633-012C	317, 385	3639-020	77, 234	682
3621-025CSR	317, 385	3624-005C	698	3630-040C	406	3633-015	77, 234	384	317, 385	3701-788
3621-025SR	77, 234	3624-007	697	3631-005CSR	317, 385		384	3639-020C	317, 385	682
	384	3624-007C	698	3631-005SR	77, 234	3633-015C	317, 385	3701-060	549, 671	3701-790
3621-030	77, 234	3624-010	697		384	3633-020	77, 234	682	682	
	384	3624-010C	698	3631-007CSR	317, 385		384	3701-060TEST	540	3701-792
3621-030C	317, 385	3624-012	697	3631-007SR	77, 234	3633-020C	317, 385	3701-080	549, 671	682
3621-030CSR	317, 385	3624-012C	698		384	3633-025	78, 234		682	3701-794
3621-030SR	77, 234	3624-015	697	3631-010CSR	317, 385		385	3701-080TEST	540	682
	384	3624-015C	698	3631-010SR	77, 234	3633-025C	317, 385	3701-100	549, 671	3701-796
3621-040	77, 234	3624-020	697		384	3633-030	78, 234	682	682	
	384	3624-020C	698	3631-012CSR	317, 385		385	3701-100TEST	540	3701-814
3621-040C	317, 385	3625-005	697	3631-012SR	77, 234	3633-030C	317, 385	3701-120	549, 671	682
3621-040CSR	317, 385	3625-005C	698		384	3633-040	78, 234		682	3701-816
3621-040SR	77, 234	3625-007	697	3631-015CSR	317, 385		385	3701-120TEST	540	682
	384	3625-007C	698	3631-015SR	77, 234	3633-040C	317, 385	3701-140	540, 549	3701-818
3622-007FG	743	3625-010	697		384	3634-005	697		671, 682	682
3622-010FG	743	3625-010C	698	3631-020CSR	317, 385	3634-005C	698	3701-160	549, 671	3701-820
3622-015W	34, 77	3625-012	697	3631-020SR	77, 234	3634-007	697		682	682
	385	3625-012C	698		384	3634-007C	698	3701-180	549, 671	3701-822
3622-020W	34, 77	3625-015	697	3631-025	77, 234	3634-010	697		682	682
	385	3625-015C	698		384	3634-010C	698	3701-200	549, 671	3701-824
3622-025	77, 234	3625-020	697	3631-025C	317, 385	3634-012	697		682	682
	384	3625-020C	698	3631-025CSR	317, 385	3634-012C	698	3701-240	549, 671	3701-826
3622-025C	317, 385	3627-005	77, 234	3631-025SR	77, 234	3634-015	697		682	682
3622-030	77, 234		384		384	3634-015C	698	3701-528	540, 549	3701-828
	384	3627-005C	317, 385	3631-030	77, 234	3634-020	697		671, 682	682
3622-030C	317, 385	3627-007	77, 234		384	3634-020C	698	3701-530	540, 549	3701-904
3622-040	77, 234		384	3631-030C	317, 385	3635-005	697		671, 682	682
	384	3627-007C	317, 385	3631-030CSR	317, 385	3635-005C	698	3701-532	549, 671	3701-906
3622-040C	317, 385	3627-010	77, 234	3631-030SR	77, 234	3635-007	697		682	549, 671
3622R-005	237, 388		384		384	3635-007C	698	3701-578	540, 549	3701-908
3622R-005C	320, 388	3627-010C	317, 385	3631-040	77, 234	3635-010	697		671, 682	682
3622R-007	237, 388	3627-012	77, 234		384	3635-010C	698	3701-580	540, 549	3701-910
3622R-007C	320, 388		384	3631-040C	317, 385	3635-012	697		671, 682	682
3622R-010	237, 388	3627-012C	317, 385	3631-040CSR	317, 385	3635-012C	698	3701-582	549, 671	3701-912
3622R-010C	320, 388	3627-015	77, 234	3631-040SR	77, 234	3635-015	697		682	682
3622R-012	237, 388		384		384	3635-015C	698	3701-585	549, 671	3701-914
3622R-012C	320, 388	3627-015C	317, 385	3632-025	77, 234	3635-020	697		682	682
3622R-015	237, 388	3627-020	77, 234		384	3635-020C	698	3701-621	540, 549	3701-916
3622R-015C	320, 388		384	3632-025C	317, 385	3637-005	77, 234		671, 682	682
3622R-020	237, 388	3627-020C	317, 385	3632-030	77, 234		384	3701-623	540, 549	3701-918
3622R-020C	320, 388	3627-025	77, 234		384	3637-005C	317, 385		671, 682	682
3622R-025	237, 388		384	3632-030C	317, 385	3637-007	77, 234	3701-624	549, 671	3701-920
3622R-025C	320, 388	3627-025C	317, 385	3632-040	77, 234		384		682	682

Spears List Price Part Number Index



3706-060	549, 671	3716-240	550, 672	3720-670	553, 675	3724-200	551, 673	3729-578	674, 685	3729-790	551, 674
	682		683		686		684		685		685
3706-080	549, 671	3717-040	550, 672	3720-691	553, 675	3724-240	551, 673	3729-580	684	3729-790E	552, 674
	682	3717-060	550, 672		686		684		551, 673		685
3706-100	549, 671		683	3720-693	553, 675		684		684	3729-792	551, 674
	682	3717-080	550, 672		686	3727-040	550, 672	3729-580E	535, 552		685
3706-120	549, 671		683	3720-694	553, 675		684		674, 685	3729-792E	552, 674
	682	3717-100	550, 672		686	3727-060	550, 672	3729-582	551, 673		685
3706-140	538, 549		683	3720-696	553, 675		684		684	3729-794	552, 674
	671, 682	3717-120	550, 672		686	3727-080	550, 672	3729-582E	535, 552		685
3706-160	549, 671		683	3720-698	553, 675		684		674, 685	3729-794E	552, 674
	682	3717-140	538, 550		686	3727-100	538, 550	3729-585	551, 673		685
3706-180	549, 671		672, 683	3720-700	553, 675		672, 684		684	3729-796	552, 674
	682	3717-160	550, 672		686	3727-120	538, 550	3729-585E	535, 552		685
3706-200	550, 672		683	3720-702	553, 675		672, 684		674, 685	3729-796E	552, 674
	683	3717-180	550, 672		686	3727-140	538, 550	3729-624	535, 551		685
3706-240	550, 672		683	3720-751	553, 675		672, 684		673, 684	3729-816	552, 674
	683	3717-200	550, 672		686	3727-160	551, 673	3729-624E	535, 552		685
3709-060	539, 551		683	3720-753	553, 675		684		674, 685	3729-818	552, 674
	673, 684	3717-240	550, 672		686	3727-180	551, 673	3729-626	535, 551		685
3709-080	539, 551		683	3720-754	553, 675		684		673, 684	3729-820	552, 674
	673, 684	3718-040	550, 672		686	3727-200	551, 673	3729-626E	535, 552		685
3709-100	539, 551		683	3720-756	553, 675		684		674, 685	3729-822	552, 674
	673, 684	3718-060	550, 672		686	3727-240	551, 673	3729-628	535, 551		685
3709-120	539, 551		683	3720-758	553, 675		684		673, 684	3729-824	552, 674
	673, 684	3718-080	550, 672		686	3728-040	551, 673	3729-628E	535, 552		685
3709-140	539, 551		683	3720-760	553, 675		684		674, 685	3729-826	552, 674
	673, 684	3718-100	550, 672		686	3728-060	551, 673	3729-661	535		685
3709-160	551, 673		683	3720-762	553, 675		684		535	3729-828	552, 674
	684	3718-120	550, 672		686	3728-080	551, 673	3729-664	535, 551		685
3709-180	551, 673		683	3720-764	553, 675		684		673, 684	3729-906	552, 674
	684	3718-140	550, 672		686	3728-100	551, 673	3729-664E	535, 552		685
3709-200	551, 673		683	3720-784	553, 675		684		674, 685	3729-908	552, 674
	684	3718-160	550, 672		686	3728-120	551, 673	3729-666	535, 551		685
3709-240	551, 673		683	3720-786	553, 675		684		673, 684	3729-910	552, 674
	684	3718-180	550, 672		686	3728-140	551, 673	3729-666E	535, 552		685
3711-040	550, 672		683	3720-788	553, 675		684		674, 685	3729-912	552, 674
	683	3718-200	550, 672		686	3728-160	551, 673	3729-668	551, 673		685
3711-060	550, 672		683	3720-790	553, 675		684		684	3729-914	552, 674
	683	3718-240	550, 672		686	3728-180	551, 673	3729-668E	535, 552		685
3711-080	550, 672		683	3720-792	553, 675		684		674, 685	3729-916	552, 674
	683	3720-040	674		686	3728-200	551, 673	3729-670	535, 551		685
3711-100	550, 672	3720-060	552, 674	3720-794	553, 675		684		673, 684	3729-918	552, 674
	683		685	3720-796	553, 675		684		535, 552		685
3711-120	550, 672	3720-080	552, 674		686	3728-240	551, 673	3729-670E	674, 685		685
	683		685	3720-814	553, 675	3729-040IXS	557, 679	3729-691	535	3729-920	552, 674
3711-140	550, 672	3720-100	552, 674		686	3729-04013IXS	461, 557	3729-694	535, 551	3742-060	550, 672
	683		685	3720-816	553, 675		679		673, 684		683
3711-160	550, 672	3720-120	552, 674		686	3729-04031IXS	557, 679	3729-696	535, 551	3742-080	550, 672
	683		685	3720-818	553, 675	3729-060IXS	557, 679		673, 684		683
3711-180	550, 672	3720-140	553, 675		686	3729-06013IXS	557, 679	3729-696E	552, 674	3742-100	538, 550
	683		686	3720-820	553, 675	3729-06031IXS	557, 679		685		672, 683
3711-200	550, 672	3720-160	553, 675		686	3729-080	551, 673	3729-698	535, 551	3742-120	538, 550
	683		686	3720-822	553, 675		684		673, 684		672, 683
3711-240	550, 672	3720-180	553, 675		686	3729-080IXS	557, 679	3729-698E	552, 674	3742-140	538, 550
	683		686	3720-824	553, 675	3729-08013IXS	557, 679		685		672, 683
3715-040	550, 672	3720-200	553, 675		686	3729-08031IXS	557, 679	3729-700	535, 551	3742-160	550, 672
	683		686	3720-826	553, 675	3729-100	551, 673		673, 684		683
3715-060	550, 672	3720-240	553, 675		686		684	3729-700E	552, 674	3742-180	550, 672
	683		686	3720-828	553, 675	3729-100IXS	557, 679		685		683
3715-080	550, 672	3720-528	552, 674		686	3729-10013IXS	557, 679	3729-702	535, 551	3742-200	550, 672
	683		685	3720-904	553, 675	3729-10031IXS	557, 679		673, 684		683
3715-100	550, 672	3720-530	552, 674		686	3729-120	551, 673	3729-702E	552, 674	3742-240	550, 672
	683		685	3720-906	553, 675		684		685		683
3715-120	550, 672	3720-532	552, 674		686	3729-120IXS	557, 679	3729-754	551, 673	3747-100	537, 557
	683		685	3720-908	553, 675	3729-12013IXS	557, 679		684		679, 686
3715-140	550, 672	3720-578	552, 674		686	3729-12031IXS	557, 679	3729-756	551, 673	3747-120	537, 557
	683		685	3720-910	553, 675	3729-140	551, 673		684		679, 686
3715-160	550, 672	3720-580	552, 674		686	3729-160	551, 673	3729-756E	552, 674	3747-140	537, 557
	683		685	3720-912	553, 675		684		685		679, 686
3715-180	550, 672	3720-582	552, 674		686	3729-180	551, 673	3729-758	551, 673	3747-160	557, 679
	683		685	3720-914	553, 675		684		684		686
3715-200	550, 672	3720-585	552, 674		686	3729-200	551, 673	3729-758E	552, 674	3747-180	557, 679
	683		685	3720-916	553, 675		684		685		686
3715-240	550, 672	3720-621	552, 674		686	3729-240	551, 673	3729-760	551, 673	3747-200	557, 679
	683		685	3720-918	553, 675		684		684		686
3716-040	550, 672	3720-623	552, 674		686	3729-338E	552, 674	3729-760E	552, 674	3747-240	557, 679
	683		685	3720-920	553, 675		685		685		686
3716-060	550, 672	3720-624	552, 674		686	3729-420E	552, 674	3729-762	551, 673	3749-060	557, 679
	683		685	3724-040	673		685		684		686
3716-080	550, 672	3720-626	552, 674	3724-060	538, 551	3729-422E	552, 674	3729-762E	552, 674	3749-080	557, 679
	683		685		673, 683		685		685		686
3716-100	538, 550	3720-628	552, 674	3724-080	538, 551		685	3729-764	551, 673	3749-100	557, 679
	672, 683		685		673, 683	3729-528	535, 551		684		686
3716-120	538, 550	3720-661	552, 674	3724-100	538, 551		673, 684	3729-764E	552, 674	3749-120	557, 679
	672, 683		685		673, 683	3729-528E	535, 552		685		686
3716-140	538, 550	3720-663	552, 675	3724-120	538, 551		674, 685	3729-786	551, 673	3749-140	557, 679
	672, 683		685		673, 683	3729-530	535, 551		684		686
3716-160	550, 672	3720-664	552, 675	3724-140	538, 551		673, 684	3729-786E	552, 674	3749-160	557, 679
	683		686		538, 551	3729-530E	535, 552		685		686
3716-180	550, 672	3720-666	552, 675	3724-160	673, 683		674, 685	3729-788	551, 674	3763-528	22, 557
	683		686		551, 673	3729-532	551, 673		685		679
3716-200	550, 672	3720-668	552, 675	3724-180	551, 673	3729-532E	535, 552	3729-788E	552, 674	3763-530	22, 557
	683		686						685		679



Spears List Price Part Number Index

3763-532	22, 557	3763-824	22, 558	3765-781	23, 559	675	3777-670	541, 555
	679		680		681	3775-693	542, 553	543, 554
3763-578	22, 557	3763-826	22, 558	3765-783	23, 559	675	3777-691	541, 555
	679		680		681	3775-694	542, 553	543, 554
3763-580	22, 557	3763-828	22, 558	3765-784	23, 559	675	3777-693	541, 555
	679		680		681	3775-696	542, 553	543, 554
3763-582	22, 557	3763-901	22, 558	3765-786	23, 559	675	3777-694	541, 555
	679		680		681	3775-698	542, 553	543, 554
3763-585	22, 557	3763-903	22, 558	3765-788	23, 559	675	3777-696	541, 555
	679		680		681	3775-700	542, 553	543, 554
3763-621	22, 557	3763-904	22, 558	3765-790	23, 559	676	3777-698	541, 555
	679		680		681	3775-702	542, 553	543, 554
3763-623	22, 557	3763-906	22, 558	3765-792	23, 559	676	3777-700	541, 555
	679		680		681	3775-751	553, 676	543, 554
3763-624	22, 557	3763-908	22, 558	3765-794	23, 559	3775-753	554, 676	543, 554
	679		680		681	3775-754	554, 676	543, 554
3763-626	22, 557	3763-910	22, 558	3765-796	23, 559	3775-756	554, 676	543, 554
	679		680		681	3775-758	554, 676	543, 554
3763-628	22, 557	3763-912	22, 558	3765-811	23, 559	3775-760	554, 676	543, 554
	679		680		681	3775-762	554, 676	543, 554
3763-661	22, 557	3763-914	22, 558	3765-813	23, 559	3775-764	554, 676	543, 554
	679		680		681	3775-784	554, 676	543, 554
3763-663	22, 557	3763-916	22, 558	3765-814	23, 559	3775-786	554, 676	543, 554
	679		680		681	3775-788	554, 676	543, 554
3763-664	22, 557	3763-918	22, 558	3765-816	23, 559	3775-790	554, 676	543, 554
	679		680		681	3775-792	554, 676	543, 554
3763-666	22, 557	3763-920	22, 558	3765-818	23, 559	3775-794	554, 676	543, 554
	679		680		681	3775-796	554, 676	543, 554
3763-668	22, 557	3765-528	22, 558	3765-820	23, 559	3775-814	554, 676	543, 554
	680		680		681	3775-816	554, 676	543, 554
3763-670	22, 557	3765-530	22, 558	3765-822	23, 559	3775-818	554, 676	543, 554
	680		680		681	3775-820	554, 676	543, 554
3763-691	22, 557	3765-532	22, 558	3765-824	23, 559	3775-822	554, 676	543, 554
	680		680		681	3775-826	554, 676	543, 554
3763-693	22, 557	3765-578	22, 558	3765-826	23, 559	3775-828	554, 676	543, 554
	680		680		681	3775-904	554, 676	543, 554
3763-694	22, 557	3765-580	22, 558	3765-828	23, 559	3775-906	554, 676	543, 554
	680		680		681	3775-908	554, 676	543, 554
3763-696	22, 557	3765-582	22, 558	3765-901	23, 559	3775-910	554, 676	543, 554
	680		680		681	3775-912	554, 676	543, 554
3763-698	22, 557	3765-585	22, 558	3765-903	23, 559	3775-914	554, 676	543, 554
	680		680		681	3775-916	554, 676	543, 554
3763-700	22, 558	3765-621	22, 558	3765-904	23, 559	3775-918	554, 676	543, 554
	680		680		681	3775-920	554, 676	543, 554
3763-702	22, 558	3765-623	22, 558	3765-906	23, 559	3776-060	554, 676	543, 554
	680		680		681	3776-080	554, 676	543, 554
3763-751	22, 558	3765-624	22, 558	3765-908	23, 559	3776-100	554, 676	543, 554
	680		680		681	3776-120	554, 676	543, 554
3763-753	22, 558	3765-626	22, 558	3765-910	23, 559	3776-140	554, 676	543, 554
	680		681		681	3776-160	554, 676	543, 554
3763-754	22, 558	3765-628	22, 558	3765-912	23, 559	3776-180	554, 676	543, 554
	680		681		681	3776-200	554, 676	543, 554
3763-756	22, 558	3765-661	22, 558	3765-914	23, 559	3776-220	554, 676	543, 554
	680		681		681	3776-240	554, 676	543, 554
3763-758	22, 558	3765-663	22, 558	3765-916	23, 559	3776-260	554, 676	543, 554
	680		681		681	3776-280	554, 676	543, 554
3763-760	22, 558	3765-664	22, 558	3765-918	23, 559	3776-300	554, 676	543, 554
	680		681		681	3776-320	554, 676	543, 554
3763-762	22, 558	3765-666	22, 558	3765-920	23, 559	3776-340	554, 676	543, 554
	680		681		681	3776-360	554, 676	543, 554
3763-764	22, 558	3765-668	22, 558	3775-080	553, 675	3776-380	554, 676	543, 554
	680		681	3775-100	553, 675	3776-400	554, 676	543, 554
3763-781	22, 558	3765-670	22, 559	3775-120	553, 675	3776-420	554, 676	543, 554
	680		681	3775-140	553, 675	3776-440	554, 676	543, 554
3763-783	22, 558	3765-691	22, 559	3775-160	553, 676	3776-460	554, 676	543, 554
	680		681	3775-180	554, 676	3776-480	554, 676	543, 554
3763-784	22, 558	3765-693	22, 559	3775-200	554, 676	3776-500	554, 676	543, 554
	680		681	3775-220	554, 676	3776-520	554, 676	543, 554
3763-786	22, 558	3765-694	22, 559	3775-240	554, 676	3776-540	554, 676	543, 554
	680		681	3775-260	554, 676	3776-560	554, 676	543, 554
3763-788	22, 558	3765-696	22, 559	3775-280	554, 676	3776-580	554, 676	543, 554
	680		681	3775-300	554, 676	3776-600	554, 676	543, 554
3763-790	22, 558	3765-698	22, 559	3775-320	554, 676	3776-620	554, 676	543, 554
	680		681	3775-340	554, 676	3776-640	554, 676	543, 554
3763-792	22, 558	3765-700	22, 559	3775-360	554, 676	3776-660	554, 676	543, 554
	680		681	3775-380	554, 676	3776-680	554, 676	543, 554
3763-794	22, 558	3765-702	22, 559	3775-400	554, 676	3776-700	554, 676	543, 554
	680		681	3775-420	554, 676	3776-720	554, 676	543, 554
3763-796	22, 558	3765-751	22, 559	3775-440	554, 676	3776-740	554, 676	543, 554
	680		681	3775-460	554, 676	3776-760	554, 676	543, 554
3763-811	22, 558	3765-753	23, 559	3775-480	554, 676	3776-780	554, 676	543, 554
	680		681	3775-500	554, 676	3776-800	554, 676	543, 554
3763-813	22, 558	3765-754	23, 559	3775-520	554, 676	3776-820	554, 676	543, 554
	680		681	3775-540	554, 676	3776-840	554, 676	543, 554
3763-814	22, 558	3765-756	23, 559	3775-560	554, 676	3776-860	554, 676	543, 554
	680		681	3775-580	554, 676	3776-880	554, 676	543, 554
3763-816	22, 558	3765-758	23, 559	3775-600	554, 676	3776-900	554, 676	543, 554
	680		681	3775-620	554, 676	3776-920	554, 676	543, 554
3763-818	22, 558	3765-760	23, 559	3775-640	554, 676	3776-940	554, 676	543, 554
	680		681	3775-660	554, 676	3776-960	554, 676	543, 554
3763-820	22, 558	3765-762	23, 559	3775-680	554, 676	3776-980	554, 676	543, 554
	680		681	3775-700	554, 676	3777-000	554, 676	543, 554
3763-822	22, 558	3765-764	23, 559	3775-720	554, 676	3777-020	554, 676	543, 554
	680		681	3775-740	554, 676	3777-040	554, 676	543, 554

Spears List Price Part Number Index



3790-670	678	3792-626	541	3901-762	549, 671	3911-080	550, 672	3918-240	550, 672	3920-788	553, 675
	539, 556	3792-628	541		549, 671		550, 672		550, 672		553, 675
	678	3792-661	541	3901-764	549, 671	3911-100	550, 672	3920-060	552, 674	3920-790	553, 675
3790-691	539, 556	3792-663	541		549, 671		550, 672		552, 674		553, 675
	678	3792-664	541	3901-784	549, 671	3911-120	550, 672	3920-080	552, 674	3920-792	553, 675
3790-693	539, 556	3792-666	541		549, 671		550, 672		552, 674		553, 675
	678	3792-668	541	3901-786	549, 671	3911-140	550, 672	3920-100	552, 674	3920-794	553, 675
3790-694	539, 556	3792-670	541		549, 671		550, 672		552, 674		553, 675
	678	3792-691	541	3901-788	549, 671	3911-160	550, 672	3920-120	552, 674	3920-796	553, 675
3790-696	539, 556	3792-693	541		549, 671		550, 672		552, 674		553, 675
	678	3792-694	541	3901-790	549, 671	3911-180	550, 672	3920-140	553, 675	3920-814	553, 675
3790-698	539, 556	3792-696	541		549, 671		550, 672		553, 675		553, 675
	678	3792-698	541	3901-792	549, 671	3911-200	550, 672	3920-160	553, 675	3920-816	553, 675
3790-700	539, 556	3792-700	541		549, 671		550, 672		553, 675		553, 675
	678	3792-702	541	3901-794	549, 671	3911-240	550, 672	3920-180	553, 675	3920-818	553, 675
3790-702	539, 556	3901-060	549, 671		549, 671		550, 672		553, 675		553, 675
	678		682	3901-796	549, 671	3915-040	550, 672	3920-200	553, 675	3920-820	553, 675
3790-751	556, 678	3901-080	549, 671		549, 671		550, 672		553, 675		553, 675
3790-753	556, 678		682	3901-814	549, 671	3915-060	550, 672	3920-240	553, 675	3920-822	553, 675
3790-754	556, 678	3901-100	549, 671		549, 671		550, 672		553, 675		553, 675
3790-756	556, 678		682	3901-816	549, 671	3915-080	550, 672	3920-420	552, 674	3920-824	553, 675
3790-758	556, 678	3901-120	549, 671		549, 671		550, 672		552, 674		553, 675
3790-760	556, 678		682	3901-818	549, 671	3915-100	550, 672	3920-422	552, 674	3920-826	553, 675
3790-762	556, 678	3901-140	549, 671		549, 671		550, 672		552, 674		553, 675
3790-764	556, 678		682	3901-820	549, 671	3915-120	550, 672	3920-528	552, 674	3920-828	553, 675
3790-784	556, 678	3901-160	549, 671		549, 671		550, 672		552, 674		553, 675
	556, 678		682	3901-822	549, 671	3915-140	550, 672	3920-530	552, 674	3920-904	553, 675
3790-786	556, 678	3901-180	549, 671		549, 671		550, 672		552, 674		553, 675
3790-788	556, 678		682	3901-824	549, 671	3915-160	550, 672	3920-532	552, 674	3920-906	553, 675
3790-790	556, 678	3901-200	549, 671		549, 671		550, 672		552, 674		553, 675
3790-792	556, 678		682	3901-826	549, 671	3915-180	550, 672	3920-578	552, 674	3920-908	553, 675
3790-794	556, 678	3901-240	549, 671		549, 671		550, 672		552, 674		553, 675
3790-796	556, 678		682	3901-828	549, 671	3915-200	550, 672	3920-580	552, 674	3920-910	553, 675
3790-814	556, 678	3901-528	549, 671		549, 671		550, 672		552, 674		553, 675
3790-816	556, 678		682	3901-904	549, 671	3915-240	550, 672	3920-582	552, 674	3920-912	553, 675
3790-818	556, 678	3901-530	549, 671		549, 671		550, 672		552, 674		553, 675
3790-820	556, 678		682	3901-906	549, 671	3916-040	550, 672	3920-585	552, 674	3920-914	553, 675
3790-822	556, 678	3901-532	549, 671		549, 671		550, 672		552, 674		553, 675
3790-824	556, 679		682	3901-908	549, 671	3916-060	550, 672	3920-621	552, 674	3920-916	553, 675
3790-826	556, 679	3901-578	549, 671		549, 671		550, 672		552, 674		553, 675
3790-828	556, 679		682	3901-910	549, 671	3916-080	550, 672	3920-623	552, 674	3920-918	553, 675
3790-904	557, 679	3901-580	549, 671		549, 671		550, 672		552, 674		553, 675
3790-906	557, 679		682	3901-912	549, 671	3916-100	550, 672	3920-624	552, 674	3920-920	553, 675
3790-908	557, 679	3901-582	549, 671		549, 671		550, 672		552, 674		553, 675
3790-910	557, 679		682	3901-914	549, 671	3916-120	550, 672	3920-626	552, 674	3924-060	551, 673
3790-912	557, 679	3901-585	549, 671		549, 671		550, 672		552, 674		551, 673
3790-914	557, 679		682	3901-916	549, 671	3916-140	550, 672	3920-628	552, 674	3924-080	551, 673
3790-916	557, 679	3901-621	549, 671		549, 671		550, 672		552, 674		551, 673
3790-918	557, 679		682	3901-918	549, 671	3916-160	550, 672	3920-661	552, 674	3924-100	551, 673
3790-920	557, 679	3901-623	549, 671		549, 671		550, 672		552, 675		551, 673
3791-060	539		682	3901-920	549, 671	3916-180	550, 672	3920-663	552, 675	3924-120	551, 673
3791-080	539	3901-624	549, 671		549, 671		550, 672		552, 675		551, 673
3791-100	539		682	3906-060	549, 671	3916-200	550, 672	3920-664	552, 675	3924-140	551, 673
3791-120	539	3901-626	549, 671		549, 671		550, 672		552, 675		551, 673
3791-140	539		682	3906-080	549, 671	3916-240	550, 672	3920-666	552, 675	3924-160	551, 673
3791-528	540	3901-628	549, 671		549, 671		550, 672		552, 675		551, 673
3791-530	540		682	3906-100	549, 671	3917-040	550, 672	3920-668	552, 675	3924-180	551, 673
3791-532	540	3901-661	549, 671		549, 671		550, 672		553, 675		551, 673
3791-578	540		682	3906-120	549, 671	3917-060	550, 672	3920-670	553, 675	3924-200	551, 673
3791-580	540	3901-663	549, 671		549, 671		550, 672		553, 675		551, 673
3791-582	540		682	3906-140	549, 671	3917-080	550, 672	3920-691	553, 675	3924-240	551, 673
3791-585	540	3901-664	549, 671		549, 671		550, 672		553, 675		551, 673
3791-621	540		682	3906-160	549, 671	3917-100	550, 672	3920-693	553, 675	3927-040	550, 672
3791-623	540	3901-666	549, 671		549, 671		550, 672		553, 675		550, 672
3791-624	540		682	3906-180	549, 671	3917-120	550, 672	3920-694	553, 675	3927-060	550, 672
3791-626	540	3901-668	549, 671		549, 671		550, 672		553, 675		550, 672
3791-628	540		682	3906-200	549, 671	3917-140	550, 672	3920-696	553, 675	3927-080	550, 672
3791-661	540	3901-670	549, 671		549, 671		550, 672		553, 675		550, 672
3791-663	540		682	3906-240	549, 671	3917-160	550, 672	3920-698	553, 675	3927-100	550, 672
3791-664	540	3901-691	549, 671		549, 671		550, 672		553, 675		550, 672
3791-666	540		682	3909-040	551, 673	3917-180	550, 672	3920-700	553, 675	3927-120	550, 672
3791-668	540	3901-693	549, 671		551, 673		550, 672		553, 675		550, 672
3791-670	540		682	3909-060	551, 673	3917-200	550, 672	3920-702	553, 675	3927-140	550, 672
3791-691	540	3901-694	549, 671		551, 673		550, 672		553, 675		550, 672
3791-693	540		682	3909-080	551, 673	3917-240	550, 672	3920-751	553, 675	3927-160	551, 673
3791-694	540	3901-696	549, 671		551, 673		550, 672		553, 675		551, 673
3791-696	540		682	3909-100	551, 673	3918-040	550, 672	3920-753	553, 675	3927-180	551, 673
3791-698	540	3901-698	549, 671		551, 673		550, 672		553, 675		551, 673
3791-700	540		682	3909-120	551, 673	3918-060	550, 672	3920-754	553, 675	3927-200	551, 673
3791-702	540	3901-700	549, 671		551, 673		550, 672		553, 675		551, 673
3792-060	541		682	3909-140	551, 673	3918-080	550, 672	3920-756	553, 675	3927-240	551, 673
3792-080	541	3901-702	549, 671		551, 673		550, 672		553, 675		551, 673
3792-100	541		682	3909-160	551, 673	3918-100	550, 672	3920-758	553, 675	3928-040	551, 673
3792-120	541	3901-751	549, 671		551, 673		550, 672		553, 675		551, 673
3792-140	541		682	3909-180	551, 673	3918-120	550, 672	3920-760	553, 675	3928-060	551, 673
3792-528	541	3901-753	549, 671		551, 673		550, 672		553, 675		551, 673
3792-530	541		682	3909-200	551, 673	3918-140	550, 672	3920-762	553, 675	3928-080	551, 673
3792-532	541	3901-754	549, 671		551, 673		550, 672		553, 675		551, 673
3792-578	541		682	3909-240	551, 673	3918-160	550, 672	3920-764	553, 675	3928-100	551, 673
3792-580	541	3901-756	549, 671		551, 673		550, 672		553, 675		551, 673
3792-582	541		682	3911-040	550, 672	3918-180	550, 672	3920-784	553, 675	3928-120	551, 673
3792-585	541	3901-758	549, 671		550, 672		550, 672		553, 675		551, 673
3792-621	541		682	3911-060	550, 672	3918-200	55				



Spears List Price Part Number Index

3928-160	551, 673 684	3929-700	551, 673 684	3942-160	550, 672 683	3963-696	212, 558 680	3965-694C	300
3928-180	551, 673 684	3929-700E	552, 674 685	3942-180	550, 672 683	3963-696C	300	3965-696	213, 559
3928-200	551, 673 684	3929-702	551, 673 684	3942-200	550, 672 683	3963-698	212, 558 680	3965-696C	300
3928-240	551, 673 684	3929-702E	552, 674 685	3942-240	550, 672 683	3963-698C	300	3965-700	213, 559
3929-080	551, 673 684	3929-754	551, 673 684	3947-100	557, 679 686	3963-700	212, 558 680	3965-700C	300
3929-100	551, 673 684	3929-756	551, 673 684	3947-120	557, 679 686	3963-700C	300	3965-702	213, 559
3929-120	551, 673 684	3929-756E	552, 674 685	3947-140	557, 679 686	3963-702	212, 558 680	3965-702C	300
3929-140	551, 673 684	3929-758	551, 673 684	3947-160	557, 679 686	3963-702C	300	3965-751	213, 559
3929-160	551, 673 684	3929-758E	552, 674 685	3947-180	557, 679 686	3963-751	212, 558 680	3965-751C	300
3929-180	551, 673 684	3929-760	551, 673 684	3947-200	557, 679 686	3963-751C	300	3965-753	213, 559
3929-200	551, 673 684	3929-760E	552, 674 685	3947-240	557, 679 686	3963-753	212, 558 680	3965-753C	300
3929-240	551, 673 684	3929-762	551, 673 684	3949-060	557, 679 686	3963-753C	300	3965-754	213, 559
3929-338E	552, 674 685	3929-762E	552, 674 685	3949-080	557, 679 686	3963-754	212, 558 680	3965-754C	300
3929-420E	552, 674 685	3929-764	551, 673 684	3949-100	557, 679 686	3963-754C	300	3965-756	213, 559
3929-422E	552, 674 685	3929-764E	552, 674 685	3949-120	557, 679 686	3963-756	212, 558 680	3965-756C	300
3929-528	551, 673 684	3929-786	551, 673 684	3949-160	557, 679 686	3963-756C	300	3965-758	213, 559
3929-528E	552, 674 685	3929-786E	552, 674 685	3963-528	212, 558 680	3963-758	212, 558 680	3965-758C	300
3929-530	551, 673 684	3929-788	551, 674 685	3963-528C	299	3963-758C	300	3965-760	213, 559
3929-530E	552, 674 685	3929-788E	552, 674 685	3963-530	212, 558 299	3963-760	212, 558 680	3965-760C	300
3929-532	551, 673 684	3929-790	551, 674 685	3963-530C	299	3963-760C	300	3965-762	213, 559
3929-532E	552, 674 685	3929-790E	552, 674 685	3963-532	212, 558 680	3963-762	212, 558 680	3965-762C	300
3929-578	551, 673 684	3929-792	551, 674 685	3963-532C	299	3963-762C	300	3965-764	213, 559
3929-580	551, 673 684	3929-792E	552, 674 685	3963-578	212, 558 680	3963-764	212, 558 680	3965-764C	300
3929-580E	552, 674 685	3929-794	552, 674 685	3963-578C	299	3963-764C	300	3965-781	213, 559
3929-582	551, 673 684	3929-794E	552, 674 685	3963-580	212, 558 299	3963-781	212, 558 680	3965-781C	300
3929-582E	552, 674 685	3929-796	552, 674 685	3963-580C	299	3963-781C	300	3965-783	213, 559
3929-585	551, 673 684	3929-796E	552, 674 685	3963-582	212, 558 680	3963-783	212, 558 680	3965-783C	300
3929-585E	552, 674 685	3929-816	552, 674 685	3963-582C	299	3963-784	212, 558 680	3965-784	213, 559
3929-624	551, 673 684	3929-818	552, 674 685	3963-585	212, 558 680	3963-784C	300	3965-786	213, 559
3929-624E	552, 674 685	3929-820	552, 674 685	3963-585C	299	3963-786	212, 558 680	3965-786C	300
3929-626	551, 673 684	3929-822	552, 674 685	3963-621	212, 558 680	3963-786C	300	3965-788	213, 559
3929-626E	552, 674 685	3929-824	552, 674 685	3963-621C	299	3963-788	212, 558 680	3965-788C	300
3929-628	551, 673 684	3929-826	552, 674 685	3963-623	212, 558 680	3963-788C	300	3965-790	213, 559
3929-628E	552, 674 685	3929-828	552, 674 685	3963-624	212, 558 680	3963-790	212, 558 680	3965-792	213, 559
3929-664	551, 673 684	3929-906	552, 674 685	3963-624C	299	3963-790C	300	3965-792C	300
3929-664E	552, 674 685	3929-908	552, 674 685	3963-626	212, 558 680	3963-792	212, 558 680	3965-794	213, 559
3929-666	551, 673 684	3929-910	552, 674 685	3963-626C	300	3963-792C	300	3965-796	213, 559
3929-666E	552, 674 685	3929-912	552, 674 685	3963-628	212, 558 680	3963-794	212, 558 680	3965-796C	300
3929-668	551, 673 684	3929-914	552, 674 685	3963-628C	300	3963-796	212, 558 680	3965-811	213, 559
3929-668E	552, 674 685	3929-916	552, 674 685	3963-661	212, 558 680	3963-796C	300	3965-811C	300
3929-670	551, 673 684	3929-918	552, 674 685	3963-661C	300	3963-811	213, 558 680	3965-813	213, 559
3929-670E	552, 674 685	3929-920	552, 674 685	3963-663	212, 558 680	3963-811C	300	3965-813C	300
3929-694	551, 673 684	3942-060	550, 672 683	3963-663C	300	3963-813	213, 558 680	3965-814	213, 559
3929-696	551, 673 684	3942-080	550, 672 683	3963-664	212, 558 680	3963-813C	300	3965-816	213, 559
3929-696E	552, 674 685	3942-100	550, 672 683	3963-666	212, 558 680	3963-814	213, 558 680	3965-816C	300
3929-698	551, 673 684	3942-120	550, 672 683	3963-666C	300	3963-814C	300	3965-818	300
3929-698E	552, 674 685	3942-140	550, 672 683	3963-668	212, 558 680	3963-816	213, 558 680	3965-818C	300
				3963-668C	300	3963-816C	300	3965-820	213, 559
				3963-670	212, 558 680	3963-818	213, 558 680	3965-820C	300
				3963-670C	300	3963-818C	300	3965-822	213, 559
				3963-691	212, 558 680	3963-820	213, 558 680	3965-822C	300
				3963-693	212, 558 680	3963-820C	300	3965-824	213, 559
				3963-693C	300	3963-822	213, 558 680	3965-824C	300
				3963-694	212, 558 680	3963-822C	300	3965-826	213, 559
				3963-694C	300	3963-824	213, 558 680	3965-826C	300
						3963-824C	300	3965-828	213, 559
						3963-826	213, 558 680	3965-828C	300
						3963-826C	300	3965-901	213, 559
						3963-828	213, 558 680	3965-901C	300
						3963-828C	300		
						3963-901	213, 558 681		

Spears List Price Part Number Index



3965-903	213, 559	3976-100	554, 676	3977-751	555, 677	3990-814	556, 678	401-101G	38	401-419	7
	681	3976-120	554, 676	3977-753	555, 677	3990-816	556, 678	401-102	6	401-420	7
3965-903C	300	3976-140	554, 676	3977-754	555, 677	3990-818	556, 678	401-120	6	401-420G	38
3965-904	213, 559	3976-160	554, 676	3977-756	555, 677	3990-820	556, 678	401-120F	6	401-421	7
	681	3976-180	555, 677	3977-758	555, 677	3990-822	556, 678	401-120G	38	401-422	7
3965-904C	300	3976-200	555, 677	3977-760	555, 677	3990-824	556, 679	401-122	6	401-422G	38
3965-906	213, 559	3976-240	555, 677	3977-762	555, 677	3990-826	556, 679	401-124	6	401-422T	85
	681	3976-532	554, 676	3977-764	555, 677	3990-828	556, 679	401-125	6	401-422TC	86
3965-906C	300	3976-578	554, 676	3977-784	555, 677	3990-904	557, 679	401-126	6	401-426	7
3965-908	213, 559	3976-580	554, 676	3977-786	555, 677	3990-906	557, 679	401-130	6	401-428	7
	681	3976-582	554, 676	3977-788	555, 677	3990-908	557, 679	401-130G	38	401-486	7
3965-908C	300	3976-585	554, 676	3977-790	555, 677	3990-910	557, 679	401-131	6	401-487	7
3965-910	213, 559	3976-621	554, 676	3977-792	555, 678	3990-912	557, 679	401-131G	38	401-488	7
	681	3976-623	554, 676	3977-794	555, 678	3990-914	557, 679	401-132	6	401-490	7
3965-910C	300	3976-624	554, 676	3977-796	555, 678	3990-916	557, 679	401-133	6	401-492	7
3965-912	213, 559	3976-626	554, 676	3977-814	556, 678	3990-918	557, 679	401-134	6	401-494	7
	681	3976-628	554, 676	3977-816	556, 678	3990-920	557, 679	401-140F	6	401-526	7
3965-912C	300	3976-661	554, 676	3977-818	556, 678	401-002L	44	401-156	6	401-527	7
3965-914	213, 559	3976-663	554, 676	3977-820	556, 678	401-003	6	401-157	6	401-528	7
	681	3976-664	554, 676	3977-822	556, 678	401-003L	44	401-158	6	401-529	7
3965-914C	300	3976-666	554, 676	3977-824	556, 678	401-005	6	401-160F	6	401-530	7
3965-916	213, 559	3976-668	554, 676	3977-826	556, 678	401-005B	42	401-166	6	401-532	7
	681	3976-670	554, 676	3977-828	556, 678	401-005G	38	401-166G	38	401-532G	38
3965-916C	300	3976-691	554, 676	3977-904	556, 678	401-005L	44	401-167	6	401-533	7
3965-918	213, 559	3976-693	554, 676	3977-906	556, 678	401-005UV	36	401-167G	38	401-535	7
	681	3976-694	554, 676	3977-908	556, 678	401-007	6	401-168	6	401-537	7
3965-918C	300	3976-696	554, 676	3977-910	556, 678	401-007B	42	401-168G	38	401-578	7
3965-920	213, 559	3976-698	554, 676	3977-912	556, 678	401-007G	38	401-168T	85	401-579	7
	681	3976-700	554, 676	3977-914	556, 678	401-007L	44	401-168TC	86	401-580	7
3965-920C	300	3976-702	554, 676	3977-916	556, 678	401-007UV	36	401-169	6	401-582	7
3975-080	553, 675	3976-751	554, 676	3977-918	556, 678	401-010	6	401-170	6	401-583	7
3975-100	553, 675	3976-753	554, 676	3977-920	556, 678	401-010B	42	401-180F	6	401-585	7
3975-120	553, 675	3976-754	554, 676	3978-020	557, 679	401-010G	38	401-199	6	401-585G	38
3975-140	553, 675	3976-756	554, 676	3978-030	557, 679	401-010L	44	401-200F	6	401-589	7
3975-160	553, 676	3976-758	554, 677	3978-040	557, 679	401-010T	85	401-201	6	401-621	7
3975-180	554, 676	3976-760	554, 677	3978-050	557, 679	401-010TC	86	401-202	6	401-621F	7
3975-200	554, 676	3976-762	554, 677	3978-060	557, 679	401-010UV	36	401-209	6	401-622F	7
3975-240	554, 676	3976-764	554, 677	3978-080	557, 679	401-012	6	401-209G	38	401-623	7
3975-578	553, 675	3976-784	555, 677	3978-100	536, 557	401-012B	42	401-210	6	401-623F	7
3975-580	553, 675	3976-786	555, 677		679	401-012G	38	401-210G	38	401-624	7
3975-582	553, 675	3976-788	555, 677	3978-120	536, 557	401-012L	44	401-211	6	401-624F	7
3975-585	553, 675	3976-790	555, 677		679	401-012T	85	401-211G	38	401-625	7
3975-621	553, 675	3976-792	555, 677	3978-140	536, 557	401-012TC	86	401-212	6	401-625F	7
3975-623	553, 675	3976-794	555, 677		679	401-012UV	36	401-212G	38	401-626	7
3975-624	553, 675	3976-796	555, 677	3978-160	557, 679	401-015	6	401-212T	85	401-626F	7
3975-626	553, 675	3976-814	555, 677	3978-180	557, 679	401-015B	42	401-212TC	86	401-628	7
3975-628	553, 675	3976-816	555, 677	3978-240	557, 679	401-015G	38	401-213	6	401-628F	7
3975-661	553, 675	3976-818	555, 677	3990-060	556, 678	401-015L	44	401-214	6	401-632	7
3975-663	553, 675	3976-820	555, 677	3990-080	556, 678	401-015T	85	401-233	6	401-634F	7
3975-664	553, 675	3976-822	555, 677	3990-100	556, 678	401-015TC	86	401-238	6	401-636F	7
3975-666	553, 675	3976-824	555, 677	3990-120	556, 678	401-015UV	36	401-239	6	401-661F	7
3975-668	553, 675	3976-826	555, 677	3990-140	556, 678	401-020	6	401-240F	6	401-662F	7
3975-670	553, 675	3976-828	555, 677	3990-160	556, 678	401-020B	42	401-241	6	401-663F	7
3975-691	553, 675	3976-904	555, 677	3990-180	556, 678	401-020G	38	401-247	6	401-664	7
3975-693	553, 675	3976-906	555, 677	3990-200	556, 678	401-020L	44	401-247G	38	401-664F	7
3975-694	553, 675	3976-908	555, 677	3990-240	556, 679	401-020T	85	401-248	6	401-665F	7
3975-696	553, 675	3976-910	555, 677	3990-532	556, 678	401-020TC	86	401-248G	38	401-666	7
3975-698	553, 675	3976-912	555, 677	3990-578	556, 678	401-020UV	36	401-249	6	401-666F	7
3975-700	553, 676	3976-914	555, 677	3990-580	556, 678	401-025	6	401-249G	38	401-668	7
3975-702	553, 676	3976-916	555, 677	3990-582	556, 678	401-025G	38	401-250	6	401-668F	7
3975-751	553, 676	3976-918	555, 677	3990-585	556, 678	401-025L	44	401-250G	38	401-670	7
3975-753	554, 676	3976-920	555, 677	3990-621	556, 678	401-025T	85	401-251	6	401-670F	7
3975-754	554, 676	3977-060	555, 677	3990-623	556, 678	401-025TC	86	401-251G	38	401-674F	7
3975-756	554, 676	3977-080	555, 677	3990-624	556, 678	401-025UV	36	401-251T	85	401-676F	7
3975-758	554, 676	3977-100	555, 677	3990-626	556, 678	401-030	6	401-251TC	86	401-678F	7
3975-760	554, 676	3977-120	555, 677	3990-628	556, 678	401-030B	42	401-253	6	401-691F	7
3975-762	554, 676	3977-140	555, 677	3990-661	556, 678	401-030G	38	401-254	6	401-693F	7
3975-764	554, 676	3977-160	555, 677	3990-663	556, 678	401-030L	44	401-287	7	401-694F	7
3975-784	554, 676	3977-180	555, 677	3990-664	556, 678	401-030T	85	401-288	7	401-695F	7
3975-786	554, 676	3977-200	555, 678	3990-666	556, 678	401-030TC	86	401-289	7	401-696F	7
3975-788	554, 676	3977-240	556, 678	3990-668	556, 678	401-030UV	36	401-290	7	401-698F	7
3975-790	554, 676	3977-532	555, 677	3990-670	556, 678	401-040	6	401-291	7	401-700F	7
3975-792	554, 676	3977-578	555, 677	3990-691	556, 678	401-040G	38	401-292	7	401-702F	7
3975-794	554, 676	3977-580	555, 677	3990-693	556, 678	401-040L	44	401-292T	85	401-706F	7
3975-796	554, 676	3977-582	555, 677	3990-694	556, 678	401-040T	85	401-292TC	86	401-751F	7
3975-814	554, 676	3977-585	555, 677	3990-696	556, 678	401-040TC	86	401-293	7	401-753F	7
3975-816	554, 676	3977-621	555, 677	3990-698	556, 678	401-040UV	36	401-294	7	401-754F	7
3975-818	554, 676	3977-623	555, 677	3990-700	556, 678	401-050	6	401-333	7	401-756F	7
3975-820	554, 676	3977-624	555, 677	3990-702	556, 678	401-050G	38	401-334	7	401-758F	7
3975-822	554, 676	3977-626	555, 677	3990-751	556, 678	401-053	6	401-335	7	401-760F	7
3975-824	554, 676	3977-628	555, 677	3990-753	556, 678	401-060	6	401-336	7	401-762F	7
3975-826	554, 676	3977-661	555, 677	3990-754	556, 678	401-060G	38	401-337	7	401-764F	7
3975-828	554, 676	3977-663	555, 677	3990-756	556, 678	401-060L	44	401-337G	38	401-768F	7
3975-904	554, 676	3977-664	555, 677	3990-758	556, 678	401-074	6	401-338	7	401-781F	7
3975-906	554, 676	3977-666	555, 677	3990-760	556, 678	401-075	6	401-338G	38	401-783F	7
3975-908	554, 676	3977-668	555, 677	3990-762	556, 678	401-080	6	401-338T	85	401-784F	7
3975-910	554, 676	3977-670	555, 677	3990-764	556, 678	401-080G	38	401-338TC	86	401-786F	7
3975-912	554, 676	3977-691	555, 677	3990-784	556, 678	401-080L	44	401-339	7	401-788F	7
3975-914	554, 676	3977-693	555, 677	3990-786	556, 678	401					



Spears List Price Part Number Index

401-814F	7	402-249G	38	406-010B	42	407-005B	42	410-005G	39	4101-236	560
401-816F	7	402-250	8	406-010G	38	407-005G	38	410-007	10	4101-237	560
401-818F	7	402-250G	38	406-010L	44	407-005SR	9, 349	410-007B	42	4101-238	560
401-820F	7	402-251	8	406-010S	9	407-005UV	36	410-007G	39	4101-239	560
401-822F	7	402-251G	38	406-010T	85	407-007	9	410-010	10	4101-240	560
401-824F	7	402-287	8	406-010TC	86	407-007B	42	410-010B	42	4101-241	560
401-826F	7	402-287SR	8, 349	406-010UV	36	407-007G	38	410-012	10	4101-242	560
401-828F	7	402-288	8	406-012	9	407-007SR	9, 349	410-012B	42	4101-243	560
401-901F	7	402-288SR	8, 349	406-012B	42	407-007UV	36	410-015	10	4101-244	560
401-903F	7	402-289	8	406-012G	38	407-010	9	410-015B	42	4101-247	560
401-904F	7	402-289SR	8, 349	406-012L	44	407-010B	42	410-020	10	4101-248	561
401-906F	7	402-290	8	406-012S	9	407-010G	38	410-020B	42	4101-249	561
401-908F	7	402-290SR	8, 349	406-012T	85	407-010SR	9, 349	410-030	10	4101-250	561
401-910F	7	402-291	8	406-012TC	86	407-012	9	410-101	10	4101-251	561
401-912F	7	402-291SR	8, 349	406-012UV	36	407-012B	42	410-102	10	4101-257	561
401-914F	7	402-292	8	406-015	9	407-012G	38	4101-005	560	4106-005	561
401-916F	7	402-292SR	8, 349	406-015B	42	407-012SR	9, 349	4101-007	560	4106-007	561
401-918F	7	402-333	8	406-015G	38	407-015	9	4101-010	560	4106-010	561
401-920F	7	402-333SR	8, 349	406-015L	44	407-015B	42	4101-012	560	4106-012	561
402-003	6	402-334	8	406-015S	9	407-015G	38	4101-015	560	4106-015	561
402-005	6	402-334SR	8, 349	406-015T	85	407-020	9	4101-020	560	4106-020	561
402-005G	38	402-335	8	406-015TC	86	407-020B	42	4101-074	560	4106-101	561
402-005SR	6, 349	402-335SR	8, 349	406-015UV	36	407-020G	38	4101-094	560	4106-130	561
402-005UV	36	402-336	8	406-020	9	407-025	9	4101-095	560	4106-131	561
402-007	6	402-336SR	8, 349	406-020B	42	407-030	9	4101-101	560	4106-167	561
402-007G	38	402-337	8	406-020G	38	407-040	9	4101-102	560	4106-168	561
402-007UV	36	402-337SR	8, 349	406-020L	44	407-053	9	4101-120	560	4106-209	561
402-010	6	402-338	8	406-020S	9	407-074	9	4101-121	560	4106-210	561
402-010G	38	402-338SR	8, 349	406-020T	85	407-101	9	4101-122	560	4106-211	561
402-012	6	402-417	8	406-020TC	86	407-101G	39	4101-124	560	4106-212	561
402-012G	38	402-417SR	8, 349	406-020UV	36	407-101UV	36	4101-125	560	4106-247	561
402-012SR	6, 349	402-419	8	406-025	9	407-130	9	4101-126	560	4106-248	561
402-015	6	402-419SR	8, 349	406-025G	38	407-131	9	4101-130	560	4106-249	561
402-020	6	402-420	8	406-025L	44	407-131SR	9, 349	4101-131	560	4106-250	561
402-025	6	402-420SR	8, 349	406-025LSF	9	407-131UV	36	4101-138	560	4106-251	561
402-030	6	402-422	8	406-025S	9	407-168	9	4101-139	560	4107-005SR	364, 561
402-040	6	402-422SR	8, 349	406-025T	85	407-168SR	9, 349	4101-142	560	4109-005	561
402-071	8	402-490	8	406-025TC	86	407-211	9	4101-146	560	4109-007	561
402-072	8	402-525	8	406-025UV	36	407-212	9	4101-147	560	4109-010	561
402-072SR	8, 349	402-528	8	406-030	9	407-249	9	4101-148	560	411-005F	11
402-074	8	402-530	8	406-030G	38	407-249SR	9, 349	4101-149	560	411-007F	11
402-094	8	402-532	8	406-030L	44	407-250	9	4101-156	560	411-010F	11
402-095	8	402-578	8	406-030LSF	9	407-251	9	4101-157	560	411-012F	12
402-098SR	8, 349	402-580	8	406-030T	85	407-251SR	9, 349	4101-158	560	411-015	12
402-101	8	402-582	8	406-030TC	86	408-005	9	4101-159	560	411-015F	12
402-101B	42	402-621F	8	406-030UV	36	408-005B	42	4101-166	560	411-020	12
402-101G	38	402-622F	8	406-040	9	408-005G	38	4101-167	560	411-025F	12
402-101SR	8, 349	402-623F	8	406-040G	38	408-007	9	4101-168	560	411-030	12
402-101UV	36	402-624F	8	406-040L	44	408-007B	42	4101-169	560	411-040	12
402-124	8	402-661F	8	406-040LSF	9	408-007G	38	4101-173	560	411-045F	12
402-125	8	402-663F	8	406-040T	85	408-010	9	4101-174	560	411-050F	12
402-130	8	402-664F	8	406-040TC	86	408-010B	42	4101-175	560	411-060F	12
402-130G	38	402B-010	6, 33	406-040UV	36	408-010G	38	4101-176	560	411-080F	12
402-130UV	36	4020	579, 732	406-045F	9	408-012	9	4101-177	560	411-100F	12
402-131	8	403-007	6	406-050	9	408-012G	38	4101-182	560	411-120F	12
402-131G	38	403-095	8	406-050G	38	408-015	9	4101-184	560	411-140F	12
402-131UV	36	403-095SR	8, 349	406-053	9	408-015G	38	4101-185	560	411-160F	12
402-156	8	404A-020	33	406-060	9	408-020	9	4101-186	560	411-180F	12
402-157	8	405-005	6	406-060G	38	408-020G	38	4101-188	560	411-200F	12
402-158	8	405-005B	42	406-060L	44	409-005	9	4101-193	560	411-240F	12
402-166	8	405-005G	38	406-060LSF	9	409-005G	39	4101-194	560	41101A121-015	476
402-166G	38	405-007	6	406-080	9	409-005L	44	4101-195	560	41101A121-020	476
402-166SR	8, 349	405-007B	42	406-080G	38	409-007	9	4101-196	560	41101A121-025	476
402-166UV	36	405-007G	38	406-080L	44	409-007G	39	4101-197	560	41101A121-030	476
402-167	8	405-010	6	406-080LSF	9	409-007L	44	4101-199	560	41101A121-040	476
402-167G	38	405-010B	42	406-100	9	409-010	9	4101-201	560	41101A121-060	476
402-167UV	36	405-010G	38	406-100F	9	409-010G	39	4101-202	560	41101A121-080	476
402-168	8	405-012	6	406-100G	38	409-010L	44	4101-203	560	41101A121-100	476
402-168G	38	405-012B	42	406-101	9	409-012	9	4101-204	560	41101A123-120	476
402-168SR	8, 349	405-012G	38	406-101G	38	409-012G	39	4101-209	560	41101H101-015	477
402-199	8	405-015	6	406-120	9	409-012L	44	4101-210	560	41101H101-020	477
402-199G	38	405-015B	42	406-120F	9	409-015	10	4101-211	560	41101H101-025	477
402-201	8	405-015G	38	406-120G	38	409-015B	42	4101-212	560	41101H101-030	477
402-202	8	405-020	6	406-130	9	409-015G	39	4101-213	560	41101H101-040	477
402-209	8	405-020B	42	406-130G	38	409-015L	44	4101-216	560	41101H101-060	477
402-209G	38	405-020G	38	406-131	9	409-020	10	4101-217	560	41101H101-080	477
402-209UV	36	405-025	6	406-140F	9	409-020B	42	4101-218	560	41101H101-100	477
402-210	8	406-002L	44	406-160F	9	409-020L	44	4101-219	560	41101H101-120	477
402-210G	38	406-003	9	406-166	9	409-025	10	4101-220	560	41101J101-015	477
402-210UV	36	406-003G	38	406-167	9	409-025L	44	4101-221	560	41101J101-020	477
402-211	8	406-003L	44	406-168	9	409-030	10	4101-222	560	41101J101-025	477
402-211G	38	406-005	9	406-180F	9	409-040	10	4101-223	560	41101J101-030	477
402-212	8	406-005B	42	406-200F	9	409-050	10	4101-224	560	41101J101-040	477
402-212G	38	406-005G	38	406-209	9	409-060	10	4101-225	560	41101J101-060	477
402-212SR	8, 349	406-005L	44	406-211	9	409-080	10	4101-226	560	41101J101-080	477
402-238	8	406-005S	9	406-212	9	409-100	10	4101-227	560	41101J101-100	477
402-239	8	406-005UV	36	406-240F	9	409-120	10	4101-228	560	41101J101-120	477
402-247	8	406-007	9	406-249	9	409-140F	10	4101-229	560	41102A121-015	476
402-247G	38	406-007B	42	406-250	9	409-160F	10	4101-230	560	41102A121-020	476
402-247UV	36	406-007G	38	406-251	9	409-180F	10	4101-231	560	41102A121-025	476
402-248	8	406-007L	44	406-251N	9, 33	409-200F	10	4101-232	560	41102A121-030	476
402-248G	38	406-007S	9	406-292	9	409-240F	10	4101-233	560	41102A121-040	476
402-248UV	36	406-007UV	36	406-292N	9, 33	410-005	10	4101-234	560	41102A121-060	476
402-249	8	406-010	9	407-005	9	410-005B	42	4101-235	560	41102A121-080	476

Spears List Price Part Number Index



41102A121-100	476	41112J101-025	481	41201H101-040	477	41211J101-120	480	4129-166	561	41303J101-060	477
41102A123-120	476	41112J101-030	481	41201H101-060	477	41212A121-015	479	4129-167	561	41303J101-080	477
41102H101-015	477	41112J101-040	481	41201H101-080	477	41212A121-020	479	4129-168	561	41303J101-100	478
41102H101-020	477	41112J101-060	481	41201H101-100	477	41212A121-025	479	4129-209	561	41303J101-120	478
41102H101-025	477	41112J101-080	481	41201H101-120	477	41212A121-030	479	4129-210	561	41311A121-015	479
41102H101-030	477	41112J101-100	481	41201J101-015	477	41212A121-040	479	4129-211	561	41311A121-020	479
41102H101-040	477	41112J101-120	481	41201J101-020	477	41212A121-060	479	4129-212	561	41311A121-025	479
41102H101-060	477	41121A121-015	479	41201J101-025	477	41212A121-080	479	4129-247	561	41311A121-030	479
41102H101-080	477	41121A121-020	479	41201J101-030	477	41212A121-100	479	4129-248	561	41311A121-040	479
41102H101-100	477	41121A121-025	479	41201J101-040	477	41212A123-120	479	4129-249	561	41311A121-060	479
41102H101-120	477	41121A121-030	479	41201J101-060	477	41212H101-015	481	4129-250	561	41311A121-080	479
41102J101-015	477	41121A121-040	479	41201J101-080	477	41212H101-020	481	4129-251	561	41311A121-100	479
41102J101-020	477	41121A121-060	479	41201J101-100	477	41212H101-025	481	413-005	10	41311A123-120	479
41102J101-025	477	41121A121-080	479	41201J101-120	477	41212H101-030	481	413-007	10	41311H101-015	480
41102J101-030	477	41121A121-100	479	41202A121-015	476	41212H101-040	481	413-010	10	41311H101-020	480
41102J101-040	477	41121A123-120	479	41202A121-020	476	41212H101-060	481	413-015	10	41311H101-025	480
41102J101-060	477	41121H101-015	480	41202A121-025	476	41212H101-080	481	413-020	10	41311H101-030	480
41102J101-080	477	41121H101-020	480	41202A121-030	476	41212H101-100	481	41301A121-015	476	41311H101-040	480
41102J101-100	477	41121H101-025	480	41202A121-040	476	41212H101-120	481	41301A121-020	476	41311H101-060	480
41102J101-120	477	41121H101-030	480	41202A121-060	476	41212J101-015	481	41301A121-025	476	41311H101-080	480
41103A121-015	476	41121H101-040	480	41202A121-080	476	41212J101-020	481	41301A121-030	476	41311H101-100	480
41103A121-020	476	41121H101-060	480	41202A121-100	476	41212J101-025	481	41301A121-040	476	41311H101-120	480
41103A121-025	476	41121H101-080	480	41202A123-120	476	41212J101-030	481	41301A121-060	476	41311J101-015	480
41103A121-030	476	41121H101-100	480	41202H101-015	477	41212J101-040	481	41301A121-080	476	41311J101-020	480
41103A121-040	476	41121H101-120	480	41202H101-020	477	41212J101-060	481	41301A121-100	476	41311J101-025	480
41103A121-060	476	41121J101-015	480	41202H101-025	477	41212J101-080	481	41301A123-120	476	41311J101-030	480
41103A121-080	476	41121J101-020	480	41202H101-030	477	41212J101-100	481	41301H101-015	477	41311J101-040	480
41103A121-100	476	41121J101-025	480	41202H101-040	477	41212J101-120	481	41301H101-020	477	41311J101-060	480
41103A123-120	476	41121J101-030	480	41202H101-060	477	41212A121-015	479	41301H101-025	477	41311J101-080	480
41103H101-015	477	41121J101-040	480	41202H101-080	477	41212A121-020	479	41301H101-030	477	41311J101-100	480
41103H101-020	477	41121J101-060	480	41202H101-100	477	41212A121-025	479	41301H101-040	477	41311J101-120	480
41103H101-025	477	41121J101-080	480	41202H101-120	477	41212A121-030	479	41301H101-060	477	41312A121-015	479
41103H101-030	477	41121J101-100	480	41202J101-015	477	41212A121-040	479	41301H101-080	477	41312A121-020	479
41103H101-040	477	41121J101-120	480	41202J101-020	477	41212A121-060	479	41301H101-100	477	41312A121-025	479
41103H101-060	477	41122A121-015	479	41202J101-025	477	41212A121-080	479	41301H101-120	477	41312A121-030	479
41103H101-080	477	41122A121-020	479	41202J101-030	477	41212A121-100	479	41301J101-015	477	41312A121-040	479
41103H101-100	477	41122A121-025	479	41202J101-040	477	41212A123-120	479	41301J101-020	477	41312A121-060	479
41103H101-120	478	41122A121-030	479	41202J101-060	477	41212H101-015	480	41301J101-025	477	41312A121-080	479
41103J101-015	477	41122A121-040	479	41202J101-080	477	41212H101-020	480	41301J101-030	477	41312A121-100	479
41103J101-020	477	41122A121-060	479	41202J101-100	477	41212H101-025	480	41301J101-040	477	41312A123-120	479
41103J101-025	477	41122A121-080	479	41202J101-120	477	41212H101-030	480	41301J101-060	477	41312H101-015	481
41103J101-030	477	41122A121-100	479	41203A121-015	476	41212H101-040	480	41301J101-080	477	41312H101-020	481
41103J101-040	477	41122A123-120	479	41203A121-020	476	41212H101-060	480	41301J101-100	477	41312H101-025	481
41103J101-060	477	41122H101-015	480	41203A121-025	476	41212H101-080	480	41301J101-120	477	41312H101-030	481
41103J101-080	477	41122H101-020	480	41203A121-030	476	41212H101-100	480	41302A121-015	476	41312H101-040	481
41103J101-100	478	41122H101-025	480	41203A121-040	476	41212H101-120	480	41302A121-020	476	41312H101-060	481
41103J101-120	478	41122H101-030	480	41203A121-060	476	41212J101-015	480	41302A121-025	476	41312H101-080	481
41111A121-015	479	41122H101-040	480	41203A121-080	476	41212J101-020	480	41302A121-030	476	41312H101-100	481
41111A121-020	479	41122H101-060	480	41203A121-100	476	41212J101-025	480	41302A121-040	476	41312H101-120	481
41111A121-025	479	41122H101-080	480	41203A123-120	476	41212J101-030	480	41302A121-060	476	41312J101-015	481
41111A121-030	479	41122H101-100	481	41203H101-015	477	41212J101-040	480	41302A121-080	476	41312J101-020	481
41111A121-040	479	41122H101-120	481	41203H101-020	477	41212J101-060	480	41302A121-100	476	41312J101-025	481
41111A121-060	479	41122J101-015	480	41203H101-025	477	41212J101-080	480	41302A123-120	476	41312J101-030	481
41111A121-080	479	41122J101-020	480	41203H101-030	477	41212J101-100	480	41302H101-015	477	41312J101-040	481
41111A121-100	479	41122J101-025	480	41203H101-040	477	41212J101-120	480	41302H101-020	477	41312J101-060	481
41111A123-120	479	41122J101-030	480	41203H101-060	477	41222A121-015	479	41302H101-025	477	41312J101-080	481
41111H101-015	480	41122J101-040	480	41203H101-080	477	41222A121-020	479	41302H101-030	477	41312J101-100	481
41111H101-020	480	41122J101-060	480	41203H101-100	477	41222A121-025	479	41302H101-040	477	41312J101-120	481
41111H101-025	480	41122J101-080	480	41203H101-120	477	41222A121-030	479	41302H101-060	477	41321A121-015	479
41111H101-030	480	41122J101-100	481	41203J101-015	478	41222A121-040	479	41302H101-080	477	41321A121-020	479
41111H101-040	480	41122J101-120	481	41203J101-020	477	41222A121-060	479	41302H101-100	477	41321A121-025	479
41111H101-060	480	4117-005	561	41203J101-025	477	41222A121-080	479	41302H101-120	477	41321A121-030	479
41111H101-080	480	4117-007	561	41203J101-030	477	41222A121-100	479	41302J101-015	477	41321A121-040	479
41111H101-100	480	4117-010	561	41203J101-040	477	41222A123-120	479	41302J101-020	477	41321A121-060	479
41111H101-120	480	4117-012	561	41203J101-060	477	41222H101-015	480	41302J101-025	477	41321A121-080	479
41111J101-015	480	4117-015	561	41203J101-080	477	41222H101-020	480	41302J101-030	477	41321A121-100	479
41111J101-020	480	4117-020	561	41203J101-100	478	41222H101-025	480	41302J101-040	477	41321A123-120	479
41111J101-025	480	412-005	10	41203J101-120	478	41222H101-030	480	41302J101-060	477	41321H101-015	480
41111J101-030	480	412-005B	42	41211A121-015	479	41222H101-040	480	41302J101-080	477	41321H101-020	480
41111J101-040	480	412-005G	39	41211A121-020	479	41222H101-060	480	41302J101-100	477	41321H101-025	480
41111J101-060	480	412-005UV	36	41211A121-025	479	41222H101-080	480	41302J101-120	477	41321H101-030	480
41111J101-080	480	412-007	10	41211A121-030	479	41222H101-100	481	41303A121-015	476	41321H101-040	480
41111J101-100	480	412-007G	39	41211A121-040	479	41222H101-120	481	41303A121-020	476	41321H101-060	480
41111J101-120	480	412-007UV	36	41211A121-060	479	41222J101-015	480	41303A121-025	476	41321H101-080	480
41112A121-015	479	412-010	10	41211A121-080	479	41222J101-020	480	41303A121-030	476	41321H101-100	480
41112A121-020	479	412-010G	39	41211A121-100	479	41222J101-025	480	41303A121-040	476	41321H101-120	480
41112A121-025	479	412-012	10	41211A123-120	479	41222J101-030	480	41303A121-060	476	41321J101-015	480
41112A121-030	479	412-015	10	41211H101-015	480						



Spears List Price Part Number Index

41322H101-015	480	415-060F	11	417-045F	10	420-251	13	4201-126	738	4216-030	739
41322H101-020	480	415-080F	11	417-050	10	420-287	13	4201-131	738	4217-007	739
41322H101-025	480	415-100F	11	417-050F	10	420-288	13	4201-157	738	4217-010	739
41322H101-030	480	415-120F	11	417-050G	39	420-289	13	4201-158	738	4217-012	739
41322H101-040	480	415-140F	11	417-060	10	420-290	13	4201-159	738	4217-015	739
41322H101-060	480	415-160F	11	417-060G	39	420-291	13	4201-167	738	4217-020	739
41322H101-080	480	415-180F	11	417-060L	44	420-292	13	4201-168	738	4217-025	739
41322H101-100	481	415-200F	11	417-080	10	420-334	13	4201-169	738	4217-030	739
41322H101-120	481	415-240F	11	417-080F	10	420-335	13	4201-201	738	422-015	33
41322J101-015	480	416-005	11	417-080G	39	420-336	13	4201-202	738	4220-007	739
41322J101-020	480	416-007	11	417-080L	44	420-337	14	4201-210	738	4220-010	739
41322J101-025	480	416-010	11	417-100	10	420-338	14	4201-211	738	4220-012	739
41322J101-030	480	416-012	11	417-100F	10	420-339	14	4201-212	738	4220-015	739
41322J101-040	480	416-015	11	417-120	10	420-420	14	4201-213	738	4220-020	739
41322J101-060	480	416-015F	11	417-120F	10	420-421	14	4201-248	738	4220-025	739
41322J101-080	480	416-020	11	417-140F	11	420-422	14	4201-249	738	4220-030	739
41322J101-100	481	416-025	11	417-160F	11	420-528F	14	4201-250	738	4220-131	739
41322J101-120	481	416-025F	11	417-180F	11	420-529F	14	4201-251	738	4220-167	740
4135-005BRG	364, 562	416-030	11	417-200F	11	420-530F	14	4201-289	738	4220-210	740
4135-005OR	365, 561	416-040	11	417-240F	11	420-532F	14	4201-290	738	4220-289	740
4135-005SR	364, 562	416-045F	11	4170E-005	32	420-578F	14	4201-291	738	4227-010	739
4135-007BRG	364, 562	416-050F	11	4170E-007	32	420-579F	14	4201-292	738	4227-012	739
4135-007OR	365, 561	416-060	11	4170E-010	32	420-580F	14	4201-335	738	4227-015	739
4135-007SR	364, 562	416-060F	11	4170E-012	32	420-582F	14	4201-336	738	4227-020	739
4135-010BRG	364, 562	416-060GF	39	4170E-015	32	420-585F	14	4201-337	738	4229-007	740
4135-010OR	365, 562	416-080	11	4170E-020	32	420-621F	14	4201-338	738	4229-010	740
4135-010SR	364, 562	416-080F	11	4170E-025	32	420-622F	14	4201-339	738	4229-012	740
4135-012BRG	364, 562	416-100F	11	418-005F	11	420-623F	14	42011SR	361, 741	4229-015	740
4135-015BRG	364, 562	416-120F	11	418-007F	11	420-624F	14	42014SR	361, 741	4229-020	740
4135-020BRG	364, 562	416-120GF	39	418-010F	11	420-626F	14	4202-010	362, 738	4229-025	740
4135-101BRG	364, 562	416-140F	11	418-012F	11	420-628F	14	4202-010SR	361, 738	4229-030	740
4135-130BRG	364, 562	416-160F	11	418-015F	11	420-661F	14	4202-101	362, 738	4229-131	740
4135-131SR	364, 562	416-180F	11	418-020F	11	420-662F	14	4202-101 G	738	4229-167	740
4136-005	562	416-200F	11	418-025F	11	420-663F	14	4202-101SR	361, 738	4229-168	740
4136-005BR	364, 562	416-240F	11	418-030F	11	420-664F	14	4202-124	362, 738	4229-210	740
4136-005R	364, 562	416-005	562	418-040F	11	420-666F	14	4202-124 G	738	4229-211	740
4136-007	562	417-002L	44	418-045F	11	420-668F	14	4202-124SR	361, 738	4229-212	740
4136-007BR	364, 562	417-003L	44	418-050F	11	420-670F	14	4202-130	362, 738	4229-248	740
4136-007R	364, 562	417-005	10	418-060F	11	420-691F	14	4202-130 G	738	4229-249	740
4136-010	562	417-005B	42	418-080F	11	420-693F	14	4202-130SR	361, 738	4229-250	740
4136-010BR	364, 562	417-005G	39	418-100F	11	420-694F	14	4202-156	362, 738	4229-251	740
4136-010R	364, 562	417-005L	44	418-120F	11	420-696F	14	4202-156SR	361, 738	4229-291	740
4136-012	562	417-005UV	36	418-140F	11	420-698F	14	4202-166	362, 738	4229-292	740
4136-012BR	364, 562	417-007	10	418-160F	11	420-700F	14	4202-166 G	738	4229-339	740
4136-015	562	417-007B	42	418-180F	11	420-702F	14	4202-166SR	361, 738	4233-012	363, 740
4136-015BR	364, 562	417-007G	39	418-200F	11	420-751F	14	4202-168SR	361, 738	4233-015	363, 740
4136-020	562	417-007L	44	418-240F	11	420-753F	14	4202-199	362, 738	4233-020	363, 740
4136-020BR	364, 562	417-007UV	36	4197-005	562	420-754F	14	4202-199SR	361, 738	4233-025	363, 740
4136-074	562	417-010	10	4197-007	562	420-756F	14	4202-209	362, 738	4233-030	363, 740
4136-101	562	417-010B	42	4197-010	562	420-758F	14	4202-209 G	738	4235-007	362, 740
4137-101	562	417-010G	39	420-005	13	420-760F	14	4202-209SR	361, 738	4235-007SR	361, 740
4137-130	562	417-010L	44	420-005G	39	420-762F	14	4202-211SR	361, 738	4235-010	362, 740
4137-131	562	417-010T	85	420-007	13	420-764F	14	4202-237	362, 738	4235-010SR	361, 740
4137-166	562	417-010TC	86	420-007G	39	420-781F	14	4202-237SR	361, 738	4235-012	362, 740
4137-167	562	417-010UV	36	420-010	13	420-783F	14	4202-247	362, 738	4235-012SR	361, 740
4137-168	562	417-012	10	420-010G	39	420-784F	14	4202-247 G	738	4235-015	362, 740
4137-209	562	417-012B	42	420-012	13	420-786F	14	4202-247SR	361, 738	4235-020	362, 740
4137-210	562	417-012G	39	420-012G	39	420-788F	14	4202-287SR	361, 738	4235-010	362, 740
4137-211	562	417-012L	44	420-015	13	420-790F	14	4203-122	362, 738	4235-101 G	740
4137-212	562	417-012T	85	420-015B	42	420-792F	14	4203-122 G	738	4235-101SR	361, 740
4137-247	562	417-012TC	86	420-015G	39	420-794F	14	4203-122SR	361, 739	4235-130	362, 740
4137-248	562	417-012UV	36	420-020	13	420-796F	14	4206-007	739	4235-130GS	362, 740
4137-249	562	417-015	10	420-020B	42	420-811F	14	4206-010	739	4235-130SR	361, 740
4137-250	562	417-015B	42	420-020G	39	420-813F	14	4206-012	739	4235-131	362, 740
4137-251	562	417-015G	39	420-025	13	420-814F	14	4206-015	739	4235-131 G	740
414-005	10	417-015L	44	420-025G	39	420-816F	14	4206-020	739	4235-131SR	361, 740
414-007	10	417-015T	85	420-030	13	420-818F	14	4206-025	739	4236-007	362, 740
414-101	10	417-015TC	86	420-030G	39	420-820F	14	4206-030	739	4236-010	362, 740
414-130	10	417-015UV	36	420-040	13	420-822F	14	4206-131	739	4236-012	362, 740
4140-005	562	417-020	10	420-040G	39	420-824F	14	4207-101	362, 739	4236-015	362, 740
4140-007	562	417-020B	42	420-050F	13	420-826F	14	4207-101 G	739	4236-020	362, 740
4140-010	562	417-020G	39	420-060F	13	420-828F	14	4207-101SR	361, 739	4237-131	741
4140-012	562	417-020L	44	420-080F	13	420-901F	14	4207-130	362, 739	4237-167	741
4140-015	562	417-020T	85	420-100F	13	420-903F	14	4207-130 G	739	4237-168	741
4140-020	562	417-020TC	86	420-101	13	420-904F	14	4207-130SR	361, 739	4237-210	741
4141-007	562	417-020UV	36	420-120F	13	420-906F	14	4207-131	362, 739	4237-211	741
4141-010	562	417-025	10	420-130	13	420-908F	14	4207-131SR	361, 739	4237-212	741
4147-005	562	417-025G	39	420-131	13	420-910F	14	4207-166	362, 739	4237-248	741
4147-007	562	417-025L	44	420-140F	13	420-912F	14	4207-166 G	739	4237-249	741
4147-010	562	417-025T	85	420-160F	13	420-914F	14	4207-166SR	361, 739	4237-250	741
4147-012	562	417-025TC	86	420-166	13	420-916F	14	4209-007	739	4237-251	741
4147-015	562	417-025UV	36	420-167	13	420-918F	14	4209-010	739	4237-290	741
4147-020	562	417-030	10	420-168	13	420-920F	14	4209-012	739	4237-291	741
415-005F	11	417-030G	39	420-180F	13	42001SR	361, 741	4209-015	739	4237-292	741
415-007F	11	417-030L	44	420-200F	13	42004SR	361, 741	4209-020	739	4237-338	741
415-010F	11	417-030T	85	420-209	13	4201-007	738	421A-010	14	4237-339	741
415-012F	11	417-030TC	86	420-210	13	4201-010	738	4213-007	739	4238-101	362, 741
415-015F	11	417-030UV	36	420-211	13	4201-012	738	4213-010	739	4238-101 G	741
415-020F	11	417-040	10	420-212	13	4201-015	738	4216-007	739	4238-101SR	361, 741
415-025F	11	417-040G	39	420-240F	13	4201-020	738	4216-010	739	4238-130	362, 741
415-030F	11	417-040L	44	420-247	13	4201-025	738	4216-012	739	4238-130 G	741
415-040F	11	417-040T	85	420-248	13	4201-030	738	4216-015	739	4238-130BR	362, 741
415-045F	11	417-040TC	86	420-249	13						

Spears List Price Part Number Index



424-005F	10	427-160F	11, 33	429-101G	40	429-624	15	43BG-120	599	4301-788C	602
424-007F	10	427-180F	11, 33	429-120	14	429-624F	15	43BG-120C	603	4301-790	599
424-010F	10	427-200F	11, 33	429-120F	14	429-624FE	16	43BG-140	599	4301-790C	602
424-012F	10	427-240F	11, 33	429-130	15	429-626	15	43BG-140C	603	4301-792	599
424-015F	10	4278-007	362, 740	429-131	15	429-626F	15	43BG-160	599	4301-792C	602
424-020F	10	4278-007SR	361, 740	429-131FE	15	429-626FE	16	43BG-160C	603	4301-794	599
424-025F	10	4278-010	362, 740	429-131G	40	429-628	15	43BG-180	600	4301-794C	602
424-030F	10	4278-010SR	361, 740	429-140	14	429-628F	15	43BG-180C	603	4301-796	599
424-040F	10	428-020F	48	429-140F	14	429-628FE	16	43BG-200	600	4301-796C	602
424-045F	10	428-030F	48	429-160F	14	429-664F	15	43BG-200C	603	4301-814	599
424-050F	10	428-040F	48	429-166	15	429-664FE	16	43BG-240	600	4301-814C	602
424-060F	10	428-060F	48	429-167	15	429-666	15	43BG-240C	603	4301-816	599
424-080F	10	428-080F	48	429-168	15	429-666F	15	430-005	14	4301-816C	602
424-100F	10	428-100F	48	429-168FE	15	429-666FE	16	430-005G	14, 40	4301-818	599
424-120F	10	428-120F	48	429-168G	40	429-668	15	430-005SR	14, 349	4301-818C	602
424-140F	10	428-140F	48	429-180F	14	429-668F	15	430-005UV	36	4301-820	599
424-160F	10	428-160F	48	429-200F	14	429-668FE	16	430-007	14	4301-820C	602
424-180F	10	428-180F	48	429-209	15	429-670F	15	430-007G	40	4301-822	599
424-240F	10	428-200F	48	429-210	15	429-670FE	16	430-007SR	14, 349	4301-822C	602
4242-007	739	428-240F	48	429-211	15	429-693F	15	430-007UV	36	4301-824	599
4242-010	739	429-002L	45	429-212	15	429-694F	15	430-010	14	4301-824C	602
4242-012	739	429-003	14	429-212FE	15	429-696F	15	430-010G	40	4301-826	599
4242-015	739	429-003L	45	429-212G	40	429-696FE	16	430-010SR	14, 349	4301-826C	602
4242-020	739	429-005	14	429-240F	14	429-698F	15	430-012	14	4301-828	599
4242-025	739	429-005B	42	429-247	15	429-698FE	16	430-012SR	14, 349	4301-828C	602
4242-030	739	429-005G	39	429-248	15	429-700F	15	430-015SR	14, 349	4301-904	599
4244-007	739	429-005L	45	429-249	15	429-700FE	16	430-020SR	14, 349	4301-904C	602
4244-010	739	429-005N	14	429-249FE	15	429-702F	15	430-101	15	4301-906	599
4244-012	739	429-005UV	36	429-250	15	429-702FE	16	430-101SR	15, 349	4301-906C	602
4244-015	739	429-007	14	429-250FE	15	429-751F	15	4301-060	599	4301-908	599
4244-020	739	429-007B	42	429-251	15	429-754F	15	4301-060C	602	4301-908C	602
4247-007	741	429-007G	40	429-251FE	15	429-756F	15	4301-080	599	4301-910	599
4247-010	741	429-007L	45	429-251G	40	429-756FE	16	4301-080C	602	4301-910C	602
4247-012	741	429-007N	14	429-290FE	15	429-758F	15	4301-100	599	4301-912	599
4247-015	741	429-007UV	36	429-291	15	429-758FE	16	4301-100C	602	4301-912C	602
4247-020	741	429-010	14	429-291FE	15	429-760F	15	4301-120	599	4301-914	599
4247-025	741	429-010B	42	429-292	15	429-760FE	16	4301-120C	602	4301-914C	602
4247-030	741	429-010G	40	429-292FE	15	429-762F	15	4301-140	599	4301-916	599
4250-005	741	429-010L	45	429-335	15	429-762FE	16	4301-140C	602	4301-916C	602
4251-007	741	429-010N	14	429-335FE	15	429-764F	15	4301-160	599	4301-918	599
4251-010	741	429-010T	85	429-336FE	15	429-764FE	16	4301-160C	602	4301-918C	602
4251-012	742	429-010TC	86	429-337	15	429-786F	15	4301-180	599	4301-920	599
4251-015	742	429-010UV	36	429-337FE	15	429-786FE	16	4301-180C	602	4301-920C	602
4251-020	742	429-012	14	429-338	15	429-788F	15	4301-200	599	4306-060	599
4251-025	742	429-012B	42	429-338E	15	429-788FE	16	4301-200C	602	4306-060C	602
4253-007	742	429-012G	40	429-338FE	15	429-790F	15	4301-240	599	4306-080	599
4253-010	742	429-012L	45	429-338G	40	429-790FE	16	4301-240C	602	4306-080C	602
4253-012	742	429-012T	85	429-339	15	429-792F	15	4301-532	599	4306-100	599
4253-015	742	429-012TC	86	429-339FE	15	429-792FE	16	4301-532C	602	4306-100C	602
4253-020	742	429-012UV	36	429-340F	15	429-794F	15	4301-582	599	4306-120	599
4253-025	742	429-015	14	429-416	15	429-794FE	16	4301-582C	602	4306-120C	602
4253-030	742	429-015B	42	429-417	15	429-796F	15	4301-585	599	4306-140	599
4254-030	742	429-015G	40	429-417FE	15	429-796FE	16	4301-585C	602	4306-140C	602
4256-007	742	429-015L	45	429-418FE	15	429-814F	15	4301-624	599	4306-160	599
4256-010	742	429-015T	85	429-419FE	15	429-816F	15	4301-624C	602	4306-160C	602
4256-012	742	429-015TC	86	429-420	15	429-818F	15	4301-626	599	4306-180	599
4256-015	742	429-015UV	36	429-420E	15	429-820F	15	4301-626C	602	4306-180C	602
4256-020	742	429-020	14	429-420FE	15	429-822F	15	4301-628	599	4306-200	599
4256-025	742	429-020B	42	429-421	15	429-824F	15	4301-628C	602	4306-200C	602
4256-030	742	429-020G	40	429-421FE	15	429-826F	15	4301-664	599	4306-240	599
4257-007	742	429-020L	45	429-422	15	429-828F	15	4301-664C	602	4306-240C	602
4257-010	742	429-020T	85	429-422B	42	429-906F	15	4301-666	599	43065-060	599
4257-012	742	429-020TC	86	429-422FE	16	429-908F	15	4301-666C	602	43065-060C	602
4257-015	742	429-020UV	36	429-422G	40	429-910F	15	4301-668	599	43065-080	599
4257-020	742	429-025	14	429-460F	15	429-912F	15	4301-668C	602	43065-080C	602
4259-010BR	742	429-025G	40	429-486F	15	429-914F	15	4301-670	599	43065-100	599
4259-012BR	742	429-025L	45	429-487F	15	429-916F	15	4301-670C	602	43065-100C	602
4259-015BR	742	429-025T	85	429-488F	15	429-918F	15	4301-694	599	43065-120	599
4259-020BR	742	429-025TC	86	429-490F	15	429-920F	15	4301-694C	602	43065-120C	602
427-005	11, 33	429-025UV	36	429-490FE	16	429GR-020	33	4301-696	599	43065-140	599
427-005L	44	429-030	14	429-491F	15	43BD-060	600	4301-696C	602	43065-140C	602
427-007	11, 33	429-030G	40	429-528F	15	43BD-060C	603	4301-698	599	43065-160	599
427-007L	44	429-030L	45	429-528FE	16	43BD-080	600	4301-698C	602	43065-160C	602
427-010	11, 33	429-030T	85	429-529FE	16	43BD-080C	603	4301-700	599	43065-180	599
427-010L	44	429-030TC	86	429-530F	15	43BD-100	600	4301-700C	602	43065-180C	602
427-012	11, 33	429-030UV	36	429-530FE	16	43BD-100C	603	4301-702	599	43065-200	599
427-012L	44	429-040	14	429-532	15	43BD-120	600	4301-702C	602	43065-200C	602
427-015	11, 33	429-040G	40	429-532E	16	43BD-120C	603	4301-754	599	43065-240	599
427-015L	44	429-040L	45	429-532FE	16	43BD-140	600	4301-754C	602	43065-240C	602
427-020	11, 33	429-040T	85	429-533F	15	43BD-140C	603	4301-756	599	431-060	16
427-020B	42	429-040TC	86	429-533FE	16	43BD-160	600	4301-756C	602	431-080	16
427-020L	44	429-040UV	36	429-534F	15	43BD-160C	603	4301-758	599	431-100F	16
427-025	11, 33	429-045F	14	429-578F	15	43BD-180	600	4301-758C	602	431-120F	16
427-025L	44	429-050	14	429-578FE	16	43BD-180C	603	4301-760	599	4317-060	599
427-030	11, 33	429-050G	40	429-580F	15	43BD-200	600	4301-760C	602	4317-060C	603
427-030L	44	429-060	14	429-580FE	16	43BD-200C	603	4301-762	599	4317-080	599
427-040	11, 33	429-060G	40	429-582	15	43BD-240	600	4301-762C	602	4317-080C	603
427-040L	44	429-060L	45	429-582FE	16	43BD-240C	603	4301-764	599	4317-100	599
427-050	11, 33	429-080	14	429-583F	15	43BG-060	599	4301-764C	602	4317-100C	603
427-060	11, 33	429-080G	40	429-583FE	16	43BG-060C	603	4301-784	599	4317-120	599
427-080	11, 33	429-080L	45	429-585	15	43BG-080	599	4301-784C	602	4317-120C	603
427-100	11, 33	429-100	14	429-585FE	16	43BG-080C	603	4301-786	599	4317-140	599
427-120	11, 33	429-100F	14	429-621F	15	43BG-100	599	4301-786C	602	4317-140C	603
427-140F	11, 33	429-101	15	429-623F	15	43BG-100C	603	4301-788	599	4317-160	599



Spears List Price Part Number Index

4317-160C	603	4320-792	600	4329-760	600	4347-120A	601	435-040SR	16, 349	436-005L	45
4317-180	599	4320-792C	603	4329-760C	603	4347-120AC	604	435-040SRL	45	436-005UV	36
4317-180C	603	4320-794	600	4329-762	600	4347-120B	601	435-040SRT	85	436-007	17
4317-200	599	4320-794C	603	4329-762C	603	4347-120BC	604	435-040SRTC	86	436-007B	43
4317-200C	603	4320-796	600	4329-764	600	4347-120C	604	435-050	16	436-007G	40
4317-240	599	4320-796C	603	4329-764C	603	4347-140	601	435-050G	40	436-007L	45
4317-240C	603	4320-814	600	4329-784	600	4347-140A	601	435-060	16	436-007UV	36
43173-060	599	4320-814C	603	4329-784C	603	4347-140AC	604	435-060G	40	436-010	17
43173-060C	603	4320-816	600	4329-786	600	4347-140B	601	435-072	17	436-010B	43
43173-080	599	4320-816C	603	4329-786C	603	4347-140BC	604	435-072SR	17, 349	436-010G	40
43173-080C	603	4320-818	600	4329-788	600	4347-140C	604	435-073	17	436-010L	45
43173-100	599	4320-818C	603	4329-788C	603	4347-160	601	435-073G	40	436-010T	86
43173-100C	603	4320-820	600	4329-790	600	4347-160A	601	435-074	17	436-010TC	86
43173-120	599	4320-820C	603	4329-790C	603	4347-160AC	604	435-074SR	17, 349	436-010UV	36
43173-120C	603	4320-822	600	4329-792	600	4347-160B	601	435-080	16	436-012	17
43173-140	599	4320-822C	603	4329-792C	603	4347-160BC	604	435-100F	16	436-012B	43
43173-140C	603	4320-824	600	4329-794	600	4347-160C	604	435-101	17	436-012G	40
43173-160	599	4320-824C	603	4329-794C	603	4347-180	601	435-101G	40	436-012L	45
43173-160C	603	4320-826	600	4329-796	600	4347-180A	601	435-101SR	17, 349	436-012T	86
43173-180	599	4320-826C	603	4329-796C	603	4347-180AC	604	435-102	17	436-012TC	86
43173-180C	603	4320-828	600	4329-814	600	4347-180B	601	435-102SR	17, 349	436-012UV	36
43173-200	599	4320-828C	603	4329-814C	603	4347-180BC	604	435-120F	16	436-015	17
43173-200C	603	4320-904	600	4329-816	600	4347-180C	604	435-130	17	436-015B	43
43173-240	599	4320-904C	603	4329-816C	603	4347-200	601	435-130SR	17, 349	436-015G	40
43173-240C	603	4320-906	600	4329-818	600	4347-200A	601	435-131	17	436-015L	45
432-007525	34	4320-906C	603	4329-818C	603	4347-200AC	604	435-131G	40	436-015T	86
4320-060	600	4320-908	600	4329-820	600	4347-200B	601	435-131SR	17, 349	436-015TC	86
4320-060C	603	4320-908C	603	4329-820C	603	4347-200BC	604	435-133	17	436-015UV	36
4320-080	600	4320-910	600	4329-822	600	4347-200C	604	435-168	17	436-020	17
4320-080C	603	4320-910C	603	4329-822C	603	4347-240	601	435-247	17	436-020B	43
4320-100	600	4320-912	600	4329-824	600	4347-240A	601	435-460F	17	436-020G	40
4320-100C	603	4320-912C	603	4329-824C	603	4347-240AC	604	435-532	17	436-020L	45
4320-120	600	4320-914	600	4329-826	600	4347-240B	601	435-578F	17	436-020T	86
4320-120C	603	4320-914C	603	4329-826C	603	4347-240BC	604	435-582F	17	436-020TC	86
4320-140	600	4320-916	600	4329-828	600	4347-240C	604	435-628F	17	436-020UV	36
4320-140C	603	4320-916C	603	4329-828C	603	435-002SR	16, 349	4351S-060	601	436-025	17
4320-160	600	4320-918	600	4329-904	600	435-002SRL	45	4351S-060C	604	436-025G	40
4320-160C	603	4320-918C	603	4329-904C	603	435-003	16	4351S-080	601	436-025L	45
4320-180	600	4320-920	600	4329-906	600	435-003SR	16, 349	4351S-080C	604	436-025T	86
4320-180C	603	4320-920C	603	4329-906C	603	435-003SRL	45	4351S-100	601	436-025TC	86
4320-200	600	4329-060	600	4329-908	600	435-005	16	4351S-100C	604	436-025UV	36
4320-200C	603	4329-060C	603	4329-908C	603	435-005B	42	4351S-120	601	436-030	17
4320-240	600	4329-080	600	4329-910	600	435-005G	40	4351S-120C	604	436-030B	43
4320-240C	603	4329-080C	603	4329-910C	603	435-005SR	16, 349	4351S-140	601	436-030G	40
4320-532	600	4329-100	600	4329-912	600	435-005SRL	45	4351S-140C	604	436-030L	45
4320-532C	603	4329-100C	603	4329-912C	603	435-005UV	36	4351S-160	601	436-030T	86
4320-582	600	4329-120	600	4329-914	600	435-007	16	4351S-160C	604	436-030TC	86
4320-582C	603	4329-120C	603	4329-914C	603	435-007B	42	4351S-180	601	436-030UV	36
4320-585	600	4329-140	600	4329-916	600	435-007G	40	4351S-180C	604	436-040	17
4320-585C	603	4329-140C	603	4329-916C	603	435-007SR	16, 349	4351S-200	601	436-040G	40
4320-624	600	4329-160	600	4329-918	600	435-007SRL	45	4351S-200C	604	436-040L	45
4320-624C	603	4329-160C	603	4329-918C	603	435-007UV	36	4351S-240	601	436-040T	86
4320-626	600	4329-180	600	4329-920	600	435-010	16	4351S-240C	604	436-040TC	86
4320-626C	603	4329-180C	603	4329-920C	603	435-010B	42	4353-060	601	436-050	17
4320-628	600	4329-200	600	4329S-060	600	435-010G	40	4353-060C	604	436-050G	40
4320-628C	603	4329-200C	603	4329S-060C	603	435-010SR	16, 349	4353-080	601	436-053	17
4320-664	600	4329-240	600	4329S-080	600	435-010SRL	45	4353-080C	604	436-060	17
4320-664C	603	4329-240C	603	4329S-080C	603	435-010SRT	85	4353-100	601	436-060G	40
4320-666	600	4329-532	600	4329S-100	600	435-010SRTC	86	4353-100C	604	436-073	17
4320-666C	603	4329-532C	603	4329S-100C	603	435-012	16	4353-120	601	436-074	17
4320-668	600	4329-582	600	4329S-120	600	435-012B	42	4353-120C	604	436-074G	40
4320-668C	603	4329-582C	603	4329S-120C	603	435-012G	40	4353-140	601	436-074UV	36
4320-670	600	4329-585	600	4329S-140	600	435-012SR	16, 349	4353-140C	604	436-075	17
4320-670C	603	4329-585C	603	4329S-140C	603	435-012SRL	45	4353-160	601	436-080	17
4320-694	600	4329-624	600	4329S-160	600	435-012SRT	85	4353-160C	604	436-100F	17
4320-694C	603	4329-624C	603	4329S-160C	603	435-012SRTC	86	4353-180	601	436-101	17
4320-696	600	4329-626	600	4329S-180	600	435-015	16	4353-180C	604	436-101B	43
4320-696C	603	4329-626C	603	4329S-180C	603	435-015B	42	4353-200	601	436-101G	40
4320-698	600	4329-628	600	4329S-200	600	435-015G	40	4353-200C	604	436-102	17
4320-698C	603	4329-628C	603	4329S-200C	603	435-015SR	16, 349	4353-240	601	436-120F	17
4320-700	600	4329-664	600	4329S-240	600	435-015SRL	45	4353-240C	604	436-131	17
4320-700C	603	4329-664C	603	4329S-240C	603	435-015SRT	85	4353S-060	601	436-132	17
4320-702	600	4329-666	600	434-005	18	435-015SRTC	86	4353S-060C	605	436-133	17
4320-702C	603	4329-666C	603	434-007	18	435-020	16	4353S-080	601	436-168	17
4320-754	600	4329-668	600	434-010	18	435-020B	42	4353S-080C	605	436-169	17
4320-754C	603	4329-668C	603	4347-060	601	435-020G	40	4353S-100	601	436-212	17
4320-756	600	4329-670	600	4347-060A	601	435-020SR	16, 349	4353S-100C	605	436-213	17
4320-756C	603	4329-670C	603	4347-060AC	604	435-020SRL	45	4353S-120	601	436-251	17
4320-758	600	4329-694	600	4347-060B	601	435-020SRT	85	4353S-120C	605	436-251B	43
4320-758C	603	4329-694C	603	4347-060BC	604	435-020SRTC	86	4353S-140	601	436-252	17
4320-760	600	4329-696	600	4347-060C	604	435-025	16	4353S-140C	605	436-253	17
4320-760C	603	4329-696C	603	4347-080	601	435-025G	40	4353S-160	601	436-294	17
4320-762	600	4329-698	600	4347-080A	601	435-025SR	16, 349	4353S-160C	605	436-296	17
4320-762C	603	4329-698C	603	4347-080AC	604	435-025SRL	45	4353S-180	601	436-342	17
4320-764	600	4329-700	600	4347-080B	601	435-025SRT	85	4353S-180C	605	436-492F	17
4320-764C	603	4329-700C	603	4347-080BC	604	435-025SRTC	86	4353S-200	601	436-535F	17
4320-784	600	4329-702	600	4347-080C	604	435-030	16	4353S-200C	605	436-537F	17
4320-784C	603	4329-702C	603	4347-100	601	435-030G	40	4353S-240	601	437-072	18
4320-786	600	4329-754	600	4347-100A	601	435-030SR	16, 349	4353S-240C	605	437-073	18
4320-786C	603	4329-754C	603	4347-100AC	604	435-030SRL	45	436-003	17	437-101	18
4320-788	600	4329-756	600	4347-100B	601	435-030SRT	85	436-003L	45	437-101G	40
4320-788C	603	4329-756C	603	4347-100BC	604	435-030SRTC	86	436-005	17	437-101L	45
4320-790	600	4329-758	600	4347-100C	604	435-040	16	436-005B	43	437-101UV	36
4320-790C	603	4329-758C	603	4347-120	601						

Spears List Price Part Number Index



437-130G	40	437-422T	86	4375-666C	605	438-131UV	37	439-210G	41	4423CB-080C	328, 419
437-130UV	36	437-422TC	86	4375-668	602	438-166	19	439-211	18	4423CB-080P	371, 420
437-131	18	437-422UV	37	4375-668C	605	438-166G	41	439-211G	41	4423CB-007	248, 419
437-131G	40	437-486	18	4375-670	602	438-166SR	19, 349	439-212	18	4423CB-007C	328, 419
437-131L	45	437-488	18	4375-670C	605	438-167	19	439-212G	41	4423CB-007P	371, 419
437-131UV	36	437-490	18	4375-694	602	438-167G	41	439-247	18	4423CB-010	248, 419
437-166	18	437-490G	40	4375-694C	605	438-168	19	439-248	18	4423CB-010C	328, 419
437-166G	40	437-528	18	4375-696	602	438-168G	41	439-248SR	19, 350	4423CB-010P	371, 419
437-167	18	437-530	18	4375-696C	605	438-206	19	439-249	18	4423CB-012	248, 419
437-167G	40	437-532	18	4375-698	602	438-207	19	439-249G	41	4423CB-012C	328, 419
437-167UV	36	437-532G	40	4375-698C	605	438-207SR	19, 349	439-249SR	19, 350	4423CB-012P	371, 419
437-168	18	437-532L	45	4375-700	602	438-209	19	439-250	18	4423CB-015	248, 419
437-168G	40	437-534	18	4375-700C	605	438-209G	41	439-250G	41	4423CB-015C	328, 419
437-168L	45	437-534G	40	4375-702	602	438-209SR	19, 349	439-251	18	4423CB-015P	371, 419
437-168UV	36	437-578	18	4375-702C	605	438-210	19	439-251G	41	4423CB-020	248, 419
437-209	18	437-580	18	4375-754	602	438-210G	41	439-292	18	4423CB-020C	328, 419
437-209G	40	437-582	18	4375-754C	605	438-210SR	19, 349	439-337	18	4423CB-020P	371, 419
437-210	18	437-582G	40	4375-756	602	438-211	19	439-338	18	4423CB-025	248, 419
437-210G	40	437-583	18	4375-756C	605	438-211G	41	439-339	18	4423CB-025C	328, 419
437-210UV	36	437-585	18	4375-758	602	438-212	19	439-420	18	4423CB-025P	371, 419
437-211	18	437-585G	40	4375-758C	605	438-212G	41	439-422	18	4423CB-030	248, 419
437-211G	40	437-585L	45	4375-760	602	438-245	19	442-005	11, 33	4423CB-030C	328, 419
437-211L	45	437-623	18	4375-760C	605	438-247	19	442-007	11, 33	4423CB-030P	371, 419
437-211UV	36	437-624	18	4375-762	602	438-247G	41	442-010	11, 33	4423CB-040	248, 419
437-212	18	437-626	18	4375-762C	605	438-247SR	19, 349	442-012	11, 33	4423CB-040C	328, 419
437-212G	40	437-628	18	4375-764	602	438-248	19	442-015	11, 33	4423CB-040P	371, 419
437-212L	45	437-664	18	4375-764C	605	438-248G	41	442-020	11, 33	4423CB-060	248, 419
437-212UV	36	437-666	18	4375-784	602	438-248SR	19, 349	442-025F	11, 33	4423CB-060C	328, 419
437-247	18	437-666F	18	4375-784C	605	438-249	19	442-030	11, 33	4423CB-060P	371, 419
437-247G	40	437-668	18	4375-786	602	438-249G	41	442-040	11, 33	4423CB-080	248, 419
437-248	18	437-670	18	4375-786C	605	438-249SR	19, 349	442-060	11, 33	4423CB-080C	328, 419
437-248G	40	437-696F	18	4375-788	602	438-250	19	442-060F	11, 33	4423CB-080P	371, 419
437-249	18	437-698F	18	4375-788C	605	438-250G	41	442-080	11, 33	4433-007	248, 418
437-249G	40	437-700F	18	4375-790	602	438-251	19	442-080F	11, 33	4433-007C	328, 418
437-249UV	36	437-702F	18	4375-790C	605	438-251G	41	442-100F	11, 33	4433-007P	371, 418
437-250	18	437-756F	19	4375-792	602	438-287	19	442-120F	11, 33	4433-010	248, 418
437-250G	40	437-758F	19	4375-792C	605	438-288	19	4423-007	248, 418	4433-010C	328, 418
437-250T	86	437-760F	19	4375-794	602	438-289	19	4423-007C	328, 418	4433-010P	371, 418
437-250TC	86	437-762F	19	4375-794C	605	438-290	19	4423-007P	371, 418	4433-012	248, 418
437-250UV	36	437-764F	19	4375-796	602	438-291	19	4423-010	248, 418	4433-012C	328, 418
437-251	18	437-786F	19	4375-796C	605	438-291G	41	4423-010C	328, 418	4433-012P	371, 418
437-251B	43	437-788F	19	4375-814	602	438-292	19	4423-010P	371, 418	4433-015	248, 418
437-251G	40	437-790F	19	4375-814C	605	438-292G	41	4423-012	248, 418	4433-015C	328, 418
437-251L	45	437-792F	19	4375-816	602	438-334	19	4423-012C	328, 418	4433-015P	371, 418
437-251T	86	437-794F	19	4375-816C	605	438-334SR	19, 349	4423-012P	371, 418	4433-020	248, 418
437-251TC	86	437-796F	19	4375-818	602	438-335	19	4423-015	248, 418	4433-020C	328, 418
437-251UV	36	437-816F	19	4375-818C	605	438-335SR	19, 349	4423-015C	328, 418	4433-020P	371, 419
437-287	18	437-818F	19	4375-820	602	438-336	19	4423-015P	371, 418	4433-025	248, 418
437-288	18	437-820F	19	4375-820C	605	438-336SR	19, 349	4423-020	248, 418	4433-025C	328, 418
437-288UV	36	437-822F	19	4375-822	602	438-337	19	4423-020C	328, 418	4433-025P	371, 419
437-289	18	437-824F	19	4375-822C	605	438-337SR	19, 349	4423-020P	371, 419	4433-030	248, 418
437-289UV	36	437-826F	19	4375-824	602	438-338	19	4423-025	248, 418	4433-030C	328, 418
437-290	18	437-828F	19	4375-824C	605	438-338G	41	4423-025C	328, 418	4433-030P	371, 419
437-290G	40	437-906F	19	4375-826	602	438-339	19	4423-025P	371, 419	4433-040	248, 418
437-290UV	36	437-908F	19	4375-826C	605	438-420	19	4423-030	248, 418	4433-040C	328, 418
437-291	18	437-910F	19	4375-828	602	438-420G	41	4423-030C	328, 418	4433-040P	371, 419
437-291G	40	437-912F	19	4375-828C	605	438-420SR	19, 349	4423-030P	371, 419	4433-060	248, 418
437-292	18	437-914F	19	4375-904	602	438-421	19	4423-040	248, 418	4433-060C	328, 418
437-292G	40	437-916F	19	4375-904C	605	438-421SR	19, 349	4423-040C	328, 418	4433-060P	371, 419
437-292L	45	437-918F	19	4375-906	602	438-422	19	4423-040P	371, 419	4433-080	248, 418
437-292T	86	437-920F	19	4375-906C	605	438-422G	41	4423-060	248, 418	4433-080C	328, 418
437-292TC	86	4375-060	601	4375-908	602	438-488	19	4423-060C	328, 418	4433-080P	371, 419
437-292UV	36	4375-060C	605	4375-908C	605	438-490	19	4423-060P	371, 419	4433CB-007	248, 419
437-333	18	4375-080	601	4375-910	602	438-490G	41	4423-080	248, 418	4433CB-007C	328, 419
437-334	18	4375-080C	605	4375-910C	605	438-528	19	4423-080C	328, 418	4433CB-007P	371, 419
437-334G	40	4375-100	601	4375-912	602	438-528SR	19, 349	4423-080P	371, 419	4433CB-010	248, 419
437-335	18	4375-100C	605	4375-912C	605	438-530	19	4423CB-007	248, 419	4433CB-010C	328, 419
437-335B	43	4375-120	601	4375-914	602	438-530SR	19, 349	4423CB-007C	328, 419	4433CB-010P	371, 419
437-335G	40	4375-120C	605	4375-914C	605	438-532	19	4423CB-007P	371, 419	4433CB-012	248, 419
437-335UV	36	4375-140	601	4375-916	602	438-532G	41	4423CB-010	248, 419	4433CB-012C	328, 419
437-336	18	4375-140C	605	4375-916C	605	438-532SR	19, 350	4423CB-010C	328, 419	4433CB-012P	371, 419
437-336G	40	4375-160	601	4375-918	602	438-534	19	4423CB-010P	371, 419	4433CB-015	248, 419
437-336UV	37	4375-160C	605	4375-918C	605	439-052	18	4423CB-012	248, 419	4433CB-015C	328, 419
437-337	18	4375-180	601	4375-920	602	439-071	18	4423CB-012C	328, 419	4433CB-015P	371, 419
437-337B	43	4375-180C	605	4375-920C	605	439-072	18	4423CB-012P	371, 419	4433CB-020	248, 419
437-337G	40	4375-200	601	438-071	19	439-073	18	4423CB-015	248, 419	4433CB-020C	328, 419
437-337UV	37	4375-200C	605	438-072	19	439-098	18	4423CB-015C	328, 419	4433CB-020P	371, 419
437-338	18	4375-240	601	438-072B	43	439-099	18	4423CB-015P	371, 419	4433CB-025	248, 419
437-338G	40	4375-240C	605	438-072G	40	439-101	18	4423CB-020	248, 419	4433CB-025C	328, 419
437-338L	45	4375-532	601	438-073	19	439-101G	41	4423CB-020C	328, 419	4433CB-025P	371, 419
437-338T	86	4375-532C	605	438-073G	40	439-128	18	4423CB-020P	371, 419	4433CB-030	248, 419
437-338TC	86	4375-582	601	438-098	19	439-130	18	4423CB-025	248, 419	4433CB-030C	328, 419
437-338UV	37	4375-582C	605	438-098G	40	439-130G	41	4423CB-025C	328, 419	4433CB-030P	371, 419
437-339	18	4375-585	601	438-101	19	439-131	18	4423CB-025P	371, 419	4433CB-040	248, 419
437-339G	40	4375-585C	605	438-101G	40	439-131G	41	4423CB-030	248, 419	4433CB-040C	328, 419
437-339L	45	4375-624	601	438-127	19	439-166	18	4423CB-030C	328, 419	4433CB-040P	371, 419
437-339UV	37	4375-624C	605	438-128	19	439-166G	41	4423CB-030P	371, 419	4433CB-060	248, 419
437-420	18	4375-626	601	438-128SR	19, 349	439-167	18	4423CB-040	248, 419	4433CB-060C	328, 419
437-420G	40	4375-626C	605	438-129	19	439-167G	41	4			



Spears List Price Part Number Index

4433I-007P	371, 419	448-003	20	4520-015	406	4525-015	707	4531-040	242, 408	4538-015	707
4433I-010	248, 419	448-003G	39	4520-015C	406	4525-015C	708	4531-040C	324, 409	4538-015C	708
4433I-010C	328, 419	448-005	20	4520-020	406	4525-020	707	4531-040CSR	324, 409	4538-020	707
4433I-010P	371, 419	448-005B	43	4520-020C	406	4525-020C	708	4531-040SR	242, 408	4538-020C	708
4433I-012	248, 419	448-005G	39	4520-025	406	4527-005	242, 408	4531-060	242, 408	4539-005	242, 408
4433I-012C	328, 419	448-007	20	4520-025C	406	4527-005C	324, 409	4531-060C	324, 409	4539-005BL	566
4433I-012P	371, 419	448-007B	43	4520-030	406	4527-007	242, 408	4531-060CSR	324, 409	4539-005C	324, 408
4433I-015	248, 419	448-007G	39	4520-030C	406	4527-007C	324, 409	4531-060SR	242, 408	4539-007	242, 408
4433I-015C	328, 419	448-010	20	4520-040	406	4527-010	242, 408	4532-025	242, 408	4539-007BL	566
4433I-015P	371, 419	448-010G	39	4520-040C	406	4527-010C	324, 409	4532-025C	324, 409	4539-007C	324, 408
4433I-020	248, 419	448-012	20	4520-060	406	4527-012	242, 408	4532-030	242, 408	4539-010	242, 408
4433I-020C	328, 419	448-012G	39	4520-060C	406	4527-012C	324, 409	4532-030BL	567	4539-010BL	567
4433I-020P	371, 419	448-012SR	20, 350	4521-005CSR	324, 409	4527-015	242, 408	4532-030C	324, 409	4539-010C	324, 408
4433I-025	248, 419	448-015	20	4521-005SR	242, 408	4527-015C	324, 409	4532-040	242, 408	4539-012	242, 408
4433I-025C	328, 419	448-015G	39	4521-007CSR	324, 409	4527-020	242, 408	4532-040BL	567	4539-012BL	567
4433I-025P	371, 419	448-020	20	4521-007SR	242, 408	4527-020C	324, 409	4532-040C	324, 409	4539-012C	324, 409
4433I-030	248, 419	448-020G	39	4521-010CSR	324, 409	4527-025	242, 408	4532-060	242, 408	4539-015	242, 408
4433I-030C	328, 419	448-025	20	4521-010SR	242, 408	4527-025C	324, 409	4532-060C	324, 409	4539-015BL	567
4433I-030P	371, 419	448-030	20	4521-012CSR	324, 409	4527-030	242, 408	4532-080	242, 408	4539-015C	324, 409
4433I-040	248, 419	448-030G	39	4521-012SR	242, 408	4527-030C	324, 409	4532-080C	324, 409	4539-020	242, 408
4433I-040C	328, 419	448-040	20	4521-015CSR	324, 409	4527-040	242, 408	4533-005	242, 408	4539-020BL	567
4433I-040P	371, 419	448-040G	39	4521-015SR	242, 408	4527-040C	324, 409	4533-005C	324, 409	4539-020C	324, 409
4433I-060	248, 419	448-050	20	4521-020CSR	324, 409	4527-060	242, 408	4533-007	242, 408	457-005	20
4433I-060C	328, 419	448-060	20	4521-020SR	242, 408	4527-060C	324, 409	4533-007C	324, 409	457-005G	41
4433I-060P	371, 419	448-080F	20	4521-025	242, 408	4528-005	707	4533-010	242, 408	457-007	20
4433I-080	248, 419	448-100F	20	4521-025C	324, 409	4528-005C	708	4533-010C	324, 409	457-007G	41
4433I-080C	328, 419	448-120F	20	4521-025CSR	324, 409	4528-007	707	4533-012	242, 408	457-010	20
4433I-080P	371, 419	449-003	20	4521-025SR	242, 408	4528-007C	708	4533-012C	324, 409	457-010G	41
444-005	6	449-005	20	4521-030	242, 408	4528-010	707	4533-015	242, 408	457-012	20
444-007	6	449-005G	39	4521-030C	324, 409	4528-010C	708	4533-015C	324, 409	457-012G	41
444-010	6	449-007	20	4521-030CSR	324, 409	4528-012	707	4533-020	242, 408	457-015	20
444-012	6	449-007CS	20	4521-030SR	242, 408	4528-012C	708	4533-020C	324, 409	457-015G	41
444-015	6	449-007G	39	4521-040	242, 408	4528-015	707	4533-025	242, 408	457-020	20
444-020	6	449-010	20	4521-040C	324, 409	4528-015C	708	4533-025C	324, 409	457-020G	41
446-003	17	449-010CS	20	4521-040CSR	324, 409	4528-020	707	4533-030	242, 408	457-025	20
446-012	17	449-010G	39	4521-040SR	242, 408	4528-020C	708	4533-030C	324, 409	457-030	20
446-053	17	449-012	20	4521-060	242, 408	4529-005	242, 408	4533-040	242, 408	457-040	20
446-074	17	449-012G	39	4521-060C	324, 409	4529-005BL	566	4533-040C	324, 409	457-060	20
446-074B	43	449-015	20	4521-060CSR	324, 409	4529-005C	324, 408	4533-060	242, 408	458-005	20
447-002L	45	449-015G	39	4521-060SR	242, 408	4529-007	242, 408	4533-060C	324, 409	458-005G	41
447-003	19	449-020	20	4522-025	242, 408	4529-007BL	566	4533-080	242, 408	458-007	20
447-003G	39	449-020G	39	4522-025C	324, 409	4529-007C	324, 408	4533-080C	324, 409	458-007G	41
447-003L	45	449-025	20	4522-030	242, 408	4529-010	242, 408	4534-005	707	458-010	20
447-005	19	449-030	20	4522-030BL	566	4529-010BL	566	4534-005C	707	458-010G	41
447-005B	43	449-030G	39	4522-030C	324, 409	4529-010C	324, 408	4534-007	707	458-012	20
447-005G	39	449-040	20	4522-040	242, 408	4529-012	242, 408	4534-007C	707	458-012G	41
447-005L	45	449-060	20	4522-040BL	566	4529-012BL	566	4534-010	707	458-015	20
447-007	19	449-060F	20	4522-040C	324, 409	4529-012C	324, 409	4534-010C	707	458-015G	41
447-007B	43	449-080F	20	4522-060	242, 408	4529-015	242, 408	4534-012	707	458-020	20
447-007G	39	449-100F	20	4522-060C	324, 409	4529-015BL	566	4534-012C	707	458-020G	41
447-007L	45	449-120F	20	4522-080	242, 408	4529-015C	324, 409	4534-015	707	458-025	20
447-010	19	449-140F	20	4522-080C	324, 409	4529-020	242, 408	4534-015C	707	458-030	20
447-010B	43	449-160F	20	4523-005	242, 408	4529-020BL	566	4534-020	707	458-040	20
447-010G	39	449-180F	20	4523-005C	324, 409	4529-020C	324, 409	4534-020C	707	458-060	20
447-010L	45	449-200F	20	4523-007	242, 408	4530-005	406	4535-005	707	459-002SR	21, 350
447-012	19	449-240F	20	4523-007C	324, 409	4530-005C	406	4535-005C	708	459-003SR	21, 350
447-012B	43	450-003	20	4523-010	242, 408	4530-007	406	4535-007	707	459-005SR	21, 350
447-012G	39	450-003G	39	4523-010C	324, 409	4530-007C	406	4535-007C	708	459-007SR	21, 350
447-012L	45	450-005	20	4523-012	242, 408	4530-010	406	4535-010	707	459-010BR	21, 350
447-015	19	450-005B	43	4523-012C	324, 409	4530-010C	406	4535-010C	708	459-010SR	21, 350
447-015B	43	450-005G	39	4523-015	242, 408	4530-012	406	4535-012	707	459-012BR	21, 350
447-015G	39	450-007	20	4523-015C	324, 409	4530-012C	406	4535-012C	708	459-012SR	21, 350
447-015L	45	450-007B	43	4523-020	242, 408	4530-015	406	4535-015	707	459-015BR	21, 350
447-020	19	450-007G	39	4523-020C	324, 409	4530-015C	406	4535-015C	708	459-015SR	21, 350
447-020B	43	450-010	20	4523-025	242, 408	4530-020	406	4535-020	707	459-020BR	21, 350
447-020G	39	450-010B	43	4523-025C	324, 409	4530-020C	406	4535-020C	708	459-020SR	21, 350
447-020L	45	450-010G	39	4523-030	242, 408	4530-025	406	4537-005	242, 408	459-030SR	21, 350
447-025	19	450-012	20	4523-030C	324, 409	4530-025C	406	4537-005C	324, 409	459-040SR	21, 350
447-025G	39	450-012B	43	4523-040	242, 408	4530-030	406	4537-007	242, 408	459-060SR	21, 350
447-025L	45	450-012G	39	4523-040C	324, 409	4530-030C	406	4537-007C	324, 409	460-005	17, 161
447-030	19	450-015	20	4523-060	242, 408	4530-040	406	4537-010	242, 408	460-005G	161
447-030G	39	450-015G	39	4523-060C	324, 409	4530-040C	406	4537-010C	324, 409	460-007	17, 161
447-030L	45	450-020	20	4523-080	242, 408	4530-060	406	4537-012	242, 408	460-007G	161
447-040	19	450-020G	39	4523-080C	324, 409	4530-060C	406	4537-012C	324, 409	460-007N	18, 161
447-040B	43	450-025	20	4524-005	707	4531-005CSR	324, 409	4537-015	242, 408	460-010	17, 161
447-040G	39	450-025G	39	4524-005C	707	4531-005SR	242, 408	4537-015C	324, 409	460-010G	161
447-040L	45	450-030	20	4524-007	707	4531-007CSR	324, 409	4537-020	242, 408	460-012	18, 161
447-045F	19	450-030G	39	4524-007C	707	4531-007SR	242, 408	4537-020C	324, 409	460-012G	161
447-050	19	450-040	20	4524-010	707	4531-010CSR	324, 409	4537-025	242, 408	460-012N	18, 161
447-050G	39	450-040G	39	4524-010C	707	4531-010SR	242, 408	4537-025C	324, 409	460-015	18, 161
447-060	19	450-060	20	4524-012	707	4531-012CSR	324, 409	4537-030	242, 408	460-015G	161
447-060B	43	450-080F	20	4524-012C	707	4531-012SR	242, 408	4537-030C	324, 409	460-020	18, 161
447-060G	39	450-100F	20	4524-015	707	4531-015CSR	324, 409	4537-040	242, 408	460-020G	161
447-060L	45	450-120F	20	4524-015C	707	4531-015SR	242, 408	4537-040C	324, 409	460-030	18, 161
447-080	19	451A-010	8	4524-020	707	4531-020CSR	324, 409	4537-060	242, 408	460-040	18, 161
447-080G	39	4520	579, 732	4524-020C	707	4531-020SR	242, 408	4537-060C	324, 409	460-131N	18, 161
447-080L	45	4520									

Spears List Price Part Number Index



461-131	21	466-585	25	466SE-247	25	467E-335SR	27	467SE-419SR	27	468E-528	28
463-005	21	466-620	25	466SE-248	25	467E-336SR	27	467SE-420SR	27	468E-529	28
463-007	21	466-624	25	466SE-249	25	467E-337SR	27	467SE-421SR	27	468E-530	28
463-010	21	466-626	25	466SE-250	25	467E-338SR	27	467SE-422SR	27	468E-532	28
463-012	21	466-660	25	466SE-251	26	467E-415SR	27	467SE-523SR	27, 629	468E-573	28
463-015	22	466-664	25	466SE-291	26	467E-416SR	27	467SE-524SR	27, 629	468E-574	28
463-020	22	466-666	25	466SE-333	26	467E-417SR	27	467SE-525SR	27	468E-575	28
463-101	22	466E-247	25	466SE-334	26	467E-418SR	27	467SE-526SR	27	468E-576	28
463-130	22	466E-248	25	466SE-335	26	467E-419SR	27	467SE-527SR	27	468E-577	28
463-288	21	466E-249	25	466SE-336	26	467E-420SR	27	467SE-528SR	27	468E-578	28
463-333	21	466E-250	25	466SE-337	26	467E-421SR	27	467SE-529SR	27	468E-579	28
463-335	21	466E-251	25	466SE-338	26	467E-422SR	27	467SE-530SR	27	468E-580	28
463-336	21	466E-291	25	466SE-415	26	467E-523SR	27	467SE-532SR	27	468E-582	28
463-337	21	466E-333	25	466SE-416	26	467E-524SR	27	467SE-573SR	27, 629	468E-585	28
463-338	21	466E-334	25	466SE-417	26	467E-525SR	27	467SE-574SR	27, 629	468E-624	28
463-415	21	466E-335	25	466SE-418	26	467E-526SR	27	467SE-575SR	27	468E-626	28
463-416	21	466E-336	25	466SE-419	26	467E-527SR	27	467SE-576SR	27	468E-664	28
463-417	21	466E-337	25	466SE-420	26	467E-528SR	27	467SE-577SR	27	468E-666	28
463-418	21	466E-338	25	466SE-421	26	467E-529SR	27	467SE-578SR	27	468S-247	28
463-419	21	466E-415	25	466SE-422	26	467E-530SR	27	467SE-579SR	27	468S-248	28
463-420	21	466E-416	25	466SE-523	26	467E-532SR	27	467SE-580SR	27	468S-249	28
463-485	21	466E-417	25	466SE-524	26	467E-573SR	27	467SE-582SR	27	468S-250	28
463-486	21	466E-418	25	466SE-525	26	467E-574SR	27	467SE-585SR	27	468S-251	28
463-523	21	466E-419	25	466SE-526	26	467E-575SR	27	467SE-624SR	27	468S-291	28
463-525	21	466E-420	25	466SE-527	26	467E-576SR	27	467SE-626SR	27	468S-333	28
463-526	21	466E-421	25	466SE-528	26	467E-577SR	27	467SE-666SR	27	468S-334	28
463-527	21	466E-422	25	466SE-529	26	467E-578SR	27	468-247	27	468S-335	28
463-528	21	466E-523	25	466SE-530	26	467E-579SR	27	468-248	27	468S-336	28
463-530	21	466E-524	25	466SE-532	26	467E-580SR	27	468-249	27	468S-337	28
463-532	21	466E-525	25	466SE-573	26	467E-582SR	27	468-250	27	468S-338	28
463-573	21	466E-526	25	466SE-574	26	467E-585SR	27	468-251	27	468S-415	28
463-575	21	466E-527	25	466SE-575	26	467E-624SR	27	468-291	27	468S-416	28
463-576	21	466E-528	25	466SE-576	26	467E-626SR	27	468-333	27	468S-417	28
463-577	21	466E-529	25	466SE-577	26	467E-664SR	27	468-334	27	468S-418	28
463-578	21	466E-530	25	466SE-578	26	467E-666SR	27	468-335	27	468S-419	28
463-580	21	466E-532	25	466SE-579	26	467S-247SR	26	468-336	27	468S-420	28
463-582	21	466E-573	25	466SE-580	26	467S-248SR	26	468-337	27	468S-421	28
463-624	21	466E-574	25	466SE-582	26	467S-249SR	26	468-338	27	468S-422	28
464-005	22	466E-575	25	466SE-585	26	467S-250SR	26	468-415	27	468S-523	28
464-007	22	466E-576	25	466SE-624	26	467S-251SR	26	468-416	27	468S-524	28
464-010	22	466E-577	25	466SE-626	26	467S-291SR	26	468-417	28	468S-525	28
464-071	22	466E-578	25	466SE-664	26	467S-333SR	26	468-418	28	468S-526	28
464-097	22	466E-579	25	466SE-666	26	467S-334SR	26	468-419	28	468S-527	28
464-101	22	466E-580	25	467-247SR	26	467S-335SR	26	468-420	28	468S-528	28
464-130	22	466E-582	25	467-248SR	26	467S-336SR	26	468-421	28	468S-529	28
464-131	22	466E-585	25	467-249SR	26	467S-337SR	26	468-422	28	468S-530	28
464-210	22	466E-624	25	467-250SR	26	467S-338SR	26	468-523	28	468S-532	28
464-288	21	466E-626	25	467-251SR	26	467S-415SR	26	468-524	28	468S-573	28
464-337	21	466E-664	25	467-291SR	26	467S-416SR	26	468-525	28	468S-574	28
464-419	21	466E-666	25	467-333SR	26	467S-417SR	26	468-526	28	468S-575	28
464-486	21	466S-247	25	467-334SR	26	467S-418SR	26	468-527	28	468S-576	28
464-527	21	466S-248	25	467-335SR	26	467S-419SR	26	468-528	28	468S-577	28
464-532	21	466S-249	25	467-336SR	26	467S-420SR	26	468-529	28	468S-578	28
464-577	21	466S-250	25	467-337SR	26	467S-421SR	26	468-530	28	468S-579	28
464-582	21	466S-251	25	467-338SR	26	467S-422SR	26	468-532	28	468S-580	28
464-624	21	466S-291	25	467-415SR	26	467S-523SR	26	468-573	28	468S-582	28
466-247	24	466S-333	25	467-416SR	26	467S-524SR	26	468-574	28	468S-585	28
466-248	24	466S-334	25	467-417SR	26	467S-525SR	26	468-575	28	468S-624	28
466-249	24	466S-335	25	467-418SR	26	467S-526SR	26	468-576	28	468S-626	28
466-250	24	466S-336	25	467-419SR	26	467S-527SR	26	468-577	28	468S-664	28
466-251	24	466S-337	25	467-420SR	26	467S-528SR	26	468-578	28	468S-666	28
466-291	24	466S-338	25	467-421SR	26	467S-529SR	26	468-579	28	468SE-247	29
466-333	24	466S-415	25	467-422SR	26	467S-530SR	26	468-580	28	468SE-248	29
466-334	24	466S-416	25	467-523SR	26	467S-532SR	26	468-582	28	468SE-249	29
466-335	24	466S-417	25	467-524SR	26	467S-573SR	26	468-585	28	468SE-250	29
466-336	24	466S-418	25	467-525SR	26	467S-574SR	26	468-624	28	468SE-251	29
466-337	24	466S-419	25	467-526SR	26	467S-575SR	26	468-626	28	468SE-291	29
466-338	24	466S-420	25	467-527SR	26	467S-576SR	26	468-664	28	468SE-333	29
466-415	24	466S-421	25	467-528SR	26	467S-577SR	26	468-666	28	468SE-334	29
466-416	24	466S-422	25	467-529SR	26	467S-578SR	27	468E-247	28	468SE-335	29
466-417	24	466S-523	25	467-530SR	26	467S-579SR	27	468E-248	28	468SE-336	29
466-418	24	466S-524	25	467-532SR	26	467S-580SR	27	468E-249	28	468SE-337	29
466-419	24	466S-525	25	467-573SR	26	467S-582SR	27	468E-250	28	468SE-338	29
466-420	24	466S-526	25	467-574SR	26	467S-585SR	27	468E-251	28	468SE-415	29
466-421	24	466S-527	25	467-575SR	26	467S-624SR	27	468E-291	28	468SE-416	29
466-422	24	466S-528	25	467-576SR	26	467S-626SR	27	468E-333	28	468SE-417	29
466-523	24	466S-529	25	467-577SR	26	467S-664SR	27	468E-334	28	468SE-418	29
466-524	24	466S-530	25	467-578SR	26	467S-666SR	27	468E-335	28	468SE-419	29
466-525	24	466S-532	25	467-579SR	26	467SE-247SR	27, 629	468E-336	28	468SE-420	29
466-526	24	466S-573	25	467-580SR	26	467SE-248SR	27, 629	468E-337	28	468SE-421	29
466-527	24	466S-574	25	467-582SR	26	467SE-249SR	27	468E-338	28	468SE-422	29
466-528	24	466S-575	25	467-585SR	26	467SE-250SR	27	468E-415	28	468SE-523	29
466-529	25	466S-576	25	467-624SR	26	467SE-251SR	27	468E-416	28	468SE-524	29
466-530	25	466S-577	25	467-626SR	26	467SE-291SR	27	468E-417	28	468SE-525	29
466-532	25	466S-578	25	467-664SR	26	467SE-333SR	27, 629	468E-418	28	468SE-526	29
466-573	25	466S-579	25	467-666SR	26	467SE-334SR	27, 629	468E-419	28	468SE-527	29
466-574	25	466S-580	25	467E-247SR	27	467SE-335SR	27	468E-420	28	468SE-528	29
466-575	25	466S-582	25	467E-248SR	27	467SE-336SR	27	468E-421	28	468SE-529	29
466-576	25	466S-585	25	467E-249SR	27	467SE-337SR	27	468E-422	28	468SE-530	29
466-577	25	466S-620	25	467E-250SR	27	467SE-338SR	27	468E-523	28	468SE-532	29
466-578	25	466S-624	25	467E-251SR	27	467SE-415SR	27, 629	468E-524	28	468SE-573	29
466-579	25	466S-626	25	467E-291SR	27	467SE-416SR	27, 629	468E-525	28	468SE-574	29
466-580	25	466S-664	25	467E-333SR	27	467SE-417SR	27	468E-526	28	468SE-575	29
466-582	25	466S-666	25	467E-334SR	27	467SE-418SR	27	468E-527	28	468SE-576	29



Spears List Price Part Number Index

468SE-577	29	469S-247SR	29	4721L1-015CSR	315, 382	4722L2-025	232, 381	4723L3-040	232, 381	4725L3-007C	705
468SE-578	29	469S-248SR	29	4721L1-015SR	232, 381	4722L2-025C	315, 382	4723L3-040C	315, 382	4725L3-010	703
468SE-579	29	469S-249SR	29	4721L1-020CSR	315, 382	4722L2-030	232, 381	4723T1-005	232, 380	4725L3-010C	705
468SE-580	29	469S-250SR	29	4721L1-020SR	232, 381	4722L2-030C	315, 382	4723T1-005C	315, 381	4725L3-012	705
468SE-582	29	469S-251SR	29	4721L1-025CSR	315, 382	4722L2-040	232, 381	4723T1-007	232, 380	4725L3-012C	705
468SE-585	29	469S-291SR	29	4721L1-025SR	232, 381	4722L2-040C	315, 382	4723T1-007C	315, 381	4725L3-015	703
468SE-624	29	469S-333SR	29	4721L1-030CSR	315, 382	4722L3-005	232, 380	4723T1-010	232, 380	4725L3-015C	705
468SE-626	29	469S-334SR	29	4721L1-030SR	232, 381	4722L3-005C	315, 381	4723T1-010C	315, 381	4725L3-020	703
468SE-664	29	469S-335SR	29	4721L1-040CSR	315, 382	4722L3-007	232, 380	4723T1-012	232, 380	4725L3-020C	705
468SE-666	29	469S-336SR	29	4721L1-040SR	232, 381	4722L3-007C	315, 381	4723T1-012C	315, 382	4725T1-005	703
469-247SR	29	469S-337SR	29	4721L2-005CSR	315, 381	4722L3-010	232, 380	4723T1-015	232, 381	4725T1-005C	706
469-248SR	29	469S-338SR	29	4721L2-005SR	232, 380	4722L3-010C	315, 381	4723T1-015C	315, 382	4725T1-007	703
469-249SR	29	469S-415SR	29	4721L2-007CSR	315, 381	4722L3-012	232, 380	4723T1-020	232, 381	4725T1-007C	706
469-250SR	29	469S-416SR	29	4721L2-007SR	232, 380	4722L3-012C	315, 382	4723T1-020C	315, 382	4725T1-010	703
469-251SR	29	469S-417SR	29	4721L2-010CSR	315, 381	4722L3-015	232, 381	4723T1-025	232, 381	4725T1-010C	706
469-291SR	29	469S-418SR	29	4721L2-010SR	232, 380	4722L3-015C	315, 382	4723T1-025C	315, 382	4725T1-012	703
469-333SR	29	469S-419SR	29	4721L2-012CSR	315, 382	4722L3-020	232, 381	4723T1-030	232, 381	4725T1-012C	706
469-334SR	29	469S-420SR	29	4721L2-012SR	232, 380	4722L3-020C	315, 382	4723T1-030C	315, 382	4725T1-015	703
469-335SR	29	469S-421SR	29	4721L2-015CSR	315, 382	4722L3-025	232, 381	4723T1-040	232, 381	4725T1-015C	706
469-336SR	29	469S-422SR	29	4721L2-015SR	232, 381	4722L3-025C	315, 382	4723T1-040C	315, 382	4725T1-020	703
469-337SR	29	469S-523SR	29	4721L2-020CSR	315, 382	4722L3-030	232, 381	4724L1-005	701	4725T1-020C	706
469-338SR	29	469S-524SR	29	4721L2-020SR	232, 381	4722L3-030C	315, 382	4724L1-005C	704	4727L1-005	232, 380
469-415SR	29	469S-525SR	29	4721L2-025CSR	315, 382	4722L3-040	232, 381	4724L1-007	701	4727L1-005C	315, 381
469-416SR	29	469S-526SR	29	4721L2-025SR	232, 381	4722L3-040C	315, 382	4724L1-007C	704	4727L1-007	232, 380
469-417SR	29	469S-527SR	29	4721L2-030CSR	315, 382	4722T1-005	232, 380	4724L1-010	701	4727L1-007C	315, 381
469-418SR	29	469S-528SR	29	4721L2-030SR	232, 381	4722T1-005C	315, 381	4724L1-010C	704, 704	4727L1-010	232, 380
469-419SR	29	469S-529SR	29	4721L2-040CSR	315, 382	4722T1-007	232, 380	4724L1-012	701	4727L1-010C	315, 381
469-420SR	29	469S-530SR	29	4721L2-040SR	232, 381	4722T1-007C	315, 381	4724L1-012C	704	4727L1-012	232, 380
469-421SR	29	469S-532SR	29	4721L3-005CSR	315, 381	4722T1-010	232, 380	4724L1-015	701	4727L1-012C	315, 382
469-422SR	29	469S-573SR	30	4721L3-005SR	232, 380	4722T1-010C	315, 381	4724L1-015C	704	4727L1-015	232, 381
469-523SR	29	469S-574SR	30	4721L3-007CSR	315, 381	4722T1-012	232, 380	4724L1-020	701	4727L1-015C	315, 382
469-524SR	29	469S-575SR	30	4721L3-007SR	232, 380	4722T1-012C	315, 382	4724L1-020C	704	4727L1-020	232, 381
469-525SR	29	469S-576SR	30	4721L3-010CSR	315, 381	4722T1-015	232, 381	4724L2-005	702	4727L1-020C	315, 382
469-526SR	29	469S-577SR	30	4721L3-010SR	232, 380	4722T1-015C	315, 382	4724L2-005C	704	4727L1-025	232, 381
469-527SR	29	469S-578SR	30	4721L3-012CSR	315, 382	4722T1-020	232, 381	4724L2-007	702	4727L1-025C	315, 382
469-528SR	29	469S-579SR	30	4721L3-012SR	232, 380	4722T1-020C	315, 382	4724L2-007C	704	4727L1-030	232, 381
469-529SR	29	469S-580SR	30	4721L3-015CSR	315, 382	4722T1-025	232, 381	4724L2-010	702	4727L1-030C	315, 382
469-530SR	29	469S-582SR	30	4721L3-015SR	232, 381	4722T1-025C	315, 382	4724L2-010C	704	4727L1-040	232, 381
469-532SR	29	469S-585SR	30	4721L3-020CSR	315, 382	4722T1-030	232, 381	4724L2-012	702	4727L1-040C	315, 382
469-573SR	29	469S-624SR	30	4721L3-020SR	232, 381	4722T1-030C	315, 382	4724L2-012C	704	4727L2-005	232, 380
469-574SR	29	469S-626SR	30	4721L3-025CSR	315, 382	4722T1-040	232, 381	4724L2-015	702	4727L2-005C	315, 381
469-575SR	29	469S-664SR	30	4721L3-025SR	232, 381	4722T1-040C	315, 382	4724L2-015C	704	4727L2-007	232, 380
469-576SR	29	469S-666SR	30	4721L3-030CSR	315, 382	4723L1-005	232, 380	4724L2-020	702	4727L2-007C	315, 381
469-577SR	29	469SE-247SR	30	4721L3-030SR	232, 381	4723L1-005C	315, 381	4724L2-020C	704	4727L2-010	232, 380
469-578SR	29	469SE-248SR	30	4721L3-040CSR	315, 382	4723L1-007	232, 380	4724L3-005	703	4727L2-010C	315, 381
469-579SR	29	469SE-249SR	30	4721L3-040SR	232, 381	4723L1-007C	315, 381	4724L3-005C	705	4727L2-012	232, 380
469-580SR	29	469SE-250SR	30	4721T1-005CSR	315, 381	4723L1-010	232, 380	4724L3-007	703	4727L2-012C	315, 382
469-582SR	29	469SE-251SR	30	4721T1-005SR	232, 380	4723L1-010C	315, 381	4724L3-007C	705	4727L2-015	232, 381
469-585SR	29	469SE-291SR	30	4721T1-007CSR	315, 381	4723L1-012	232, 380	4724L3-010	703	4727L2-015C	315, 382
469-624SR	29	469SE-333SR	30	4721T1-007SR	232, 380	4723L1-012C	315, 382	4724L3-010C	705	4727L2-020	232, 381
469-626SR	29	469SE-334SR	30	4721T1-010CSR	315, 381	4723L1-015	232, 381	4724L3-012	703	4727L2-020C	315, 382
469-666SR	29	469SE-335SR	30	4721T1-010SR	232, 380	4723L1-015C	315, 382	4724L3-012C	705	4727L2-025	232, 381
469E-247SR	30	469SE-336SR	30	4721T1-012CSR	315, 382	4723L1-020	232, 381	4724L3-015	703	4727L2-025C	315, 382
469E-248SR	30	469SE-337SR	30	4721T1-012SR	232, 380	4723L1-020C	315, 382	4724L3-015C	705	4727L2-030	232, 381
469E-249SR	30	469SE-338SR	30	4721T1-015CSR	315, 382	4723L1-025	232, 381	4724L3-020	703	4727L2-030C	315, 382
469E-250SR	30	469SE-415SR	30	4721T1-015SR	232, 381	4723L1-025C	315, 382	4724L3-020C	705	4727L2-040	232, 381
469E-251SR	30	469SE-416SR	30	4721T1-020CSR	315, 382	4723L1-030	232, 381	4724T1-005	703	4727L2-040C	315, 382
469E-291SR	30	469SE-417SR	30	4721T1-020SR	232, 381	4723L1-030C	315, 382	4724T1-005C	706	4727L3-005	232, 380
469E-333SR	30	469SE-418SR	30	4721T1-025CSR	315, 382	4723L1-040	232, 381	4724T1-007	703	4727L3-005C	315, 381
469E-334SR	30	469SE-419SR	30	4721T1-025SR	232, 381	4723L1-040C	315, 382	4724T1-007C	706	4727L3-007	232, 380
469E-335SR	30	469SE-420SR	30	4721T1-030CSR	315, 382	4723L2-005	232, 380	4724T1-010	703	4727L3-007C	315, 381
469E-336SR	30	469SE-421SR	30	4721T1-030SR	232, 381	4723L2-005C	315, 381	4724T1-010C	706	4727L3-010	232, 380
469E-337SR	30	469SE-422SR	30	4721T1-040CSR	315, 382	4723L2-007	232, 380	4724T1-012	703	4727L3-010C	315, 381
469E-338SR	30	469SE-523SR	30	4721T1-040SR	232, 381	4723L2-007C	315, 381	4724T1-012C	706	4727L3-012	232, 380
469E-415SR	30	469SE-524SR	30	4722L1-005	232, 380	4723L2-010	232, 380	4724T1-015	703	4727L3-012C	315, 382
469E-416SR	30	469SE-525SR	30	4722L1-005C	315, 381	4723L2-010C	315, 381	4724T1-015C	706	4727L3-015	232, 381
469E-417SR	30	469SE-526SR	30	4722L1-007	232, 380	4723L2-012	232, 380	4724T1-020	703	4727L3-015C	315, 382
469E-418SR	30	469SE-527SR	30	4722L1-007C	315, 381	4723L2-012C	315, 382	4724T1-020C	706	4727L3-020	232, 381
469E-419SR	30	469SE-528SR	30	4722L1-010	232, 380	4723L2-015	232, 381	4725L1-005	702	4727L3-020C	315, 382
469E-420SR	30	469SE-529SR	30	4722L1-010C	315, 381	4723L2-015C	315, 382	4725L1-005C	704	4727L3-025	232, 381
469E-421SR	30	469SE-530SR	30	4722L1-012	232, 380	4723L2-020	232, 381	4725L1-007	702	4727L3-025C	315, 382
469E-422SR	30	469SE-532SR	30	4722L1-012C	315, 382	4723L2-020C	315, 382	4725L1-007C	704	4727L3-030	232, 381
469E-523SR	30	469SE-573SR	30	4722L1-015	232, 381	4723L2-025	232, 381	4725L1-010	702	4727L3-030C	315, 382
469E-524SR	30	469SE-574SR	30	4722L1-015C	315, 382	4723L2-025C	315, 382	4725L1-012	702	4727L3-040	232, 381
469E-525SR	30	469SE-575SR	30	4722L1-020	232, 381	4723L2-030	232, 381	4725L1-012C	704	4727L3-040C	315, 382
469E-526SR	30	469SE-576SR	30	4722L1-020C	315, 382	4723L2-030C	315, 382	4725L1-015	702	4727T1-005	232, 380
469E-527SR	30	469SE-577SR	30	4722L1-025	232, 381	4723L2-040	232, 381	4725L1-015C	704	4727T1-005C	315, 381
469E-528SR	30	469SE-578SR	30	4722L1-025C	315, 382	4723L2-040C	315, 382	4725L1-020	702	4727T1-007	232, 380
469E-529SR	30	469SE-579SR	30	4722L1-030	232, 381	4723L3-005	232, 380	4725L1-020C	704	4727T1-007C	315, 381
469E-530SR	30	469SE-580SR	30	4722L1-030C							

Spears List Price Part Number Index



4728L1-005C	704	4731L3-007CSR	315, 381	4732T1-012	232, 380	4734L1-020	702	4737L1-015	232, 381	4738L3-012	703
4728L1-007	702	4731L3-007SR	232, 380	4732T1-012C	315, 382	4734L1-020C	704	4737L1-015C	315, 382	4738L3-012C	706
4728L1-007C	704	4731L3-010CSR	315, 381	4732T1-015	232, 381	4734L2-005	702	4737L1-020	232, 381	4738L3-015	703
4728L1-010	702	4731L3-010SR	232, 380	4732T1-015C	315, 382	4734L2-005C	705	4737L1-020C	315, 382	4738L3-015C	706
4728L1-010C	704	4731L3-012CSR	315, 382	4732T1-020	232, 381	4734L2-007	702	4737L1-025	232, 381	4738L3-020	703
4728L1-012	702	4731L3-012SR	232, 380	4732T1-020C	315, 382	4734L2-007C	705	4737L1-025C	315, 382	4738L3-020C	706
4728L1-012C	704	4731L3-015CSR	315, 382	4732T1-025	232, 381	4734L2-010	702	4737L1-030	232, 381	4738T1-005	704
4728L1-015	702	4731L3-015SR	232, 381	4732T1-025C	315, 382	4734L2-010C	705	4737L1-030C	315, 382	4738T1-005C	706
4728L1-015C	704	4731L3-020CSR	315, 382	4732T1-030	232, 381	4734L2-012	702	4737L1-040	232, 381	4738T1-007	704
4728L1-020	702	4731L3-020SR	232, 381	4732T1-030C	315, 382	4734L2-012C	705	4737L1-040C	315, 382	4738T1-007C	706
4728L1-020C	704	4731L3-025CSR	315, 382	4732T1-040	232, 381	4734L2-015	702	4737L2-005	232, 380	4738T1-010	704
4728L2-005	702	4731L3-025SR	232, 381	4732T1-040C	315, 382	4734L2-015C	705	4737L2-005C	315, 381	4738T1-010C	706
4728L2-005C	705	4731L3-030CSR	315, 382	4733L1-005	232, 380	4734L2-020	702	4737L2-007	232, 380	4738T1-012	704
4728L2-007	702	4731L3-030SR	232, 381	4733L1-005C	315, 381	4734L2-020C	705	4737L2-007C	315, 381	4738T1-012C	706
4728L2-007C	705	4731L3-040CSR	315, 382	4733L1-007	232, 380	4734L3-005	703	4737L2-010	232, 380	4738T1-015	704
4728L2-010	702	4731L3-040SR	232, 381	4733L1-007C	315, 381	4734L3-005C	705	4737L2-010C	315, 381	4738T1-015C	706
4728L2-010C	705	4731T1-005CSR	315, 381	4733L1-010	232, 380	4734L3-007	703	4737L2-012	232, 380	4738T1-020	704
4728L2-012	702	4731T1-005SR	232, 380	4733L1-010C	315, 381	4734L3-007C	705	4737L2-012C	315, 382	4738T1-020C	706
4728L2-012C	705	4731T1-007CSR	315, 381	4733L1-012	232, 380	4734L3-010	703	4737L2-015	232, 381	474-005	17, 161
4728L2-015	702	4731T1-007SR	232, 380	4733L1-012C	315, 382	4734L3-010C	705	4737L2-015C	315, 382	474-005G	161
4728L2-015C	705	4731T1-010CSR	315, 381	4733L1-015	232, 381	4734L3-012	703	4737L2-020	232, 381	474-007	17, 161
4728L2-020	702	4731T1-010SR	232, 380	4733L1-015C	315, 382	4734L3-012C	705	4737L2-020C	315, 382	474-007G	161
4728L2-020C	705	4731T1-012CSR	315, 382	4733L1-020	232, 381	4734L3-015	703	4737L2-025	232, 381	474-010	17, 161
4728L3-005	703	4731T1-012SR	232, 380	4733L1-020C	315, 382	4734L3-015C	705	4737L2-025C	315, 382	474-010G	161
4728L3-005C	705	4731T1-015CSR	315, 382	4733L1-025	232, 381	4734L3-020	703	4737L2-030	232, 381	474-012	17, 161
4728L3-007	703	4731T1-015SR	232, 381	4733L1-025C	315, 382	4734L3-020C	705	4737L2-030C	315, 382	474-012G	161
4728L3-007C	705	4731T1-020CSR	315, 382	4733L1-030	232, 381	4734T1-005	703	4737L2-040	232, 381	474-015	17, 161
4728L3-010	703	4731T1-020SR	232, 381	4733L1-030C	315, 382	4734T1-005C	706	4737L2-040C	315, 382	474-015G	161
4728L3-010C	705	4731T1-025CSR	315, 382	4733L1-040	232, 381	4734T1-007	703	4737L3-005	232, 380	474-020	17, 161
4728L3-012	703	4731T1-025SR	232, 381	4733L1-040C	315, 382	4734T1-007C	706	4737L3-005C	315, 381	474-020G	161
4728L3-012C	705	4731T1-030CSR	315, 382	4733L2-005	232, 380	4734T1-010	703	4737L3-007	232, 380	474-030	17, 161
4728L3-015	703	4731T1-030SR	232, 381	4733L2-005C	315, 381	4734T1-010C	706	4737L3-007C	315, 381	474-040	17, 161
4728L3-015C	705	4731T1-040CSR	315, 382	4733L2-007	232, 380	4734T1-012	703	4737L3-010	232, 380	474-060F	17
4728L3-020	703	4731T1-040SR	232, 381	4733L2-007C	315, 381	4734T1-012C	706	4737L3-010C	315, 381	474-080F	17
4728L3-020C	705	4732L1-005	232, 380	4733L2-010	232, 380	4734T1-015	703	4737L3-012	232, 380	475-005	12
4728T1-005	704	4732L1-005C	315, 381	4733L2-010C	315, 381	4734T1-015C	706	4737L3-012C	315, 382	475-007	12
4728T1-005C	706	4732L1-007	232, 380	4733L2-012	232, 380	4734T1-020	703	4737L3-015	232, 381	475-010	12
4728T1-007	704	4732L1-007C	315, 381	4733L2-012C	315, 382	4734T1-020C	706	4737L3-015C	315, 382	475-012	12
4728T1-007C	706	4732L1-010	232, 380	4733L2-015	232, 381	4735L1-005	702	4737L3-020	232, 381	475-015	12
4728T1-010	704	4732L1-010C	315, 381	4733L2-015C	315, 382	4735L1-005C	704	4737L3-020C	315, 382	475-015L	45
4728T1-010C	706	4732L1-012	232, 380	4733L2-020	232, 381	4735L1-007	702	4737L3-025	232, 381	475-020	12
4728T1-012	704	4732L1-012C	315, 382	4733L2-020C	315, 382	4735L1-007C	704	4737L3-025C	315, 382	475-020L	45
4728T1-012C	706	4732L1-015	232, 381	4733L2-025	232, 381	4735L1-010	702	4737L3-030	232, 381	475-020120	33
4728T1-015	704	4732L1-015C	315, 382	4733L2-025C	315, 382	4735L1-010C	704	4737L3-030C	315, 382	475-025	12
4728T1-015C	706	4732L1-020	232, 381	4733L2-030	232, 381	4735L1-012	702	4737L3-040	232, 381	475-030	12
4728T1-020	704	4732L1-020C	315, 382	4733L2-030C	315, 382	4735L1-012C	704	4737L3-040C	315, 382	475-030L	45
4728T1-020C	706	4732L1-025	232, 381	4733L2-040	232, 381	4735L1-015	702	4737T1-005	232, 380	475-040	12
473-1	34	4732L1-025C	315, 382	4733L2-040C	315, 382	4735L1-015C	704	4737T1-005C	315, 381	475-040L	45
473-2	34	4732L1-030	232, 381	4733L3-005	232, 380	4735L1-020	702	4737T1-007	232, 380	475-050F	12
473-210	33	4732L1-030C	315, 382	4733L3-005C	315, 381	4735L1-020C	704	4737T1-007C	315, 381	475-060	12
473-210-1/4	33	4732L1-040	232, 381	4733L3-007	232, 380	4735L2-005	702	4737T1-010	232, 380	475-060L	45
473-210-3/8	33	4732L1-040C	315, 382	4733L3-007C	315, 381	4735L2-005C	705	4737T1-010C	315, 381	475-080	12
473-3	34	4732L2-005	232, 380	4733L3-010	232, 380	4735L2-007	702	4737T1-012	232, 380	475-100	12
473-825	34	4732L2-005C	315, 381	4733L3-010C	315, 381	4735L2-007C	705	4737T1-012C	315, 382	475-100F	12
473-825-1/4	34	4732L2-007	232, 380	4733L3-012	232, 380	4735L2-010	702	4737T1-015	232, 381	475-100G	39
473-825-3/8	34	4732L2-007C	315, 381	4733L3-012C	315, 382	4735L2-010C	705	4737T1-015C	315, 382	475-101	12
4731L1-005CSR	315, 381	4732L2-010	232, 380	4733L3-015	232, 381	4735L2-012	702	4737T1-020	232, 381	475-120	12
4731L1-005SR	232, 380	4732L2-010C	315, 381	4733L3-015C	315, 382	4735L2-012C	705	4737T1-020C	315, 382	475-120F	12
4731L1-007CSR	315, 381	4732L2-012	232, 380	4733L3-020	232, 381	4735L2-015	702	4737T1-025	232, 381	475-120G	39
4731L1-007SR	232, 380	4732L2-012C	315, 382	4733L3-020C	315, 382	4735L2-015C	705	4737T1-025C	315, 382	475-130	12
4731L1-010CSR	315, 381	4732L2-015	232, 381	4733L3-025	232, 381	4735L2-020	702	4737T1-030	232, 381	475-131	12
4731L1-010SR	232, 380	4732L2-015C	315, 382	4733L3-025C	315, 382	4735L2-020C	705	4737T1-030C	315, 382	475-140F	12
4731L1-012CSR	315, 382	4732L2-020	232, 381	4733L3-030	232, 381	4735L3-005	703	4737T1-040	232, 381	475-160F	12
4731L1-012SR	232, 380	4732L2-020C	315, 382	4733L3-030C	315, 382	4735L3-005C	705	4737T1-040C	315, 382	475-166	12
4731L1-015CSR	315, 382	4732L2-025	232, 381	4733L3-040	232, 381	4735L3-007	703	4738L1-005	702	475-167	12
4731L1-015SR	232, 381	4732L2-025C	315, 382	4733L3-040C	315, 382	4735L3-007C	705	4738L1-005C	704	475-168	12
4731L1-020CSR	315, 382	4732L2-030	232, 381	4733T1-005	232, 380	4735L3-010	703	4738L1-007	702	475-180F	12
4731L1-020SR	232, 381	4732L2-030C	315, 382	4733T1-005C	315, 381	4735L3-010C	705	4738L1-007C	704	475-200F	12
4731L1-025CSR	315, 382	4732L2-040	232, 381	4733T1-007	232, 380	4735L3-012	703	4738L1-010	702	475-209	12
4731L1-025SR	232, 381	4732L2-040C	315, 382	4733T1-007C	315, 381	4735L3-012C	705	4738L1-010C	704	475-210	12
4731L1-030CSR	315, 382	4732L3-005	232, 380	4733T1-010	232, 380	4735L3-015	703	4738L1-012	702	475-211	12
4731L1-030SR	232, 381	4732L3-005C	315, 381	4733T1-010C	315, 381	4735L3-015C	705	4738L1-012C	704	475-21131T	33
4731L1-040CSR	315, 382	4732L3-007	232, 380	4733T1-012	232, 380	4735L3-020	703	4738L1-015	702	475-212	12
4731L1-040SR	232, 381	4732L3-007C	315, 381	4733T1-012C	315, 382	4735L3-020C	705	4738L1-015C	704	475-240F	12
4731L2-005CSR	315, 381	4732L3-010	232, 380	4733T1-015	232, 381	4735T1-005	704	4738L1-020	702	475-247	12
4731L2-005SR	232, 380	4732L3-010C	315, 381	4733T1-015C	315, 382	4735T1-005C	706	4738L1-020C	704	475-248	12
4731L2-007CSR	315, 381	4732L3-012	232, 380	4733T1-020	232, 381	4735T1-007	704	4738L2-005	703	475-249	12
4731L2-007SR	232, 380										



Spears List Price Part Number Index

475-532	12	476-661F	13	4839-249B	368	499-012BR	21, 350	5023L1-025	231, 379	5027T1-010	231, 379
475-532L	45	476-662F	13	4839-251	367	499-012SR	21, 350	5023L1-025C	314, 380	5027T1-010C	314, 380
475-578F	12	476-663F	13	4839-251B	368	499-015BR	21, 350	5023L1-030	231, 379	5027T1-012	231, 379
475-579F	12	476-664F	13	4848-005BSR	368	499-015SR	21, 350	5023L1-030C	314, 380	5027T1-012C	314, 380
475-580F	12	476-666F	13	4848-005SR	367	499-020BR	21, 350	5023L1-040	231, 379	5027T1-015	231, 379
475-582F	12	476-668F	13	4848-007BSR	368	499-020SR	21, 350	5023L1-040C	314, 380	5027T1-015C	314, 380
475-585F	12	476-670F	13	4848-007SR	367	499-030SR	21, 350	5023T1-005	231, 379	5027T1-020	231, 379
475-621F	12	477-010	8, 62	4848-010BSR	368	499-040SR	21, 350	5023T1-005C	314, 380	5027T1-020C	314, 380
475-622F	12		107	4848-010SR	367	499-060SR	21, 350	5023T1-007	231, 379	5027T1-025	231, 379
475-623F	12	478-005	16	4848-015BSR	368	5020	579, 732	5023T1-007C	314, 380	5027T1-025C	314, 380
475-624F	12	478-005G	40	4848-015SR	367	5021L1-005CSR	314, 380	5023T1-010	231, 379	5027T1-030	231, 379
475-626	12	478-005SR	16, 349	4848-020BSR	368	5021L1-005SR	231, 379	5023T1-010C	314, 380	5027T1-030C	314, 380
475-626F	12	478-007	16	4848-020SR	367	5021L1-007CSR	314, 380	5023T1-012	231, 379	5027T1-040	231, 379
475-628	12	478-007G	40	4852-005BSR	368	5021L1-007SR	231, 379	5023T1-012C	314, 380	5027T1-040C	314, 380
475-628F	12	478-007SR	16, 349	4852-005SR	367	5021L1-010CSR	314, 380	5023T1-015	231, 379	5028L1-005	699
475-661F	12	478-010	16	4852-007BSR	368	5021L1-010SR	231, 379	5023T1-015C	314, 380	5028L1-005C	700
475-663F	12	478-010G	40	4852-007SR	367	5021L1-012CSR	314, 380	5023T1-020	231, 379	5028L1-007	699
475-664F	12	478-010SR	16, 349	4852-010BSR	368	5021L1-012SR	231, 379	5023T1-020C	314, 380	5028L1-007C	700
475-666F	12	478-012	16	4852-010SR	367	5021L1-015CSR	314, 380	5023T1-025	231, 379	5028L1-010	699
475-668F	12	478-012G	40	4852-015BSR	368	5021L1-015SR	231, 379	5023T1-025C	314, 380	5028L1-010C	700
475-670F	12	478-012SR	16, 349	4852-015SR	367	5021L1-020CSR	314, 380	5023T1-030	231, 379	5028L1-012	699
475-691F	12	478-015	16	4852-020BSR	368	5021L1-020SR	231, 379	5023T1-030C	314, 380	5028L1-012C	700
475-693F	12	478-015G	40	4852-020SR	367	5021L1-025CSR	314, 380	5023T1-040	231, 379	5028L1-015	699
475-694F	12	478-015SR	16, 349	4853-005	367	5021L1-025SR	231, 379	5023T1-040C	314, 380	5028L1-015C	700
475-696F	12	478-020	16	4853-005B	368	5021L1-030CSR	314, 380	5024L1-005	699	5028L1-020	699
475-698F	12	478-020G	40	4853-007	367	5021L1-030SR	231, 379	5024L1-005C	700	5028L1-020C	700
475-700F	12	478-020SR	16, 349	4853-007B	368	5021L1-040CSR	314, 380	5024L1-007	699	5028T1-005	700
475-702F	12	478-030	16	4853-010	367	5021L1-040SR	231, 379	5024L1-007C	700	5028T1-005C	701
475-751F	12	478-030G	40	4853-010B	368	5021T1-005CSR	314, 380	5024L1-010	699	5028T1-007	700
475-753F	12	478-030SR	17, 349	4853-015	367	5021T1-005SR	231, 379	5024L1-010C	700	5028T1-007C	701
475-754F	12	478-040	16	4853-015B	368	5021T1-007CSR	314, 380	5024L1-012	699	5028T1-010	700
475-756F	12	478-040G	40	4853-020	367	5021T1-007SR	231, 379	5024L1-012C	700	5028T1-010C	701
475-758F	12	478-040SR	17, 349	4853-020B	368	5021T1-010CSR	314, 380	5024L1-015	699	5028T1-012	700
475-760F	12	478-072SR	17, 349	4858-005BSR	368	5021T1-010SR	231, 379	5024L1-015C	700	5028T1-012C	701
475-762F	12	478-098SR	17, 349	4858-005SR	367	5021T1-012CSR	314, 380	5024L1-020	699	5028T1-015	700
475-764F	12	478-128SR	17, 349	4858-007BSR	368	5021T1-012SR	231, 379	5024L1-020C	700	5028T1-015C	701
475-781F	12	479-005N	16	4858-007SR	367	5021T1-015CSR	314, 380	5024T1-005	699	5028T1-020	700
475-783F	12	479-007	16	4858-010BSR	368	5021T1-015SR	231, 379	5024T1-005C	701	5028T1-020C	701
475-784F	12	479-010	16	4858-010SR	367	5021T1-020CSR	314, 380	5024T1-007	699	5031L1-005CSR	314, 380
475-786F	12	479-015	16	4858-015BSR	368	5021T1-020SR	231, 379	5024T1-007C	701	5031L1-005SR	231, 379
475-788F	12	479-020	16	4858-015SR	367	5021T1-025CSR	314, 380	5024T1-010	699	5031L1-007CSR	314, 380
475-790F	12	479-025	16	4858-020BSR	368	5021T1-025SR	231, 379	5024T1-010C	701	5031L1-007SR	231, 379
475-792F	12	479-030	16	4858-020SR	367	5021T1-030CSR	314, 380	5024T1-012	699	5031L1-010CSR	314, 380
475-794F	13	479-040	16	4898-005BSR	368	5021T1-030SR	231, 379	5024T1-012C	701	5031L1-010SR	231, 379
475-796F	13	479-050F	16	4898-005SR	367	5021T1-040CSR	314, 380	5024T1-015	699	5031L1-012CSR	314, 380
475-811F	13	4805-005BSR	367	4898-007BSR	368	5021T1-040SR	231, 379	5024T1-015C	701	5031L1-012SR	231, 379
475-813F	13	4805-005SR	367	4898-007SR	367	5022L1-005	231, 379	5024T1-020	699	5031L1-015CSR	314, 380
475-814F	13	4805-007BSR	367	4898-010BSR	368	5022L1-005C	314, 380	5024T1-020C	701	5031L1-015SR	231, 379
475-816F	13	4805-007SR	367	4898-010SR	367	5022L1-007	231, 379	5025L1-005	699	5031L1-020CSR	314, 380
475-818F	13	4805-010BSR	367	4898-015BSR	368	5022L1-007C	314, 380	5025L1-005C	700	5031L1-020SR	231, 379
475-820F	13	4805-010SR	367	4898-015SR	367	5022L1-010	231, 379	5025L1-007	699	5031L1-025CSR	314, 380
475-822F	13	4805-015BSR	367	4898-020BSR	368	5022L1-010C	314, 380	5025L1-007C	700	5031L1-025SR	231, 379
475-824F	13	4805-015SR	367	4898-020SR	367	5022L1-012	231, 379	5025L1-010	699	5031L1-030CSR	314, 380
475-826F	13	4805-020BSR	367	491-060	178	5022L1-012C	314, 380	5025L1-010C	700	5031L1-030SR	231, 379
475-828F	13	4805-020SR	367	492-060	178	5022L1-015	231, 379	5025L1-012	699	5031L1-040CSR	314, 380
475-901F	13	4808-005BSR	367	493-060	178	5022L1-015C	314, 380	5025L1-012C	700	5031L1-040SR	231, 379
475-903F	13	4808-005SR	367	497-005	20	5022L1-020	231, 379	5025L1-015	699	5031T1-005CSR	314, 380
475-904F	13	4808-007BSR	367	497-005G	41	5022L1-020C	314, 380	5025L1-015C	700	5031T1-005SR	231, 379
475-906F	13	4808-007SR	367	497-007	20	5022L1-025	231, 379	5025L1-020	699	5031T1-007CSR	314, 380
475-908F	13	4808-010BSR	367	497-007G	41	5022L1-025C	314, 380	5025L1-020C	700	5031T1-007SR	231, 379
475-910F	13	4808-010SR	367	497-010	20	5022L1-030	231, 379	5025T1-005	700	5031T1-010CSR	314, 380
475-912F	13	4808-015BSR	367	497-010G	41	5022L1-030C	314, 380	5025T1-005C	701	5031T1-010SR	231, 379
475-914F	13	4808-015SR	367	497-012	20	5022L1-040	231, 379	5025T1-007	700	5031T1-012CSR	314, 380
475-916F	13	4808-020BSR	367	497-012G	41	5022L1-040C	314, 380	5025T1-007C	701	5031T1-012SR	231, 379
475-918F	13	4808-020SR	367	497-015	20	5022T1-005	231, 379	5025T1-010	700	5031T1-015CSR	314, 380
475-920F	13	4819-005BSR	367	497-015G	41	5022T1-005C	314, 380	5025T1-010C	701	5031T1-015SR	231, 379
476-010	8, 62	4819-005SR	367	497-020	20	5022T1-007	231, 379	5025T1-012	700	5031T1-020CSR	314, 380
	106	4819-007BSR	367	497-020G	41	5022T1-007C	314, 380	5025T1-012C	701	5031T1-020SR	231, 379
476-020F	13	4819-007SR	367	497-025	20	5022T1-010	231, 379	5025T1-015	700	5031T1-025CSR	314, 380
476-030F	13	4819-010BSR	367	497-030	20	5022T1-010C	314, 380	5025T1-015C	701	5031T1-025SR	231, 379
476-040F	13	4819-010SR	367	497-040	20	5022T1-012	231, 379	5025T1-020	700	5031T1-030CSR	314, 380
476-060F	13	4819-015BSR	367	497-060	20	5022T1-012C	314, 380	5025T1-020C	701	5031T1-030SR	231, 379
476-080F	13	4819-015SR	367	498-005	20	5022T1-015	231, 379	5027L1-005	231, 379	5031T1-040CSR	314, 380
476-100F	13	4819-020BSR	367	498-005G	41	5022T1-015C	314, 380	5027L1-005C	314, 380	5031T1-040SR	231, 379
476-120F	13	4819-020SR	367	498-007	20	5022T1-020	231, 379	5027L1-007	231, 379	5032L1-005	231, 379
476-338	13	4830-005BSR	368	498-007G	41	5022T1-020C	314, 380	5027L1-007C	314, 380	5032L1-005C	314, 380
476-420F	13	4830-005SR	367	498-010	20	5022T1-025	231, 379	5027L1-010	231, 379	5032L1-007	231, 379
476-421F	13	4830-007BSR	368	498-010G	41	5022T1-025C	314, 380	5027L1-010C	314, 380	5032L1-007C	314, 380
476-422F	13	4830-007SR	367	498-012	20	5022T1-030	231, 379	5027L1-012	231, 379	5032L1-010	231, 379
476-528F	13	4830-010BSR	368	498-012G	41	5022T1-030C	314, 380	5027L1-012C	314, 380	5032L1-010C	314, 380
476-529F	13	4830-010SR	367	498-015	20	5022T1-040	231, 379	5027L1-015	231, 379	5032L1-012	231, 379
476-530F	13	4830-015BSR	368	498-015G	41	5022T1-040C	314, 380	5027L1-015C	314, 380	5032L1-012C	314, 380
476-532F	13	4830-015SR	367	498-020	21	5023L1-005	231, 379	5027L1-020	231, 379	5032L1-015	231, 379
476-578F											

Spears List Price Part Number Index



5032T1-007	231, 379	5035T1-012	700	5112A121-020	482	5121H101-060	483	5131A121-015	482	5132H101-040	483
5032T1-007C	314, 380	5035T1-012C	701	5112A121-025	482	5121H101-080	483	5131A121-020	482	5132H101-060	483
5032T1-010	231, 379	5035T1-015	700	5112A121-030	482	5121H101-100	483	5131A121-025	482	5132H101-080	483
5032T1-010C	314, 380	5035T1-015C	701	5112A121-040	482	5121H101-120	483	5131A121-030	482	5132H101-100	484
5032T1-012	231, 379	5035T1-020	700	5112A121-060	482	5121J101-015	483	5131A121-040	482	5132H101-120	484
5032T1-012C	314, 380	5035T1-020C	701	5112A121-080	482	5121J101-020	483	5131A121-060	482	5132J101-015	483
5032T1-015	231, 379	5037L1-005	231, 379	5112A121-100	482	5121J101-025	483	5131A121-080	482	5132J101-020	483
5032T1-015C	314, 380	5037L1-005C	314, 380	5112A123-120	482	5121J101-030	483	5131A121-100	482	5132J101-025	483
5032T1-020	231, 379	5037L1-007	231, 379	5112H101-015	484	5121J101-040	483	5131A123-120	482	5132J101-030	483
5032T1-020C	314, 380	5037L1-007C	314, 380	5112H101-020	484	5121J101-060	483	5131H101-015	483	5132J101-040	483
5032T1-025	231, 379	5037L1-010	231, 379	5112H101-025	484	5121J101-080	483	5131H101-020	483	5132J101-060	483
5032T1-025C	314, 380	5037L1-010C	314, 380	5112H101-030	484	5121J101-100	483	5131H101-025	483	5132J101-080	483
5032T1-030	231, 379	5037L1-012	231, 379	5112H101-040	484	5121J101-120	483	5131H101-030	483	5132J101-100	484
5032T1-030C	314, 380	5037L1-012C	314, 380	5112H101-060	484	5121A121-015	482	5131H101-040	483	5132J101-120	484
5032T1-040	231, 379	5037L1-015	231, 379	5112H101-080	484	5121A121-020	482	5131H101-060	483	5210-010	433
5032T1-040C	314, 380	5037L1-015C	314, 380	5112H101-100	484	5121A121-025	482	5131H101-080	483	5210-010C	433
5033L1-005	231, 379	5037L1-020	231, 379	5112H101-120	484	5121A121-030	482	5131H101-100	483	5210-020	433
5033L1-005C	314, 380	5037L1-020C	314, 380	5112J101-015	484	5121A121-040	482	5131H101-120	483	5210-020C	433
5033L1-007	231, 379	5037L1-025	231, 379	5112J101-020	484	5121A121-060	482	5131J101-015	483	5211-005CSR	331, 432
5033L1-007C	314, 380	5037L1-025C	314, 380	5112J101-025	484	5121A121-080	482	5131J101-020	483	5211-005SR	252, 432
5033L1-010	231, 379	5037L1-030	231, 379	5112J101-030	484	5121A121-100	482	5131J101-025	483	5211-007CSR	331, 432
5033L1-010C	314, 380	5037L1-030C	314, 380	5112J101-040	484	5121A123-120	482	5131J101-030	483	5211-007SR	252, 432
5033L1-012	231, 379	5037L1-040	231, 379	5112J101-060	484	5121H101-015	484	5131J101-040	483	5211-010CSR	331, 432
5033L1-012C	314, 380	5037L1-040C	314, 380	5112J101-080	484	5121H101-020	484	5131J101-060	483	5211-010SR	252, 432
5033L1-015	231, 379	5037T1-005	231, 379	5112J101-100	484	5121H101-025	484	5131J101-080	483	5211-012CSR	331, 432
5033L1-015C	314, 380	5037T1-005C	314, 380	5112J101-120	484	5121H101-030	484	5131J101-100	483	5211-012SR	252, 432
5033L1-020	231, 379	5037T1-007	231, 379	5112A121-015	482	5121H101-040	484	5131J101-120	483	5211-015CSR	331, 433
5033L1-020C	314, 380	5037T1-007C	314, 380	5112A121-020	482	5121H101-060	484	5131A121-015	482	5211-015SR	252, 432
5033L1-025	231, 379	5037T1-010	231, 379	5112A121-025	482	5121H101-080	484	5131A121-020	482	5211-020CSR	331, 433
5033L1-025C	314, 380	5037T1-010C	314, 380	5112A121-030	482	5121H101-100	484	5131A121-025	482	5211-020SR	252, 432
5033L1-030	231, 379	5037T1-012	231, 379	5112A121-040	482	5121H101-120	484	5131A121-030	482	5212-005	252, 432
5033L1-030C	314, 380	5037T1-012C	314, 380	5112A121-060	482	5121J101-015	484	5131A121-040	482	5212-005C	331, 432
5033L1-040	231, 379	5037T1-015	231, 379	5112A121-080	482	5121J101-020	484	5131A121-060	482	5212-007	252, 432
5033L1-040C	314, 380	5037T1-015C	314, 380	5112A121-100	482	5121J101-025	484	5131A121-080	482	5212-007C	331, 432
5033T1-005	231, 379	5037T1-020	231, 379	5112A123-120	482	5121J101-030	484	5131A121-100	482	5212-010	252, 432
5033T1-005C	314, 380	5037T1-020C	314, 380	5112H101-015	483	5121J101-040	484	5131A123-120	482	5212-010C	331, 432
5033T1-007	231, 379	5037T1-025	231, 379	5112H101-020	483	5121J101-060	484	5131H101-015	484	5212-012	252, 432
5033T1-007C	314, 380	5037T1-025C	314, 380	5112H101-025	483	5121J101-080	484	5131H101-020	484	5212-012C	331, 432
5033T1-010	231, 379	5037T1-030	231, 379	5112H101-030	483	5121J101-100	484	5131H101-025	484	5212-015	252, 432
5033T1-010C	314, 380	5037T1-030C	314, 380	5112H101-040	483	5121J101-120	484	5131H101-030	484	5212-015C	331, 432
5033T1-012	231, 379	5037T1-040	231, 379	5112H101-060	483	5121A121-015	482	5131H101-040	484	5212-020	252, 432
5033T1-012C	314, 380	5037T1-040C	314, 380	5112H101-080	483	5121A121-020	482	5131H101-060	484	5212-020C	331, 432
5033T1-015	231, 379	5038L1-005	699	5112H101-100	483	5121A121-025	482	5131H101-080	484	5213-005	252, 432
5033T1-015C	314, 380	5038L1-005C	700	5112H101-120	483	5121A121-030	482	5131H101-100	484	5213-005C	331, 433
5033T1-020	231, 379	5038L1-007	699	5121J101-015	483	5121A121-040	482	5131H101-120	484	5213-007	252, 432
5033T1-020C	314, 380	5038L1-007C	700	5121J101-020	483	5121A121-060	482	5131J101-015	484	5213-007C	331, 433
5033T1-025	231, 379	5038L1-010	699	5121J101-025	483	5121A121-080	482	5131J101-020	484	5213-010	252, 432
5033T1-025C	314, 380	5038L1-010C	700	5121J101-030	483	5121J101-100	482	5131J101-025	484	5213-010C	331, 433
5033T1-030	231, 379	5038L1-012	699	5121J101-040	483	5121A123-120	482	5131J101-030	484	5213-012	252, 432
5033T1-030C	314, 380	5038L1-012C	700	5121J101-060	483	5121H101-015	483	5131J101-040	484	5213-012C	331, 433
5033T1-040	231, 379	5038L1-015	699	5121J101-080	483	5121H101-020	483	5131J101-060	484	5213-015	252, 432
5033T1-040C	314, 380	5038L1-015C	700	5121J101-100	483	5121H101-025	483	5131J101-080	484	5213-015C	331, 433
5034L1-005	699	5038L1-020	699	5121J101-120	483	5121H101-030	483	5131J101-100	484	5213-020	252, 432
5034L1-005C	700	5038L1-020C	700	5122A121-015	482	5121H101-040	483	5131J101-120	484	5213-020C	331, 433
5034L1-007	699	5038T1-005	700	5122A121-020	482	5121H101-060	483	5132A121-015	482	5220-010	433
5034L1-007C	700	5038T1-005C	701	5122A121-025	482	5121H101-080	483	5132A121-020	482	5220-010C	433
5034L1-010	699	5038T1-007	700	5122A121-030	482	5121H101-100	483	5132A121-025	482	5220-020	433
5034L1-010C	700	5038T1-007C	701	5122A121-040	482	5121H101-120	483	5132A121-030	482	5220-020C	433
5034L1-012	699	5038T1-010	700	5122A121-060	482	5121J101-015	483	5132A121-040	482	5220-060	433
5034L1-012C	700	5038T1-010C	701	5122A121-080	482	5121J101-020	483	5132A121-060	482	5220-060C	433
5034L1-015	699	5038T1-012	700	5122A121-100	482	5121J101-025	483	5132A121-080	482	5221-005CSR	331, 432
5034L1-015C	700	5038T1-012C	701	5122A123-120	482	5121J101-030	483	5132A121-100	482	5221-005SR	252, 432
5034L1-020	699	5038T1-015	700	5122H101-015	483	5121J101-040	483	5132A123-120	482	5221-007CSR	331, 432
5034L1-020C	700	5038T1-015C	701	5122H101-020	483	5121J101-060	483	5132H101-015	483	5221-007SR	252, 432
5034T1-005	699	5038T1-020	700	5122H101-025	483	5121J101-080	483	5132H101-020	483	5221-010CSR	331, 432
5034T1-005C	701	5038T1-020C	701	5122H101-030	483	5121J101-100	483	5132H101-025	483	5221-010SR	252, 432
5034T1-007	699	5111A121-015	482	5122H101-040	483	5121J101-120	483	5132H101-030	483	5221-012CSR	331, 432
5034T1-007C	701	5111A121-020	482	5122H101-060	483	5122A121-015	482	5132H101-040	483	5221-012SR	252, 432
5034T1-010	699	5111A121-025	482	5122H101-080	483	5122A121-020	482	5132H101-060	483	5221-015CSR	331, 433
5034T1-010C	701	5111A121-030	482	5122H101-100	484	5122A121-025	482	5132H101-080	483	5221-015SR	252, 432
5034T1-012	699	5111A121-040	482	5122H101-120	484	5122A121-030	482	5132H101-100	483	5221-020CSR	331, 433
5034T1-012C	701	5111A121-060	482	5122J101-015	483	5122A121-040	482	5132H101-120	483	5221-020SR	252, 432
5034T1-015	699	5111A121-080	482	5122J101-020	483	5122A121-060	482	5132J101-015	483	5222-005	252, 432
5034T1-015C	701	5111A121-100	482	5122J101-025	483	5122A121-080	482	5132J101-020	483	5222-005C	331, 432
5034T1-020	699	5111A123-120	482	5122J101-030	483	5122A121-100	482	5132J101-025	483	5222-007	252, 432
5034T1-020C	701	5111H101-015	483	5122J101-040	483	5122A123-120	482	5132J101-030	483	5222-007C	331, 433
5035L1-005	699	5111H101-020	483	5122J101-060	483	5122H101-015	483	5132J101-040	483	5222-010	252, 432
5035L1-005C	700	5111H101-025	483	5122J101-080</							



Spears List Price Part Number Index

5223-020	252, 432	5421A-030C	327, 417	5430-120C	327, 417	5591-003	257, 451	5805-16910	90	5856-01512	91
5223-020C	331, 433	5421A-040	247, 416	5431A-020	247, 416		589	5805-16912	90	5857-01008	91
5223-060	252, 432	5421A-040C	327, 417	5431A-020C	327, 417	5591-003BL	567	5806-01008	90	5857-01010	91
5223-060C	331, 433	5421A-060	247, 417	5431A-025	247, 416	5591-003C	336, 451	5806-01010	90	5857-01012	91
5223-080	432	5421A-060C	327, 417	5431A-025C	327, 417		589	5806-01012	90	5857-01208	91
5223-080C	433	5421A-080	247, 417	5431A-030	247, 416	5591-003CSR	451, 589	5806-01208	90	5857-01210	91
5230-010	433	5421A-080C	327, 417	5431A-030C	327, 417	5591-003P	370, 451	5806-01210	90	5857-01212	91
5230-010C	433	5421A-100	247, 417	5431A-040	247, 416		590	5806-01212	90	5857-01508	91
5230-020	433	5421A-100C	327, 417	5431A-040C	327, 417	5591-003SR	451, 589	5806-01508	90	5857-01510	91
5230-020C	433	5421A-120	247, 417	5431A-060	247, 417	5591-005	257, 451	5806-01510	90	5857-01512	91
5230-060	433	5421A-120C	327, 417	5431A-060C	327, 417		589	5806-01512	90	5858-24908	91
5230-060C	433	5423-020	247, 416	5431A-080	247, 417	5591-005BLSR	567	5806-16808	90	5858-24910	91
5231-005CSR	331, 432	5423-020C	327, 417	5431A-080C	327, 417	5591-005C	336, 451	5806-16810	90	5858-24912	91
5231-005SR	252, 432	5423-025	247, 416	5431A-100	247, 417		589	5806-16812	90	5858-25008	91
5231-007CSR	331, 432	5423-025C	327, 417	5431A-100C	327, 417	5591-005CSR	336, 451	5806-16908	90	5858-25010	91
5231-007SR	252, 432	5423-030	247, 416	5431A-120	247, 417		589	5806-16910	90	5858-25012	91
5231-010CSR	331, 432	5423-030C	327, 417	5431A-120C	327, 417	5591-005PSR	370, 451	5806-16912	90	5858-25108	91
5231-010SR	252, 432	5423-040	247, 416	5433-020	247, 416		590	5807-01008	90	5858-25110	91
5231-012CSR	331, 432	5423-040C	327, 417	5433-020C	327, 417	5591-005SR	257, 451	5807-01010	90	5858-25112	91
5231-012SR	252, 432	5423-060	247, 416	5433-025	247, 416		589	5807-01012	90	59-010-08R	93
5231-015CSR	331, 433	5423-060C	327, 417	5433-025C	327, 417	5592-002	257, 451	5807-01208	90	59-010-10R	93
5231-015SR	252, 432	5423-080	247, 416	5433-030	247, 416		589	5807-01210	90	59-010-12R	93
5231-020CSR	331, 433	5423-080C	327, 417	5433-030C	327, 417	5592-002BL	567	5807-01212	90	59-010-14R	93
5231-020SR	252, 432	5423-100	247, 416	5433-040	247, 416	5592-002C	336, 451	5807-01508	90	59-010-16R	93
5232-005	252, 432	5423-100C	327, 417	5433-040C	327, 417		589	5807-01510	90	59-012-08R	93
5232-005C	331, 432	5423-120	247, 416	5433-060	247, 416	5592-003	257, 451	5807-01512	90	59-012-10R	93
5232-007	252, 432	5423-120C	327, 417	5433-060C	327, 417		589	5807-16808	90	59-012-12R	93
5232-007C	331, 432	5423-140	247, 416	5433-080	247, 416	5592-003BL	567	5807-16810	90	59-012-14R	93
5232-010	252, 432	5423-140C	327, 417	5433-080C	327, 417	5592-003C	336, 451	5807-16812	90	59-012-16R	93
5232-010C	331, 432	5423-160	247, 416	5433-100	247, 416		589	5807-16908	90	59-015-08R	93
5232-012	252, 432	5423-160C	327, 417	5433-100C	327, 417	5592-005	257, 451	5807-16910	90	59-015-10R	93
5232-012C	331, 432	5423-180	247, 416	5433-120	247, 416		589	5807-16912	90	59-015-12R	93
5232-015	252, 432	5423-180C	327, 417	5433-120C	327, 417	5592-005BL	567	5808-24908	90	59-015-14R	93
5232-015C	331, 432	5423-200	247, 416	5433-140	247, 416	5592-005C	336, 451	5808-24910	90	59-015-16R	93
5232-020	252, 432	5423-200C	327, 417	5433-140C	327, 417		589	5808-24912	90	590-015	94
5232-020C	331, 432	5423-240	247, 416	5433-160	247, 416	5691-002	257, 451	5808-25008	90	590-168R	94
5233-005	252, 432	5423-240C	327, 417	5433-160C	327, 417		589	5808-25010	90	590-211	94
5233-005C	331, 433	5427-020	247, 416	5433-180	247, 416	5691-002BL	567	5808-25012	90	590-212	94
5233-007	252, 432	5427-020C	327, 417	5433-180C	327, 417	5691-002C	336, 451	5808-25108	90	5905-010_*	91
5233-007C	331, 433	5427-025	247, 416	5433-200	247, 416		589	5808-25110	90	5905-010_**	91
5233-010	252, 432	5427-025C	327, 417	5433-200C	327, 417	5691-002P	370, 451	5808-25112	90	5905-01000	91
5233-010C	331, 433	5427-030	247, 416	5433-240	247, 416		590	5809-01008	90	5905-012_*	91
5233-012	252, 432	5427-030C	327, 417	5433-240C	327, 417	5691-003	257, 451	5809-01010	90	5905-012_**	91
5233-012C	331, 433	5427-040	247, 416	5437-020	247, 416		589	5809-01012	90	5905-01200	91
5233-015	252, 432	5427-040C	327, 417	5437-020C	327, 417	5691-003BL	567	5809-01208	90	5905-015_*	91
5233-015C	331, 433	5427-060	247, 416	5437-025	247, 416	5691-003C	336, 451	5809-01210	90	5905-015_**	91
5233-020	252, 432	5427-060C	327, 417	5437-025C	327, 417		589	5809-01212	90	5905-01500	91
5233-020C	331, 433	5427-080	247, 416	5437-030	247, 416	5691-003P	370, 451	5809-01508	90	5906-010_*	91
5233-060	252, 432	5427-080C	327, 417	5437-030C	327, 417		590	5809-01510	90	5906-010_**	91
5233-060C	331, 433	5427-100	247, 416	5437-040	247, 416	5691-005	257, 451	5809-01512	90	5906-01000	91
5233-080	432	5427-100C	327, 417	5437-040C	327, 417		589	5810-01008	90	5906-012_*	91
5233-080C	433	5427-120	247, 416	5437-060	247, 416	5691-005BLSR	567	5810-01010	90	5906-012_**	91
542G-020	247, 417	5427-120C	327, 417	5437-060C	327, 417	5691-005C	336, 451	5810-01012	90	5906-01200	91
542G-020C	327, 417	5427-140	247, 416	5437-080	247, 416		589	5810-01208	90	5906-015_*	91
542G-025	247, 417	5427-140C	327, 417	5437-080C	327, 417	5691-005CSR	336, 451	5810-01210	90	5906-015_**	91
542G-025C	327, 417	5427-160	247, 416	5437-100	247, 416		589	5810-01212	90	5906-01500	91
542G-030	247, 417	5427-160C	327, 417	5437-100C	327, 417	5691-005PSR	370, 451	5810-01508	90	5907-010_*	91
542G-030C	327, 417	5427-180	247, 416	5437-120	247, 416		590	5810-01510	90	5907-010_**	91
542G-040	247, 417	5427-180C	327, 417	5437-120C	327, 417	5691-005SR	257, 451	5810-01512	90	5907-01000	91
542G-040C	327, 417	5427-200	247, 416	5437-140	247, 416		589	5811-01008	90	5907-012_*	91
542G-060	247, 417	5427-200C	327, 417	5437-140C	327, 417	5692-002	257, 451	5811-01010	90	5907-012_**	91
542G-060C	327, 417	5427-240	247, 416	5437-160	247, 416		589	5811-01012	90	5907-01200	91
542G-080	248, 417	5427-240C	327, 417	5437-160C	327, 417	5692-002BL	567	5811-01208	90	5907-015_*	91
542G-080C	327, 417	543G-020	247, 417	5437-180	247, 416	5692-002C	336, 451	5811-01210	90	5907-015_**	91
542G-100	248, 417	543G-020C	327, 417	5437-180C	327, 417		589	5811-01212	90	5907-01500	91
542G-100C	327, 417	543G-025	247, 417	5437-200	247, 416	5692-003	257, 451	5811-01508	90	5908-249_*	92
542G-120	248, 417	543G-025C	327, 417	5437-200C	327, 417		589	5811-01510	90	5908-249_**	92
542G-120C	327, 417	543G-030	247, 417	5437-240	247, 416	5692-003BL	567	5811-01512	90	5908-24900	92
5420-020	247, 416	543G-030C	327, 417	5437-240C	327, 417	5692-003C	336, 451	5812-24908	90	5908-250_*	92
5420-020C	327, 417	543G-040	247, 417	548-010-28A	92		589	5812-24910	91	5908-250_**	92
5420-025	247, 416	543G-040C	327, 417	548-012-28A	92	5692-005	257, 451	5812-24912	91	5908-25000	92
5420-025C	327, 417	543G-060	247, 417	548-015-28A	92		589	5812-25008	91	5908-251_*	92
5420-030	247, 416	543G-060C	327, 417	5520	580, 733	5692-005BL	567	5812-25010	91	5908-251_**	92
5420-030C	327, 417	543G-080	248, 417	5520-1	733	5692-005C	336, 451	5812-25012	91	5908-25100	92
5420-040	247, 416	543G-080C	327, 417	555A	563		589	5812-25108	91	591-010-1AR	93
5420-040C	327, 417	543G-100	248, 417	555B	563	58-010-1	93	5812-25110	91	591-010-2A	92
5420-060	247, 416	543G-100C	327, 417	555C	563	58-012-1	93	5812-25112	91	591-010-3AR	92
5420-060C	327, 417	543G-120	248, 417	556A	563	58-015-1	93	5855-01008	91	591-010-4A	93
5420-080	247, 416	543G-120C	327, 417	556B	563	58WH-010	94	5855-01010	91	591-010-5A	93
5420-080C	327, 417	5430-020	247, 416	559-010-21AR	92	58WH-012	94	5855-01012	91	591-010-6A	93
5420-100	247, 416	5430-020C	327, 417	559-010-22SRAR	92	58WH-015	94	5855-01208	91	591-010-7AR	93
5420-100C	327, 417	5430-025	247, 416	559-012-21AR	92	5805-01008	90	5855-01210	91	591-010-8BRA	93
5420-120	247, 416	5430-025C	327, 417	559-012-22SRAR	92	5805-01010	90	5855-01212	91	591-010-8SRA	93
5420-120C	327, 417	5430-030	247, 416	559-015-21AR	92	5805-01012	90	5855-01508	91	591-012-1AR	92
5420-140											

Spears List Price Part Number Index



591-015-3AR	92	657-040	691	697-020	691	721301Z-015	255, 438	721311Z-080C	334, 438	721321Z-080C	334, 438
591-015-4A	93	657-040C	691	697-020C	691	721301Z-015C	334, 438	721321Z-015	253, 434	721321Z-100	255, 438
591-015-5A	93	657-050	691	697-025	691	721301Z-020	255, 438	721321Z-015C	332, 435	721321Z-100C	334, 438
591-015-6A	93	657-050C	691	697-025C	691	721301Z-020C	334, 438	721321Z-020	253, 434	721321Z-120	255, 438
591-015-7AR	93	657-063	691	697-032	691	721301Z-025	255, 438	721321Z-020C	332, 435	721321Z-120C	334, 438
591-015-8BRA	93	657-063C	691	697-032C	691	721301Z-025C	334, 438	721321Z-020P	372, 440	722301-015	253, 435
591-015-8SRA	93	6621-005	239, 392	697-040	691	721301Z-030	255, 438	721321Z-025	253, 434	722301-015C	332, 435
591-132-7AR	93	6621-005C	322, 392	697-040C	691	721301Z-030C	334, 438	721321Z-025C	332, 435	722301-015P	372, 440
591-133-7AR	93	6621-007	239, 392	697-050	691	721301Z-040	255, 438	721321Z-025P	372, 440	722301-020	253, 435
591-168-4A	93	6621-007C	322, 392	697-050C	691	721301Z-040C	334, 438	721321Z-030	253, 434	722301-020C	332, 435
591-168-7AR	93	6621-010	239, 392	697-063	691	721301Z-060	255, 438	721321Z-030C	332, 435	722301-020P	372, 440
591-211-7AR	93	6621-010C	322, 392	697-063C	691	721301Z-060C	334, 438	721321Z-030P	372, 440	722301-025	253, 435
591-212-7AR	93	6621-012	239, 392	7020	580, 733	721301Z-080	255, 438	721321Z-040	253, 434	722301-025C	332, 435
592-010-4AR	92	6621-012C	322, 392	721301-015	253, 435	721301Z-080C	334, 438	721321Z-040C	332, 435	722301-025P	372, 440
592-012-4AR	92	6621-015	239, 392	721301-015C	332, 435	721301Z-100	255, 438	721321Z-040P	372, 440	722301-030	253, 435
592-015-4AR	92	6621-015C	322, 392	721301-015P	372, 440	721301Z-100C	334, 438	721321Z-060	253, 434	722301-030C	332, 435
593-010-1AR	93	6621-020	239, 392	721301-020	253, 435	721301Z-120	255, 438	721321Z-060C	332, 435	722301-030P	372, 440
593-012-1AR	93	6621-020C	322, 392	721301-020C	332, 435	721301Z-120C	334, 438	721321Z-060P	372, 440	722301-040	253, 435
593-015-1AR	93	6622-005	239, 392	721301-020P	372, 440	721311-015	253, 434	721321Z-080	253, 434	722301-040C	332, 435
593-249-5A	92	6622-005C	321, 392	721301-025	253, 435	721311-015C	332, 435	721321Z-080C	332, 435	722301-040P	372, 440
593-250-5A	92	6622-007	239, 392	721301-025C	332, 435	721311-015P	372, 439	721321Z-080P	372, 440	722301-060	253, 435
593-251-5A	92	6622-007C	321, 392	721301-025P	372, 440	721311-020	253, 434	721321Z-100	253, 435	722301-060C	332, 435
594-010-4AR	92	6622-010	239, 392	721301-030	253, 435	721311-020C	332, 435	721321Z-100C	332, 435	722301-060P	372, 440
594-012-4AR	92	6622-010C	321, 392	721301-030C	332, 435	721311-020P	372, 439	721321Z-100P	372, 440	722301-080	253, 435
594-015-4AR	92	6622-012	239, 392	721301-030P	372, 440	721311-025	253, 434	721321Z-120	253, 435	722301-080C	332, 435
595-010-4AR	92	6622-012C	321, 392	721301-040	253, 435	721311-025C	332, 435	721321Z-120C	332, 435	722301-080P	372, 440
595-012-4AR	92	6622-015	239, 392	721301-040C	332, 435	721311-025P	372, 439	721321Z-120P	372, 440	722301-100	253, 435
595-015-4AR	92	6622-015C	322, 392	721301-040P	372, 440	721311-030	253, 434	721321Z-015	254, 436	722301-100C	332, 435
596-010-4AR	92	6622-020	239, 392	721301-060	253, 435	721311-030C	332, 435	721321Z-015C	333, 437	722301-100P	372, 440
596-012-4AR	92	6622-020C	322, 392	721301-060C	332, 435	721311-030P	372, 439	721321Z-020	254, 436	722301-120	253, 435
596-015-4AR	92	6623-005	239, 392	721301-060P	372, 440	721311-040	253, 434	721321Z-020C	333, 437	722301-120C	332, 435
596-212-4AR	92	6623-005C	322, 392	721301-080	253, 435	721311-040C	332, 435	721321Z-025	254, 436	722301-120P	372, 440
597-010-4AR	92	6623-007	239, 392	721301-080C	332, 435	721311-040P	372, 440	721321Z-025C	333, 437	722301G-015	254, 436
597-012-4AR	92	6623-007C	322, 392	721301-080P	372, 440	721311-060	253, 434	721321Z-030	254, 436	722301G-015C	333, 437
597-015-4AR	92	6623-010	239, 392	721301-100	253, 435	721311-060C	332, 435	721321Z-030C	333, 437	722301G-020	254, 436
598-010-4AR	93	6623-010C	322, 392	721301-100C	332, 435	721311-060P	372, 440	721321Z-040	254, 436	722301G-020C	333, 437
598-012-4AR	93	6623-012	239, 392	721301-100P	372, 440	721311-080	253, 434	721321Z-040C	333, 437	722301G-025	254, 436
598-015-4AR	93	6623-012C	322, 392	721301-120	253, 435	721311-080C	332, 435	721321Z-060	254, 436	722301G-025C	333, 437
598-168-26	93	6623-015	239, 392	721301-120C	332, 435	721311-080P	372, 440	721321Z-060C	333, 437	722301G-030	254, 436
598-168-27	93	6623-015C	322, 392	721301-120P	372, 440	721311G-015	254, 436	721321Z-080	254, 436	722301G-030C	333, 437
598-212-26	93	6623-020	239, 392	721301G-015	254, 436	721311G-015C	333, 437	721321Z-080C	333, 437	722301G-040	254, 437
598-212-27	93	6623-020C	322, 392	721301G-015C	333, 437	721311G-020	254, 436	721321Z-100	254, 436	722301G-040C	333, 437
598-251-26	93	6631-005	239, 392	721301G-020	254, 436	721311G-020C	333, 437	721321Z-100C	333, 437	722301G-060	254, 437
598-251-27	93	6631-005C	322, 392	721301G-020C	333, 437	721311G-025	254, 436	721321Z-120	254, 436	722301G-060C	333, 437
601-280	692	6631-007	239, 392	721301G-025	254, 436	721311G-025C	333, 437	721321Z-120C	333, 437	722301G-080	254, 437
6013-025	257, 450	6631-007C	322, 392	721301G-025C	333, 437	721311G-030	254, 436	721321K-015	254, 436	722301G-080C	333, 437
6013-030	257, 450	6631-010	239, 392	721301G-030	254, 436	721311G-030C	333, 437	721321K-015C	333, 436	722301G-100	254, 437
6013-040	257, 450	6631-010C	322, 392	721301G-030C	333, 437	721311G-040	254, 436	721321K-020	254, 436	722301G-100C	333, 437
6013-060	257, 450	6631-012	239, 392	721301G-040	254, 437	721311G-040C	333, 437	721321K-020C	333, 436	722301G-120	254, 437
6020	732	6631-012C	322, 392	721301G-040C	333, 437	721311G-060	254, 436	721321K-025	254, 436	722301G-120C	333, 437
6023-025	257, 450	6631-015	239, 392	721301G-060	254, 437	721311G-060C	333, 437	721321K-025C	333, 436	722301K-015	254, 436
6023-025C	336, 450	6631-015C	322, 392	721301G-060C	333, 437	721311G-080	254, 436	721321K-030	254, 436	722301K-015C	333, 436
6023-030	257, 450	6631-020	239, 392	721301G-080	254, 437	721311G-080C	333, 437	721321K-030C	333, 436	722301K-020	254, 436
6023-030C	336, 450	6631-020C	322, 392	721301G-080C	333, 437	721311K-015	254, 435	721321K-040	254, 436	722301K-020C	333, 436
6023-040	257, 450	6632-005	239, 392	721301G-100	254, 437	721311K-015C	333, 436	721321K-040C	333, 436	722301K-025	254, 436
6023-040C	336, 450	6632-005C	321, 392	721301G-100C	333, 437	721311K-020	254, 435	721321K-060	254, 436	722301K-025C	333, 436
6023-060	257, 450	6632-007	239, 392	721301G-120	254, 437	721311K-020C	333, 436	721321K-060C	333, 436	722301K-030	254, 436
6023-060C	336, 450	6632-007C	321, 392	721301G-120C	333, 437	721311K-025	254, 435	721321K-080	254, 436	722301K-030C	333, 436
6033-025	257, 450	6632-010	239, 392	721301K-015	254, 436	721311K-025C	333, 436	721321K-080C	333, 436	722301K-040	254, 436
6033-025C	336, 450	6632-010C	321, 392	721301K-015C	333, 436	721311K-030	254, 435	721321K-100	254, 436	722301K-040C	333, 436
6033-030	257, 450	6632-012	239, 392	721301K-020	254, 436	721311K-030C	333, 436	721321K-100C	333, 436	722301K-060	254, 436
6033-030C	336, 450	6632-012C	321, 392	721301K-020C	333, 436	721311K-040	254, 436	721321K-120	254, 436	722301K-060C	333, 436
6033-040	257, 450	6632-015	239, 392	721301K-025	254, 436	721311K-040C	333, 436	721321K-120C	333, 436	722301K-080	254, 436
6033-040C	336, 450	6632-015C	322, 392	721301K-025C	333, 436	721311K-060	254, 436	721321L-015	255, 438	722301K-080C	333, 436
6033-060	257, 450	6632-020	239, 392	721301K-030	254, 436	721311K-060C	333, 436	721321L-015C	334, 439	722301K-100	254, 436
6033-060C	336, 450	6632-020C	322, 392	721301K-030C	333, 436	721311K-080	254, 436	721321L-020	255, 438	722301K-100C	333, 436
606-280	692	6633-005	239, 392	721301K-040	254, 436	721311K-080C	333, 436	721321L-020C	334, 439	722301K-120	254, 436
617-280	692	6633-005C	322, 392	721301K-040C	333, 436	721311L-015	255, 438	721321L-025	255, 438	722301K-120C	333, 436
6201-060	692	6633-007	239, 392	721301K-060	254, 436	721311L-015C	334, 439	721321L-025C	334, 439	722301L-015	255, 439
6201-080	692	6633-007C	322, 392	721301K-060C	333, 436	721311L-020	255, 438	721321L-030	255, 438	722301L-015C	334, 439
6201-160040	692	6633-010	239, 392	721301K-080	254, 436	721311L-020C	334, 439	721321L-030C	334, 439	722301L-020	255, 439
6206-060	692	6633-010C	322, 392	721301K-080C	333, 436	721311L-025	255, 438	721321L-040	255, 438	722301L-020C	334, 439
6206-080	692	6633-012	239, 392	721301K-100							

Page 793

Spears List Price Part Number Index



753311-020C	335, 441	801-159	186	801-525CF	278	801-670CF	278	802-005C	277	802-250C	278
753311-025	256, 441	801-159C	277	801-526	187	801-670F	187	802-005CBR	277, 360	802-251	188
753311-025C	335, 441	801-160CF	277	801-526C	278	801-678F	187	802-005CSR	277, 356	802-251C	278
753311-030	256, 441	801-160F	186	801-526CF	278	801-691CF	278	802-005SR	186, 351	802-287	188
753311-030C	335, 441	801-166	186	801-527	187	801-691F	187	802-007	186	802-287C	278
753311-040	256, 441	801-166C	277	801-527C	278	801-692CF	278	802-007BR	186, 355	802-287CSR	279, 356
753311-040C	335, 441	801-167	186	801-527CF	278	801-692F	187	802-007C	277	802-287SR	188, 351
753311-060	256, 441	801-167C	277	801-528	187	801-693CF	278	802-007CBR	277, 360	802-288	188
753311-060C	335, 441	801-168	186	801-528C	278	801-693F	187	802-007CSR	277, 356	802-288C	278
753311-080	256, 441	801-168C	277	801-528CF	278	801-694CF	278	802-007SR	186, 351	802-289	188
753311-080C	335, 441	801-180CF	277	801-529	187	801-694F	187	802-010	186	802-289C	278
753321-020	256, 441	801-180F	186	801-529C	278	801-696CF	278	802-010C	277	802-290	188
753321-020C	335, 441	801-200CF	277	801-529CF	278	801-696F	187	802-010CSR	277, 356	802-290C	278
753321-025	256, 441	801-200F	186	801-530	187	801-698CF	278	802-010SR	186, 351	802-291	188
753321-025C	335, 441	801-202	186	801-530BL	568	801-698F	187	802-012	186	802-291C	278
753321-030	256, 441	801-202C	277	801-530C	278	801-700CF	278	802-012C	277	802-292	188
753321-030C	335, 441	801-209	186	801-530CF	278	801-700F	187	802-012CSR	277, 356	802-292C	278
753321-040	256, 441	801-209C	277	801-532	187	801-702CF	278	802-012SR	186, 351	802-331CSR	279, 356
753321-040C	335, 441	801-210	186	801-532BL	569	801-702F	187	802-015	186	802-331SR	188, 351
753321-060	256, 441	801-210C	277	801-532C	278	801-706F	187	802-015C	277	802-333	188
753321-060C	335, 441	801-211	186	801-533F	187	801-751CF	278	802-015CSR	277, 356	802-333C	278
753321-080	256, 441	801-211BL	568	801-537F	187	801-751F	187	802-015SR	351	802-333SR	188, 351
753321-080C	335, 441	801-211C	277	801-539F	187	801-752CF	278	802-020	186	802-334	188
753321-100	256, 441	801-212	186	801-573	187	801-752F	187	802-020C	277	802-334C	279
753321-100C	335, 441	801-212C	277	801-575	187	801-753CF	278	802-020CSR	277, 356	802-335	188
753321-120	256, 441	801-240CF	277	801-575CF	278	801-753F	187	802-020SR	186, 351	802-335C	279
753321-120C	335, 441	801-240F	186	801-576CF	278	801-754CF	278	802-030	186	802-336	188
7622-015	396, 430	801-247	186	801-577CF	278	801-754F	187	802-030C	277	802-336C	279
	466	801-247C	277	801-578	187	801-756CF	278	802-030CSR	277, 356	802-337	188
7622-020	396, 430	801-248	186	801-578C	278	801-756F	187	802-030SR	186, 351	802-337C	279
	466	801-248C	277	801-578CF	278	801-758CF	278	802-040	186	802-338	188
7721-005SR	397, 563	801-249	186	801-578F	187	801-758F	187	802-040C	277	802-338C	279
7721-073SR	397, 563	801-249BL	568	801-579	187	801-760CF	278	802-040CSR	277, 356	802-339	188
7722-005	397, 563	801-249C	277	801-579CF	278	801-760F	187	802-040SR	186, 351	802-339C	279
7722-073	397, 563	801-250	186	801-579F	187	801-762CF	278	802-060CF	277	802-413CSR	279, 356
801-002	186	801-250C	277	801-580	187	801-762F	187	802-072CSR	279, 356	802-413SR	188, 351
801-002C	277	801-251	186	801-580C	278	801-764CF	278	802-072SR	188, 351	802-415	188
801-003	186	801-251BL	568	801-580CF	278	801-764F	187	802-098CSR	279, 356	802-415C	279
801-003C	277	801-251C	277	801-580F	187	801-781CF	278	802-098SR	188, 351	802-415SR	188, 351
801-005	186	801-287	186	801-582	187	801-781F	187	802-101	187	802-416	188
801-005BL	568	801-287C	277	801-582C	278	801-783CF	278	802-101BR	188, 355	802-416C	279
801-005C	277	801-288	186	801-582CF	278	801-783F	187	802-101C	278	802-417	188
801-007	186	801-288C	277	801-582F	187	801-784CF	278	802-101CBR	279, 360	802-417C	279
801-007BL	568	801-289	186	801-583F	187	801-784F	187	802-101CSR	279, 356	802-418	188
801-007C	277	801-289C	277	801-585	187	801-786CF	278	802-101SR	188, 351	802-418C	279
801-010	186	801-290	186	801-585C	278	801-786F	187	802-128CSR	279, 356	802-419	188
801-010BL	568	801-290C	277	801-591	187	801-788CF	278	802-128SR	188, 351	802-419C	279
801-010C	277	801-291	186	801-618CF	278	801-788F	187	802-130	187	802-420	188
801-012	186	801-291C	277	801-619CF	278	801-790CF	278	802-130C	278	802-420C	279
801-012BL	568	801-292	186	801-620CF	278	801-790F	187	802-130CSR	279, 356	802-421	188
801-012C	277	801-292C	277	801-621C	278	801-792CF	278	802-130SR	188, 351	802-421C	279
801-015	186	801-333	186	801-621CF	278	801-792F	187	802-131	187	802-422	188
801-015BL	568	801-333C	277	801-621F	187	801-794CF	278	802-131C	278	802-422C	279
801-015C	277	801-334	186	801-622CF	278	801-794F	187	802-131CSR	279, 356	802-525	188
801-020	186	801-334C	277	801-622F	187	801-796CF	278	802-131SR	188, 351	802-525C	279
801-020BL	568	801-335	186	801-623	187	801-796F	187	802-164CSR	279, 356	802-526	188
801-020C	277	801-335C	277	801-623C	278	801-814CF	278	802-164SR	188, 351	802-526C	279
801-025	186	801-336	186	801-623CF	278	801-814F	187	802-166	187	802-527	188
801-025C	277	801-336C	277	801-623F	187	801-816CF	278	802-166C	278	802-527C	279
801-030	186	801-337	187	801-624	187	801-816F	187	802-166CSR	279, 356	802-528	188
801-030BL	568	801-337C	277	801-624C	278	801-818CF	278	802-166SR	188, 351	802-528C	279
801-030C	277	801-338	187	801-624CF	278	801-818F	187	802-167	187	802-528F	188
801-040	186	801-338BL	568	801-624F	187	801-820CF	278	802-167C	278	802-529	188
801-040BL	568	801-338C	277	801-625F	187	801-820F	187	802-168	187	802-529C	279
801-040C	277	801-339	187	801-626	187	801-822CF	278	802-168C	278	802-530	188
801-050	186	801-339C	277	801-626C	278	801-822F	187	802-168CSR	279, 356	802-530C	279
801-050C	277	801-415C	278	801-626CF	278	801-824CF	278	802-168SR	188, 351	802-532	188
801-050F	186	801-416	187	801-626F	187	801-824F	187	802-207CSR	279, 356	802-532C	279
801-060	186	801-416C	278	801-628	187	801-826CF	278	802-207SR	188, 351	802-532F	188
801-060BL	568	801-417	187	801-628C	278	801-826F	187	802-209	187	802-578	188
801-060C	277	801-417C	278	801-628CF	278	801-828CF	278	802-209C	278	802-578C	279
801-080	186	801-418	187	801-628F	187	801-828F	187	802-210	187	802-578F	188
801-080C	277	801-418C	278	801-632F	187	801-904CF	278	802-210C	278	802-580	188
801-080F	186	801-419	187	801-661CF	278	801-904F	187	802-211	187	802-580C	279
801-100	186	801-419C	278	801-661F	187	801-906CF	278	802-211C	278	802-580F	188
801-100C	277	801-420	187	801-662CF	278	801-906F	187	802-211CSR	279, 356	802-582	188
801-100CF	277	801-420C	278	801-662F	187	801-908CF	278	802-211SR	188, 351	802-582C	279
801-100F	186	801-421	187	801-663CF	278	801-908F	187	802-212	187	802-582F	188
801-101	186	801-421C	278	801-663F	187	801-910CF	278	802-212C	278	802-621	188
801-101C	277	801-422	187	801-664	187	801-910F	187	802-212CSR	279, 356	802-621C	279
801-120	186	801-422BL	568	801-664C	278	801-912CF	278	802-212SR	188, 351	802-621F	188
801-120C	277	801-422C	278	801-664CF	278	801-912F	187	802-245CSR	279, 356	802-623	188
801-120CF	277	801-426	187	801-664F	187	801-914CF	278	802-245SR	188, 351	802-623C	279
801-120F	186	801-426C	278	801-665F	187	801-914F	187	802-247	187	802-623F	188
801-130	186	801-482F	187	801-666	187	801-916CF	278	802-247C	278	802-624	188
801-130C	277	801-484F	187	801-666C	278	801-916F	187	802-247CSR	279, 356	802-624C	279
801-131	186	801-486F	187	801-666CF	278	801-918CF	278	802-247SR	188, 351	802-624F	188
801-131BL	568	801-487F	187	801-666F	187	801-918F	187	802-248	187	802-661	188
801-131C	277	801-488F	187	801-668	187	801-920CF	278	802-248C	278	802-661C	279
801-140CF	277	801-490	187	801-668C	278	801-920F	187	802-248CSR	279, 356	802-661F	188
801-140F	186	801-490F	187	801-668CF	278	802-002	186	802-248SR	188, 351	802-6	



Spears List Price Part Number Index

802-664C	279	805-030	186	8059-007CSR	290, 357	806-040	188	808-003C	280	8097-030C	289
802-664F	188	805-030C	277	8059-007SR	200, 352	806-040BL	569	808-003CSR	280, 356	8097-040	200
803-005CSR	311	805-040	186	8059-010	200	806-040C	279	808-003SR	189, 351	8097-040BL	570
803-005SR	228	805-040C	277	8059-010C	289	806-040LSCF	279	808-005	189	8097-040C	289
803-007CSR	311	805-060F	186	8059-010CSR	290, 357	806-040LSF	189	808-005C	280	8097-060	200
803-007SR	228	805-080F	186	8059-010SR	200, 352	806-045F	188	808-005CSR	280, 356	8097-060C	289
803-010CSR	311	8056-005	200	8059-012	200	806-050	188	808-005SR	189, 351	8097-251W	34
803-010SR	228	8056-005C	289	8059-012C	289	806-050C	279	808-007	189	8098-005	201
803-095	188	8056-007	200	8059-012CSR	290, 357	806-050CF	279	808-007C	280	8098-005C	290
803-095C	279	8056-007C	289	8059-012SR	200, 352	806-050F	188	808-007CSR	280, 356	8098-005CSR	290, 358
803-095CSR	279, 311	8056-010	200	8059-015	200	806-060	188	808-007SR	189, 351	8098-005SR	201, 352
	356	8056-010C	289	8059-015C	289	806-060BL	569	808-010	189	8098-007	201
803-095SR	188, 228	8056-012	200	8059-015CSR	290, 357	806-060C	279	808-010C	280	8098-007C	290
	351	8056-012C	289	8059-015SR	200, 352	806-060LSCF	279	808-010CSR	280, 356	8098-007CSR	290, 358
803-113CSR	311	8056-015	200	8059-020	200	806-060LSF	189	808-010SR	189, 351	8098-007SR	201, 352
803-113SR	228	8056-015C	289	8059-020C	289	806-080	188	808-012	189	8098-010	201
803-122CSR	311	8056-020	200	8059-020CSR	290, 357	806-080C	279	808-012C	280	8098-010C	290
803-122SR	228	8056-020C	289	8059-020SR	200, 352	806-080CF	279	808-012CSR	280, 356	8098-010CSR	290, 358
803-126CSR	311	8056-025	200	8059-025	200	806-100	188	808-012SR	189, 351	8098-010SR	201, 352
803-126SR	228	8056-025C	289	8059-025C	289	806-100C	279	808-015	189	8098-012	201
803-142CSR	311	8056-030	200	8059-025CSR	290	806-100CF	279	808-015C	280	8098-012C	290
803-142SR	228	8056-030C	289	8059-025SR	200, 352	806-100F	188	808-015CSR	280, 356	8098-012CSR	290, 358
803-149CSR	311	8056-040	200	8059-030	200	806-120	188	808-015SR	189, 351	8098-012SR	201, 353
803-149SR	228	8056-040C	289	8059-030C	289	806-120C	279	808-020	189	8098-015	201
803-159CSR	311	8056-060	200	8059-030CSR	290, 357	806-120CF	279	808-020C	280	8098-015C	290
803-159SR	228	8056-060C	289	8059-030SR	200, 352	806-120F	188	808-020CSR	280, 356	8098-015CSR	290, 358
803-177CSR	311	8057-005	200	8059-040	200	806-140CF	279	808-020SR	189, 351	8098-015SR	201, 353
803-177SR	228	8057-005C	289	8059-040C	289	806-140F	188	808-025	189	8098-020	201
803-188CSR	311	8057-007	200	8059-040CSR	290, 357	806-160CF	279	808-025C	280	8098-020C	290
803-188SR	228	8057-007C	289	8059-040SR	200, 352	806-160F	188	808-030	189	8098-020CSR	290, 358
803-197CSR	311	8057-010	200	8059-060	200	806-180CF	279	808-030C	280	8098-020SR	201, 353
803-197SR	228	8057-010C	289	8059-060C	289	806-180F	188	808-040	189	8098-025	201
803-221CSR	311	8057-012	200	8059-060CSR	290	806-200CF	279	808-040C	280	8098-025C	290
803-221SR	228	8057-012C	289	8059-060SR	200, 352	806-200F	188	809-005	189	8098-025CSR	290, 358
803-227CSR	311	8057-015	200	806-002	188	806-240CF	279	809-005C	280	8098-025SR	201, 353
803-227SR	228	8057-015C	289	806-002C	279	806-240F	188	809-007	189	8098-030	201
803-233CSR	311	8057-020	200	806-003	188	806-338	188	809-007C	280	8098-030C	290
803-233SR	228	8057-020C	289	806-003C	279	806-422	188	809-010	189	8098-030CSR	290, 358
803-333CSR	311	8057-025	200	806-005	188	807-002	189	809-010C	280	8098-030SR	201, 353
803-333SR	228	8057-025C	289	806-005BL	569	807-002C	279	809-012	189	8098-040	201
803-334CSR	311	8057-030	200	806-005C	279	807-003	189	809-012C	280	8098-040C	290
803-334SR	228	8057-030BL	570	806-005LSCF	279	807-003C	279	809-015	189	8098-040CSR	290, 358
803-335CSR	311	8057-030C	289	806-005LSF	189	807-005	189	809-015C	280	8098-040SR	201, 353
803-335SR	228	8057-040	200	806-005S	189	807-005BR	189, 355	809-020	189	8098-060	201
803-415CSR	311	8057-040BL	570	806-005SBL	569	807-005C	279	809-020C	280	8098-060C	290
803-415SR	228	8057-040C	289	806-005SC	279	807-005CBR	280, 360	809-025C	280	8098-060CSR	290, 358
803-416CSR	311	8057-060	200	806-007	188	807-005CSR	280, 356	809-030	189	8098-060SR	201, 353
803-416SR	228	8057-060C	289	806-007BL	569	807-005SR	189, 351	809-030C	280	8099-005	200
803-417CSR	311	8057-251W	34	806-007C	279	807-007	189	809-040	189	8099-005C	289
803-417SR	228	8058-005	201	806-007LSCF	279	807-007BR	189, 355	809-040C	280	8099-005CSR	290, 357
803-523CSR	311	8058-005C	290	806-007LSF	189	807-007C	280	809-060	189	8099-005SR	201, 352
803-523SR	228	8058-005CSR	290, 357	806-007S	189	807-007CBR	280, 360	809-060C	280	8099-007	200
803-524CSR	311	8058-005SR	201, 353	806-007SBL	569	807-007CSR	280, 356	809-080	189	8099-007C	289
803-524SR	228	8058-007	201	806-007SC	279	807-007SR	189, 351	809-080C	280	8099-007CSR	290, 357
803-525CSR	311	8058-007C	290	806-010	188	807-010	189	809-100	189	8099-007SR	201, 352
803-525SR	228	8058-007CSR	290, 357	806-010BL	569	807-010C	280	809-100C	280	8099-010	200
803-573CSR	311	8058-007SR	201, 353	806-010C	279	807-010CSR	280, 356	809-120	189	8099-010C	289
803-573SR	228	8058-010	201	806-010LSCF	279	807-010SR	189, 351	809-120C	280	8099-010CSR	290, 357
803-574CSR	311	8058-010C	290	806-010LSF	189	807-012	189	8096-005	200	8099-010SR	201, 352
803-574SR	228	8058-010CSR	290, 357	806-010S	189	807-012C	280	8096-005C	290	8099-012	200
803-575CSR	311	8058-010SR	201, 353	806-010SBL	569	807-012CSR	356	8096-007	200	8099-012C	289
803-575SR	228	8058-012	201	806-010SC	279	807-012SR	189, 351	8096-007C	290	8099-012CSR	290, 357
805-002	186	8058-012C	290	806-012	188	807-015	189	8096-010	200	8099-012SR	201, 352
805-002C	277	8058-012CSR	290, 357	806-012BL	569	807-015C	280	8096-010C	290	8099-015	200
805-002CSR	277, 356	8058-012SR	201, 353	806-012C	279	807-015CSR	280, 356	8096-012	200	8099-015C	289
805-002SR	186, 351	8058-015	201	806-012LSCF	279	807-015SR	189, 351	8096-012C	290	8099-015CSR	290, 357
805-003	186	8058-015C	290	806-012LSF	189	807-020	189	8096-015	200	8099-015SR	201, 352
805-003C	277	8058-015CSR	290, 357	806-012S	189	807-020C	280	8096-015C	290	8099-020	200
805-003CSR	277, 356	8058-015SR	201, 353	806-012SBL	569	807-020CSR	280, 356	8096-020	200	8099-020C	289
805-003SR	186, 351	8058-020	201	806-012SC	279	807-020SR	189, 351	8096-020C	290	8099-020CSR	290, 357
805-005	186	8058-020C	290	806-015	188	807-030	189	8096-025	200	8099-020SR	201, 352
805-005C	277	8058-020CSR	290, 357	806-015BL	569	807-030C	280	8096-025C	290	8099-025	200
805-005CSR	277, 356	8058-020SR	201, 353	806-015C	279	807-030CSR	280	8096-030	200	8099-025C	289
805-005SR	186, 351	8058-025	201	806-015LSCF	279	807-030SR	189, 351	8096-030C	290	8099-025CSR	290, 357
805-007	186	8058-025C	290	806-015LSF	189	807-040	189	8096-040	200	8099-025SR	201, 352
805-007C	277	8058-025SR	201, 353	806-015S	189	807-040C	280	8096-040C	290	8099-030	200
805-007CSR	277, 356	8058-030	201	806-015SBL	569	807-040CSR	280	8096-060	200	8099-030C	289
805-007SR	186, 351	8058-030C	290	806-015SC	279	807-040SR	189, 351	8096-060C	290	8099-030CSR	290, 357
805-010	186	8058-030CSR	290, 357	806-020	188	807-060	189	8097-005	200	8099-030SR	201, 352
805-010C	277	8058-030SR	201, 353	806-020BL	569	807-101	189	8097-005C	289	8099-040	200
805-010CSR	277, 356	8058-040	201	806-020C	279	807-101BR	190, 355	8097-007	200	8099-040C	289
805-010SR	186, 351	8058-040C	290	806-020LSCF	279	807-101C	280	8097-007C	289	8099-040CSR	290, 357
805-012	186	8058-040CSR	290, 357	806-020LSF	189	807-101CBR	280, 360	8097-010	200	8099-040SR	201, 352
805-012C	277	8058-040SR	201, 353	806-020S	189	807-101CSR	280, 356	8097-010C	289	8099-060	200
805-015	186	8058-060	201	806-020SBL	569	807-101SR	189, 351	8097-012	200	8099-060C	289
805-015C	277	8058-060C	290	806-020SC	279	807-130	189	8097-012C	289	8099-060CSR	290, 357
805-015CSR	277, 356	8058-060CSR	290, 358	806-025	188	807-130C	280	8097-015	200	8099-060SR	201, 352
805-015SR	186, 351	8058-060SR	201, 353	806-025C	279	807-130CSR	280, 356	8097-015C	289	811-005CF	282
805-020	186	8059-005	200	806-025LSF	189	807-130SR	189, 351	8097-020	200		

Spears List Price Part Number Index



811-012F	191	816-050F	191	8170-025	214	8171-010	214	8171V-007CSR	302, 358	8172E-007	215
811-015	191	816-060	191	8170-025C	301	8171-010C	301	8171V-007SR	215, 353	8172E-007C	302
811-015C	282	816-060C	281	8170-030	214	8171-010CSR	302, 358	8171V-010	215	8172E-007CSR	302, 359
811-020	191	816-060CF	281	8170-030C	301	8171-010SR	215, 353	8171V-010C	301	8172E-007SR	216, 354
811-020C	282	816-060F	191	8170-040	214	8171-012	214	8171V-010CSR	302, 358	8172E-010	215
811-025CF	282	816-080	191	8170-040C	301	8171-012C	301	8171V-010SR	215, 353	8172E-010C	302
811-025F	191	816-080C	281	8170-060	214	8171-012CSR	302, 358	8171V-012	215	8172E-010CSR	303, 359
811-030	191	816-080CF	281	8170-060C	301	8171-012SR	215, 353	8171V-012C	301	8172E-010SR	216, 354
811-030C	282	816-080F	191	8170-080	214	8171-015	214	8171V-012CSR	302, 358	8172E-012	215
811-040	191	816-100CF	281	8170-080C	301	8171-015C	301	8171V-012SR	215, 353	8172E-012C	302
811-040C	282	816-100F	191	8170E-002	214	8171-015CSR	302, 358	8171V-015	215	8172E-012CSR	303, 359
811-045F	191	816-120CF	281	8170E-002C	301	8171-015SR	215, 353	8171V-015C	301	8172E-012SR	216, 354
811-050F	191	816-120F	191	8170E-003	214	8171-020	214	8171V-015CSR	302, 358	8172E-015	215
811-060CF	282	816-140CF	281	8170E-003C	301	8171-020C	301	8171V-015SR	215, 353	8172E-015C	302
811-060F	191	816-140F	191	8170E-005	214	8171-020CSR	302, 358	8171V-020	215	8172E-015CSR	303, 359
811-080CF	282	816-160CF	281	8170E-005BL	570	8171-020SR	215, 353	8171V-020C	301	8172E-015SR	216, 354
811-080F	191	816-160F	191	8170E-005C	301	8171-025	214	8171V-020CSR	302, 358	8172E-020	215
811-100CF	282	816-180CF	281	8170E-007	214	8171-025C	301	8171V-020SR	215, 353	8172E-020C	302
811-100F	191	816-180F	191	8170E-007BL	570	8171-025CSR	302, 358	8171V-025	215	8172E-020CSR	303, 359
811-120CF	282	816-200F	191	8170E-007C	301	8171-025SR	215, 353	8171V-025C	301	8172E-020SR	216, 354
811-120F	191	816-240F	191	8170E-010	214	8171-030	214	8171V-025CSR	302, 358	8172E-025	215
811-140CF	282	817-002	190	8170E-010BL	570	8171-030C	301	8171V-025SR	215, 353	8172E-025C	302
811-140F	191	817-002C	280	8170E-010C	301	8171-030CSR	302, 358	8171V-030	215	8172E-025CSR	303, 359
811-160CF	282	817-003	190	8170E-012	214	8171-030SR	215, 353	8171V-030C	301	8172E-025SR	216, 354
811-160F	191	817-003C	280	8170E-012BL	570	8171-040	214	8171V-030CSR	302, 358	8172E-030	215
811-180CF	282	817-005	190	8170E-012C	301	8171-040C	301	8171V-030SR	215, 353	8172E-030C	302
811-180F	191	817-005BL	569	8170E-015	214	8171-040CSR	302, 358	8171V-040	215	8172E-030CSR	303, 359
811-200F	191	817-005C	280	8170E-015BL	570	8171-040SR	215, 353	8171V-040C	301	8172E-030SR	216, 354
811-240F	191	817-007	190	8170E-015C	301	8171-060	214	8171V-040CSR	302, 358	8172E-040	215
812-002	189	817-007BL	569	8170E-020	214	8171-060C	301	8171V-040SR	215, 353	8172E-040C	302
812-002C	280	817-007C	280	8170E-020BL	570	8171-060CSR	302, 358	8171V-060	215	8172E-040CSR	303, 359
812-005	189	817-010	190	8170E-020C	301	8171-060SR	215, 353	8171V-060C	301	8172E-040SR	216, 354
812-010	189	817-010BL	569	8170E-025	214	8171E-002	214	8171V-060CSR	302, 358	8172E-060	215
812-012	189	817-010C	280	8170E-025C	301	8171E-002C	301	8171V-060SR	215, 353	8172E-060C	302
812-015	189	817-012	190	8170E-030	214	8171E-002CSR	302, 358	8172-002	215	8172E-060CSR	303, 359
815-005CF	281	817-012BL	569	8170E-030BL	570	8171E-002SR	215, 353	8172-002C	302	8172E-060SR	216, 354
815-005F	190	817-012C	280	8170E-030C	301	8171E-003	214	8172-002CSR	302, 358	8172ESA-010	214
815-007CF	281	817-015	190	8170E-040	214	8171E-003C	301	8172-002SR	215, 353	8172ESA-010C	301
815-007F	190	817-015BL	569	8170E-040BL	570	8171E-003CSR	302, 358	8172-003	215	8172ESA-020	214
815-010CF	281	817-015C	280	8170E-040C	301	8171E-003SR	215, 353	8172-003C	302	8172ESA-020C	301
815-010F	190	817-020	190	8170E-060	214	8171E-005	214	8172-003CSR	302, 358	8172ESA-030	214
815-012CF	281	817-020BL	569	8170E-060C	301	8171E-005C	301	8172-003SR	215, 353	8172ESA-030C	301
815-012F	190	817-020C	280	8170E-080	214	8171E-005CSR	302, 358	8172-005	215	8172SA-010	214
815-015CF	281	817-025	190	8170E-080C	301	8171E-005SR	215, 353	8172-005C	302	8172SA-010C	301
815-015F	190	817-025C	280	8170V-002	214	8171E-007	214	8172-005CSR	302, 358	8172SA-020	214
815-020CF	281	817-030	190	8170V-002C	301	8171E-007C	301	8172-005SR	215, 353	8172SA-020C	301
815-020F	190	817-030BL	569	8170V-003	214	8171E-007CSR	302, 358	8172-007	215	8172SA-030	214
815-025CF	281	817-030C	280	8170V-003C	301	8171E-007SR	215, 353	8172-007C	302	8172SA-030C	301
815-025F	190	817-040	190	8170V-005	214	8171E-010	214	8172-007CSR	302, 358	8172V-002	215
815-030CF	281	817-040BL	569	8170V-005BL	570	8171E-010C	301	8172-007SR	215, 353	8172V-002C	302
815-030F	190	817-040C	281	8170V-005C	301	8171E-010CSR	302, 358	8172-010	215	8172V-002CSR	303, 359
815-040CF	281	817-045F	190	8170V-007	214	8171E-010SR	215, 353	8172-010C	302	8172V-002SR	216, 354
815-040F	190	817-050	190	8170V-007BL	570	8171E-012	214	8172-010CSR	302, 358	8172V-003	215
815-045F	190	817-050C	281	8170V-007C	301	8171E-012C	301	8172-010SR	216, 353	8172V-003C	302
815-050F	190	817-050F	190	8170V-010	214	8171E-012CSR	302, 358	8172-012	215	8172V-003CSR	303, 359
815-060	190	817-060	190	8170V-010BL	570	8171E-012SR	215, 353	8172-012C	302	8172V-003SR	216, 354
815-060C	281	817-060BL	569	8170V-010C	301	8171E-015	214	8172-012CSR	302, 358	8172V-005	215
815-080CF	281	817-060C	281	8170V-012	214	8171E-015C	301	8172-012SR	216, 353	8172V-005C	302
815-080F	190	817-080	190	8170V-012BL	570	8171E-015CSR	302, 358	8172-015	215	8172V-005CSR	303, 359
815-100CF	281	817-080C	281	8170V-012C	301	8171E-015SR	215, 353	8172-015C	302	8172V-005SR	216, 354
815-100F	190	817-100	190	8170V-015	214	8171E-020	214	8172-015CSR	302, 358	8172V-007	215
815-120CF	281	817-100C	281	8170V-015BL	570	8171E-020C	301	8172-015SR	216, 353	8172V-007C	302
815-120F	190	817-100CF	281	8170V-015C	301	8171E-020CSR	302, 358	8172-020	215	8172V-007CSR	303, 359
815-140CF	281	817-100F	190	8170V-020	214	8171E-020SR	215, 353	8172-020C	302	8172V-007SR	216, 354
815-140F	190	817-120	190	8170V-020BL	570	8171E-025	214	8172-020CSR	302, 358	8172V-010	215
815-160CF	281	817-120C	281	8170V-020C	301	8171E-025C	301	8172-020SR	216, 353	8172V-010C	302
815-160F	190	817-120CF	281	8170V-025	214	8171E-025CSR	302, 358	8172-025	215	8172V-010CSR	303, 359
815-180CF	281	817-120F	190	8170V-025C	301	8171E-025SR	215, 353	8172-025C	302	8172V-010SR	216, 354
815-180F	190	817-140CF	281	8170V-030	214	8171E-030	214	8172-025CSR	302, 358	8172V-012	215
815-200F	190	817-140F	190	8170V-030BL	570	8171E-030C	301	8172-025SR	216, 353	8172V-012C	302
815-240F	190	817-160CF	281	8170V-030C	301	8171E-030CSR	302, 358	8172-030	215	8172V-012CSR	303, 359
816-005	190	817-160F	190	8170V-040	214	8171E-030SR	215, 353	8172-030C	302	8172V-012SR	216, 354
816-005C	281	817-180CF	281	8170V-040BL	570	8171E-040	214	8172-030CSR	302, 359	8172V-015	215
816-007	190	817-180F	190	8170V-040C	301	8171E-040C	301	8172-030SR	216, 354	8172V-015C	302
816-007C	281	817-200CF	281	8170V-060	214	8171E-040CSR	302, 358	8172-040	215	8172V-015CSR	303, 359
816-010	191	817-200F	190	8170V-060C	301	8171E-040SR	215, 353	8172-040C	302	8172V-015SR	216, 354
816-010C	281	817-240CF	281	8170V-080	214	8171E-060	214	8172-040CSR	302, 359	8172V-020	215
816-010F	191	817-240F	190	8170V-080C	301	8171E-060C	301	8172-040SR	216, 354	8172V-020C	302
816-012	191	8170-002	214	8171-002	214	8171E-060CSR	302, 358	8172-060	215	8172V-020CSR	303, 359
816-012C	281	8170-002C	301	8171-002C	301	8171E-060SR	215, 353	8172-060C	302	8172V-020SR	216, 354
816-015	191	8170-003	214	8171-002CSR	302, 358	8171V-002	215	8172-060CSR	302, 359	8172V-025	215
816-015C	281	8170-003C	301	8171-002SR	215, 353	8171V-002C	301	8172-060SR	216, 354	8172V-025C	302
816-015F	191	8170-005	214	8171-003	214	8171V-002CSR	302, 358	8172E-002	215	8172V-025CSR	303, 359
816-020	191	8170-005C	301	8171-003C	301	8171V-002SR	215, 353	8172E-002C	302	8172V-025SR	216, 354
816-020C	281	8170-007	214	8171-003CSR	302, 358	8171V-003	215	8172E-002CSR	302, 359	8172V-030	215
816-025	191	8170-007C	301	8171-003SR	215, 353	817					



Spears List Price Part Number Index

8172V-060CSR	303, 359	820-060F	193	820-628F	193	824-012F	190	826-120X6	217, 528	829-050F	194
8172V-060SR	216, 354	820-080CF	283	820-661CF	283	824-015CF	280		544	829-060	194
8172VSA-010	214	820-080F	193	820-661F	193	824-015F	190	826-120X6C	304, 528	829-060BL	569
8172VSA-010C	301	820-100CF	283	820-663CF	283	824-020CF	280	826-140X12	218, 528	829-060C	284
8172VSA-020	214	820-100F	193	820-663F	193	824-020F	190	826-140X6	217, 528	829-080	194
8172VSA-020C	301	820-101	193	820-664CF	283	824-025CF	280		544	829-080C	284
8172VSA-030	214	820-101C	283	820-664F	193	824-025F	190	827-005	190	829-100	194
8172VSA-030C	301	820-120CF	283	820-666CF	283	824-030CF	280	827-005C	281	829-100C	284
8173E-005	214	820-120F	193	820-666F	193	824-030F	190	827-007	190	829-100F	194
8173E-007	214	820-130	193	820-668CF	283	824-040CF	280	827-007C	281	829-101	194
8173E-010	214	820-130C	283	820-668F	193	824-040F	190	827-010	190	829-101BL	569
8173E-015	214	820-131	193	820-670CF	283	824-060CF	280	827-010C	281	829-101C	284
8173E-020	214	820-131C	283	820-670F	193	824-060F	190	827-012	190	829-101CFE	285
818-005CF	281	820-140CF	283	820-691CF	283	824-080CF	280	827-012C	281	829-101FE	195
818-005F	191	820-140F	193	820-691F	193	824-080F	190	827-015	190	829-120	194
818-007CF	281	820-160CF	283	820-693CF	283	824-100CF	280	827-015C	281	829-120C	284
818-007F	191	820-160F	193	820-693F	193	824-100F	190	827-020	190	829-120F	194
818-010CF	281	820-166	193	820-694CF	283	824-120CF	280	827-020C	281	829-130	194
818-010F	191	820-166C	283	820-694F	193	824-120F	190	827-025	190	829-130C	284
818-012CF	281	820-167	193	820-696CF	283	824-140CF	280	827-025C	281	829-130CFE	285
818-012F	191	820-167C	283	820-696F	193	824-140F	190	827-030	190	829-130FE	195
818-015CF	281	820-168	193	820-698CF	283	824-160CF	280	827-030C	281	829-131	194
818-015F	191	820-168C	283	820-698F	193	824-160F	190	827-040	190	829-131BL	569
818-020CF	281	820-180CF	283	820-700CF	283	824-180CF	280	827-040C	281	829-131C	284
818-020F	191	820-180F	193	820-700F	193	824-180F	190	827-050F	190	829-131CFE	285
818-025CF	281	820-200F	193	820-702CF	283	824-200F	190	827-060	190	829-131FE	195
818-025F	191	820-209	193	820-702F	193	824-240F	190	827-060C	281	829-140	194
818-030CF	281	820-209C	283	820-751CF	283	8257-016	203, 694	827-080	190	829-140C	284
818-030F	191	820-210	193	820-751F	193	8257-020	203, 694	827-080C	281	829-140CF	284
818-040CF	281	820-210C	283	820-753CF	283	8257-025	203, 694	827-100	190	829-140F	194
818-040F	191	820-211	193	820-753F	193	8257-030	203, 694	827-100C	281	829-160CF	284
818-045F	191	820-211C	283	820-754CF	283	8257-040	203, 694	827-120	190	829-160F	194
818-050F	191	820-212	193	820-754F	193	8257-050	203, 694	827-120C	281	829-166	194
818-060CF	281	820-212C	283	820-756CF	283	8257-075	203, 694	827-140CF	281	829-166C	284
818-060F	191	820-240F	193	820-756F	193	8257-100	203, 694	827-140F	190	829-167	194
818-080CF	281	820-247	193	820-758CF	284	8258-016	203, 694	827-160CF	281	829-167C	284
818-080F	191	820-247C	283	820-758F	193	8258-020	203, 694	827-160F	190	829-168	194
818-100CF	281	820-248	193	820-760F	193	8258-025	203, 694	827-180CF	281	829-168BL	569
818-100F	191	820-248C	283	820-762CF	284	8258-030	203, 694	827-180F	190	829-168C	284
818-120CF	282	820-249	193	820-762F	193	8258-040	203, 694	827-200F	190	829-168CFE	285
818-120F	191	820-249C	283	820-764CF	284	8258-050	694	827-240F	190	829-168FE	195
818-140CF	282	820-250	193	820-764F	193	8258-075	203, 694	828-020CF	286	829-180CF	284
818-140F	191	820-250C	283	820-781CF	284	8258-100	203, 694	828-020F	196	829-180F	194
818-160CF	282	820-251	193	820-783CF	284	826-005X12	218, 528	828-030CF	286	829-200CF	284
818-160F	191	820-251C	283	820-784CF	284	826-005X12C	304, 528	828-030F	196	829-200F	194
818-180CF	282	820-289	193	820-784F	193	826-005X6	217, 528	828-040CF	286	829-209	194
818-180F	191	820-289C	283	820-786CF	284	826-005X6C	304, 528	828-040F	196	829-209C	284
818-200F	191	820-290	193	820-786F	193	826-007X12	218, 528	828-060CF	286	829-209CFE	285
818-240F	191	820-290C	283	820-788CF	284	826-007X12C	304, 528	828-060F	196	829-209FE	195
819-002	190	820-291	193	820-788F	193	826-007X6	217, 528	828-080CF	286	829-210	194
819-002C	281	820-291C	283	820-790CF	284	826-007X6C	304, 528	828-080F	196	829-210C	284
819-003	190	820-292	193	820-790F	193	826-010X12	218, 528	828-100CF	286	829-210CFE	285
819-003C	281	820-292C	283	820-792CF	284	826-010X12C	304, 528	828-100F	196	829-210FE	195
819-005	190	820-335	193	820-792F	193	826-010X6	217, 528	828-120CF	286	829-211	194
819-005C	281	820-335C	283	820-794CF	284	826-010X6C	304, 528	828-120F	196	829-211BL	569
819-007	190	820-336	193	820-794F	193	826-012X12	218, 528	828-140CF	286	829-211C	284
819-007C	281	820-336C	283	820-796CF	284	826-012X12C	304, 528	828-140F	196	829-212	194
819-007CSR	281, 356	820-337	193	820-796F	193	826-012X6	217, 528	828-160CF	286	829-212BL	569
819-007SR	190, 351	820-337C	283	820-814F	193	826-012X6C	304, 528	828-160F	196	829-212C	284
819-010	190	820-338	193	820-816F	193	826-015X12	218, 528	828-180F	196	829-212CFE	285
819-010C	281	820-338C	283	820-818F	193	826-015X12C	304, 528	828-200F	196	829-212FE	195
819-012	190	820-339	193	820-820F	193	826-015X6	217, 528	828-240F	196	829-240CF	284
819-012C	281	820-339C	283	820-822F	193	826-015X6C	304, 528	829-002	194	829-240F	194
819-015	190	820-420	193	820-824F	193	826-020X12	218, 528	829-002C	284	829-247	194
819-015C	281	820-420C	283	820-826F	193	826-020X12C	304, 528	829-003	194	829-247C	284
819-020	190	820-420CF	283	820-828F	193	826-020X6	217, 528	829-003C	284	829-248	194
819-020C	281	820-420F	193	820-904F	193	826-020X6C	304, 528	829-005	194	829-248C	284
819-025	190	820-422	193	820-906F	193	826-025X12	218, 528	829-005BL	569	829-249	194
819-025C	281	820-422C	283	820-908F	193	826-025X12C	304, 528	829-005C	284	829-249BL	569
819-030	190	820-528CF	283	820-910F	193	826-025X6	217, 528	829-007	194	829-249C	284
819-030C	281	820-528F	193	820-912F	193	826-025X6C	304, 528	829-007BL	569	829-249CFE	285
819-040	190	820-530CF	283	820-914F	194	826-030X12	218, 528	829-007C	284	829-249FE	195
819-040C	281	820-530F	193	820-916F	194	826-030X12C	304, 528	829-010	194	829-250	194
820-002	193	820-532CF	283	820-918F	194	826-030X6	217, 528	829-010BL	569	829-250C	284
820-002C	283	820-532F	193	820-920F	194	826-030X6C	304, 528	829-010C	284	829-250CFE	285
820-005	193	820-533F	193	8229-016	691	826-040X12	218, 528	829-012	194	829-250FE	195
820-005C	283	820-578CF	283	8229-016C	691	826-040X12C	304, 528	829-012BL	569	829-251	194
820-007	193	820-578F	193	8229-020	691	826-040X6	217, 528	829-012C	284	829-251BL	569
820-007C	283	820-580CF	283	8229-020C	691	826-040X6C	304, 528	829-015	194	829-251C	284
820-010	193	820-580F	193	8229-025	691	826-060X12	218, 528	829-015BL	569	829-251CFE	285
820-010C	283	820-582CF	283	8229-025C	691	826-060X12C	304, 528	829-015C	284	829-251FE	195
820-012	193	820-582F	193	8229-030	691	826-060X6	217, 528	829-020	194	829-290CFE	285
820-012C	283	820-585CF	283	8229-030C	691	826-060X6C	304, 528	829-020BL	569	829-290FE	195
820-015	193	820-585F	193	8229-040	691	826-080X12	218, 528	829-020C	284	829-291	194
820-015C	283	820-621CF	283	8229-040C	691	826-080X12C	304, 528	829-025	194	829-291C	284
820-020	193	820-621F	193	8229-050	691	826-080X6	217, 528	829-025C	284	829-291CFE	285
820-020C	283	820-622F	193	8229-050C	691		544	829-030	194	829-291FE	195
820-025	193	820-623CF	283	824-005CF	280	826-080X6C	304, 528	829-030BL	569	829-292	194
820-025C	283	820-623F	193	824-005F	190	826-100X12	218, 528	829-030C	284	829-292C	284
820-030	193	820-624CF	283	824-007CF	280	826-100X12C	304, 528	829-040	194	829-292CFE	285
820-030C	283	820-624F	193	824-007F	190	826-100X6	217, 528	829-040BL	569	829-292FE	195
820-040	193	820-626CF	283	824-010CF	280		544	82			

Spears List Price Part Number Index



829-335FE	195	829-585	194	829-786CFE	285	830-040	194	835-010SS	197, 355	836-005CBR	286, 360
829-336	194	829-585C	284	829-786F	195	830-040C	284	835-012	196	836-005CR	287, 357
829-336C	284	829-585CFE	285	829-786FE	195	830-060CF	284	835-012BR	196, 355	836-005R	197, 352
829-336CFE	285	829-585FE	195	829-788CF	285	830-060F	194	835-012C	286	836-007	197
829-336FE	195	829-621CF	284	829-788CFE	285	830-073	196	835-012CBR	286, 360	836-007BL	569
829-337	194	829-621F	194	829-788F	195	830-080F	194	835-012CESR	286, 357	836-007BR	197, 355
829-337C	284	829-623CF	284	829-788FE	195	830-100F	194	835-012CSR	286, 356	836-007C	287
829-337CFE	285	829-623F	194	829-790CF	285	830-101	196	835-012CSS	286, 360	836-007CBR	286, 360
829-337FE	195	829-624CF	284	829-790CFE	285	830-101C	285	835-012ESR	196, 352	836-007CR	287, 357
829-338	194	829-624CFE	285	829-790F	195	830-101CSR	285, 356	835-012SR	196, 351	836-007R	197, 352
829-338BL	569	829-624F	195	829-790FE	195	830-101SR	196, 351	835-012SRBL	569	836-010	197
829-338C	284	829-624FE	195	829-792CF	285	830-130CSR	285, 356	835-012SS	197, 355	836-010BL	569
829-338CFE	285	829-625CF	284	829-792CFE	285	830-130SR	196, 351	835-015	196	836-010BR	197, 355
829-338FE	195	829-625CFE	285	829-792F	195	830-131CSR	285, 356	835-015BR	196, 355	836-010C	287
829-338FE	195	829-625F	195	829-792FE	195	830-131SR	196, 351	835-015C	286	836-010CBR	286, 360
829-339	194	829-625FE	195	829-794CF	285	830-168CSR	285, 356	835-015CBR	286, 360	836-010CR	287, 357
829-339C	284	829-626	195	829-794CFE	285	830-168SR	196, 351	835-015CESR	286, 357	836-010R	197, 352
829-339CF	284	829-626C	284	829-794F	195	830-210CSR	285, 356	835-015CSR	286, 356	836-012	569
829-339CFE	285	829-626CF	284	829-794FE	195	830-210SR	196, 351	835-015CSS	286, 360	836-012BL	197
829-339F	194	829-626CFE	285	829-796CF	285	830-211	196	835-015ESR	196, 352	836-012BR	197, 355
829-339FE	195	829-626F	195	829-796CFE	285	830-211CSR	285, 356	835-015SR	196, 351	836-012C	287
829-416	194	829-626FE	195	829-796F	195	830-211SR	196, 351	835-015SRBL	569	836-012CBR	286, 360
829-416C	284	829-628	195	829-796FE	195	830-212CSR	285, 356	835-015SS	197, 355	836-015	197
829-417	194	829-628C	285	829-814F	195	830-212SR	196, 351	835-020	196	836-015BL	569
829-417C	284	829-628CF	285	829-816F	195	830-249CSR	285, 356	835-020BR	196, 355	836-015BR	197, 355
829-417CFE	285	829-628CFE	285	829-818CF	285	830-249SR	196, 351	835-020C	286	836-015C	287
829-417FE	195	829-628FE	195	829-818F	195	830-251CSR	285, 356	835-020CBR	286, 360	836-015CBR	286, 360
829-418CFE	285	829-663F	195	829-820F	195	830-251SR	196, 351	835-020CESR	286, 357	836-020	197
829-418FE	195	829-664CF	285	829-822F	195	833-012	194	835-020CSR	286, 356	836-020BL	569
829-419	194	829-664CFE	285	829-824F	195	833-012C	284	835-020CSS	286, 360	836-020BR	197, 355
829-419C	284	829-664F	195	829-826CF	285	833-015	194	835-020ESR	196, 352	836-020C	287
829-419CFE	285	829-664FE	195	829-826F	195	833-015C	284	835-020SR	196, 351	836-020CBR	286, 360
829-419FE	195	829-665CF	285	829-828CF	285	833-020	194	835-020SRBL	569	836-025	197
829-420	194	829-665F	195	829-828F	195	833-020C	284	835-020SS	197, 355	836-025C	287
829-420BL	569	829-666CF	285	829-904F	195	833-025	194	835-025	196	836-030	197
829-420C	284	829-666CFE	285	829-906CF	285	833-025C	284	835-025C	286	836-030BL	569
829-420CFE	285	829-666F	195	829-906F	195	833-030	194	835-025CSR	286, 356	836-030C	287
829-420FE	195	829-666FE	195	829-908F	195	833-030C	284	835-025SR	196, 351	836-040	197
829-421	194	829-668	195	829-910F	195	833-040	194	835-030	196	836-040BL	569
829-421C	284	829-668C	285	829-912F	195	833-040C	284	835-030C	286	836-040C	287
829-421CFE	285	829-668CF	285	829-914F	195	833-050CF	284	835-030CSR	286, 356	836-050F	197
829-421FE	195	829-668CFE	285	829-916F	195	833-050F	194	835-030SR	196, 351	836-053	197
829-422	194	829-668F	195	829-918CF	285	833-060	194	835-030SRBL	569	836-060	197
829-422BL	569	829-668FE	195	829-918F	195	833-060C	284	835-040	196	836-060C	287
829-422C	284	829-670CF	285	829-920CF	285	833-080CF	284	835-040C	286	836-060CF	287
829-422CFE	285	829-670CFE	285	829-920F	195	833-080F	194	835-040CSR	286, 356	836-080CF	287
829-422FE	195	829-670F	195	829-916	203, 694	833-100CF	284	835-040SR	196, 351	836-080F	197
829-460F	194	829-670FE	195	829-920	203, 694	833-100F	194	835-040SRBL	569	836-100CF	287
829-487F	194	829-691F	195	829-925	203, 694	833-120CF	284	835-060	196	836-100F	197
829-488CF	284	829-694CF	285	829-930	203, 694	833-120F	194	835-060C	286	836-102	197
829-488F	194	829-694F	195	829-940	203, 694	835-002	196	835-060CF	286	836-102C	287
829-490CF	284	829-696CF	285	829-950	203, 694	835-002C	286	835-060CSR	286, 356	836-120CF	287
829-490CFE	285	829-696CFE	285	829-975	203, 694	835-002CESR	286, 356	835-060F	196	836-120F	197
829-490F	194	829-696F	195	829-100	203, 694	835-002CSR	286, 356	835-060SR	196, 351	836-131	197
829-490FE	195	829-696FE	195	829-016	202, 694	835-002ESR	196, 351	835-074CSR	286, 357	836-131C	287
829-491F	194	829-698CF	285	829-020	202, 694	835-002SR	196, 351	835-074SR	197, 352	836-251	197
829-528	194	829-698CFE	285	829-025	202, 694	835-003	196	835-080	196	837-052	198
829-528C	284	829-698F	195	829-030	202, 694	835-003C	286	835-080C	286	837-052C	287
829-528CFE	285	829-698FE	195	829-040	202, 694	835-003CESR	286, 357	835-080CF	286	837-072	198
829-528FE	195	829-700CF	285	829-050	202, 694	835-003CSR	286, 356	835-080F	196	837-072C	287
829-529	194	829-700CFE	285	829-075	202, 694	835-003ESR	196, 352	835-100CF	286	837-073	198
829-529C	284	829-700F	195	829-100	202, 694	835-003SR	196, 351	835-100F	196	837-073C	287
829-529CFE	285	829-700FE	195	830-002	194	835-005	196	835-101BR	197, 355	837-101	198
829-529FE	195	829-702CF	285	830-002C	284	835-005BR	196, 355	835-101CBR	286	837-101BL	569
829-530	194	829-702CFE	285	830-003	194	835-005C	286	835-101CSR	286, 357	837-101C	287
829-530C	284	829-702F	195	830-003C	284	835-005CBR	286, 360	835-101SR	197, 352	837-129	198
829-530CFE	285	829-702FE	195	830-005	194	835-005CESR	286, 357	835-102CSR	286, 357	837-129C	287
829-530F	194	829-754CF	285	830-005C	284	835-005CSR	286, 356	835-102SR	197, 352	837-130	198
829-530FE	195	829-754F	195	830-005CSR	284, 356	835-005CSS	286, 360	835-120CF	286	837-130BL	569
829-532	194	829-756CF	285	830-005SR	194, 351	835-005ESR	196, 352	835-120F	196	837-130C	287
829-532BL	569	829-756CFE	285	830-007	194	835-005SR	196, 351	835-130CSR	286, 357	837-131	198
829-532C	284	829-756F	195	830-007C	284	835-005SRBL	569	835-130SR	197, 352	837-131BL	569
829-532CFE	285	829-756FE	195	830-007CSR	284, 356	835-005SS	197, 355	835-131CSR	286, 357	837-131C	287
829-532FE	195	829-758CF	285	830-007SR	194, 351	835-007	196	835-131SR	197, 352	837-166	198
829-533F	194	829-758CFE	285	830-010	194	835-007BR	196, 355	835-007	203, 694	837-166BL	569
829-533FE	195	829-758F	195	830-010C	284	835-007C	286	835-007	203, 694	837-166C	287
829-534F	194	829-758FE	195	830-010CSR	284, 356	835-007CBR	286, 360	835-010	203, 694	837-167	198
829-575FE	195	829-760CF	285	830-010SR	194, 351	835-007CESR	286, 357	835-012	203, 694	837-167C	287
829-577FE	195	829-760CFE	285	830-012	194	835-007CSR	286, 356	835-015	203, 694	837-168	198
829-578CFE	285	829-760F	195	830-012C	284	835-007CSS	286, 360	835-020	203, 694	837-168BL	569
829-578FE	195	829-760FE	195	830-012CSR	284, 356	835-007ESR	196, 352	835-030	203, 694	837-168C	287
829-579F	194	829-762CF	285	830-012SR	194, 351	835-007SR	196, 351	835-040	203, 694	837-209	198
829-580CF	284	829-762CFE	285	830-015	194	835-007SRBL	569	835-005	202, 694	837-209C	287
829-580CFE	285	829-762F	195	830-015C	284	835-007SS	197, 355	835-007	202, 694	837-210	198
829-580F	194	829-762FE	195	830-015CSR	284, 356	835-010	196	835-010	202, 694	837-210BL	569
829-580FE	195	829-764CF	285	830-015SR	194, 351	835-010BR	196, 355	835-012	202, 694	837-210C	287
829-582C	284	829-764CFE	285	830-020	194	835-010C	286	835-015	202, 694	837-211	198
829-582CF	284	829-764F	195	830-020C	284	835-010CBR	286, 360	835-020	202, 694	837-211BL	569
829-582CFE	285	829-764FE	195	830-020CSR							



Spears List Price Part Number Index

837-248	198	837-664C	288	838-207SR	199, 352	839-128	197	842-040F	191	848-025C	288
837-248C	287	837-666	198	838-209	199	839-128C	287	842-060	191	848-030	199
837-249	198	837-666CF	288	838-209C	288	839-128SR	197, 352	842-060C	281	848-030C	288
837-249BL	569	837-666F	198	838-209CSR	288, 357	839-129	197	842-060F	191	848-030CSR	289, 357
837-249C	287	837-668	198	838-209SR	199, 352	839-129C	287	842-080	191	848-030SR	199, 352
837-250	198	837-668C	288	838-210	199	839-130	197	842-080C	281	848-040	199
837-250C	287	837-668F	198	838-210BL	569	839-130C	287	842-080F	191	848-040C	288
837-251	198	837-670	198	838-210C	288	839-131	197	842-100CF	281	848-060F	199
837-251BL	569	837-670CF	288	838-210CSR	288, 357	839-131C	287	842-100F	191	848-080F	199
837-251C	287	837-670F	198	838-210SR	199, 352	839-166	197	842-120CF	281	849-005	199
837-287	198	837-694F	198	838-211	199	839-166C	287	842-120F	191	849-005C	289
837-288	198	837-696CF	288	838-211BL	569	839-167	197	844-005	186	849-007	199
837-289	198	837-696F	198	838-211C	288	839-167C	287	844-005C	277	849-007C	289
837-289C	287	837-698CF	288	838-212	199	839-168	197	844-007	186	849-010	199
837-290	198	837-698F	198	838-212C	288	839-168C	287	844-007C	277	849-010C	289
837-290C	287	837-700CF	288	838-247	199	839-209	197	844-010	186	849-012	199
837-291	198	837-700F	198	838-247C	288	839-209C	287	844-010C	277	849-012C	289
837-291C	287	837-702CF	288	838-247CSR	288, 357	839-209CSR	287, 357	844-012	186	849-015	199
837-292	198	837-702F	198	838-247SR	199, 352	839-209SR	197, 352	844-012C	277	849-015C	289
837-292C	287	837-754F	198	838-248	199	839-210	197	844-015	186	849-020	199
837-333	198	837-756CF	288	838-248C	288	839-210C	287	844-015C	277	849-020C	289
837-334	198	837-756F	198	838-248CSR	288, 357	839-210CSR	287, 357	844-020	186	849-025CF	289
837-334C	287	837-758CF	288	838-248SR	199, 352	839-210SR	197, 352	844-020C	277	849-025F	199
837-335	198	837-758F	198	838-249	199	839-211	197	847-002	199	849-030CF	289
837-335C	287	837-760CF	288	838-249C	288	839-211C	287	847-002C	288	849-030F	199
837-336	198	837-760F	198	838-249CSR	288, 357	839-212	197	847-003	199	849-040CF	289
837-336C	287	837-762CF	288	838-249SR	199, 352	839-212C	287	847-003C	288	849-040F	199
837-337	198	837-762F	198	838-250	199	839-247	197	847-005	199	849-060CF	289
837-337C	287	837-764CF	288	838-250C	288	839-247C	287	847-005BL	570	849-060F	199
837-338	198	837-764F	198	838-251	199	839-247CSR	287, 357	847-005C	288	849-080CF	289
837-338BL	569	837-786F	198	838-251C	288	839-247SR	197, 352	847-007	199	849-080F	199
837-338C	287	837-788CF	288	838-287	199	839-248	197	847-007BL	570	849-100CF	289
837-339	198	837-788F	198	838-287C	288	839-248C	287	847-007C	288	849-100F	199
837-339C	287	837-790F	198	838-288	199	839-248CSR	287, 357	847-010	199	849-120CF	289
837-415	198	837-792F	198	838-288C	288	839-248SR	197, 352	847-010BL	570	849-120F	199
837-416	198	837-794F	198	838-289	199	839-249	197	847-010C	288	850-002	199
837-417	198	837-796CF	288	838-289C	288	839-249C	287	847-012	199	850-002C	289
837-418	198	837-796F	198	838-290	199	839-249CSR	287, 357	847-012BL	570	850-003	199
837-419	198	837-816F	198	838-290C	288	839-249SR	197, 352	847-012C	288	850-003C	289
837-420	198	837-818F	198	838-291	199	839-250	197	847-015	199	850-005	199
837-420C	287	837-820F	198	838-291C	288	839-250C	287	847-015BL	570	850-005C	289
837-421	198	837-822F	198	838-292	199	839-251	197	847-015C	288	850-007	199
837-421C	287	837-824F	198	838-292C	288	839-251C	287	847-020	199	850-007C	289
837-422	198	837-826F	198	838-334	199	839-292	197	847-020BL	570	850-010	199
837-422BL	569	837-828F	198	838-334C	288	839-292C	287	847-020C	288	850-010C	289
837-422C	288	837-906F	198	838-334CSR	288, 357	839-337	197	847-025	199	850-012	199
837-486	198	837-908F	198	838-334SR	199, 352	839-337C	287	847-025C	288	850-012C	289
837-488	198	837-910F	198	838-335	199	839-338	197	847-030	199	850-015	199
837-490	198	837-912F	198	838-335C	288	839-338C	287	847-030BL	570	850-015C	289
837-490C	288	837-914F	198	838-335CSR	288, 357	839-339	197	847-030C	288	850-020	200
837-490F	198	837-916F	198	838-335SR	199, 352	839-339C	287	847-040	199	850-020C	289
837-524	198	837-918F	198	838-336	199	839-420	197	847-040BL	570	850-025	200
837-525	198	837-920F	198	838-336C	288	839-420C	287	847-040C	288	850-025C	289
837-526	198	838-052	198	838-336CSR	288, 357	839-420CSR	287, 357	847-050F	199	850-030	200
837-527	198	838-052C	288	838-336SR	199, 352	839-420SR	197, 352	847-060	199	850-030C	289
837-528	198	838-071	198	838-337	199	839-422	197	847-060BL	570	850-040	200
837-528C	288	838-071C	288	838-337C	288	839-422C	287	847-060C	288	850-040C	289
837-529	198	838-072	198	838-337CSR	288, 357	839-530C	287	847-080	199	850-060	200
837-529C	288	838-072BL	569	838-337SR	199, 352	839-532	197	847-080C	288	850-060C	289
837-530	198	838-072C	288	838-338	199	839-532C	287	847-100CF	288	850-060CF	289
837-530C	288	838-073	198	838-338C	288	8398-005	203, 695	847-100F	199	850-080CF	289
837-532	198	838-073BL	569	838-339	199	8398-007	203, 695	847-120CF	288	850-080F	200
837-532BL	569	838-073C	288	838-339C	288	8398-010	203, 695	847-120F	199	850-100CF	289
837-532C	288	838-098	198	838-419	199	8398-012	203, 695	847-140CF	288	850-100F	200
837-533F	198	838-098BL	569	838-420	199	8398-015	203, 695	847-140F	199	850-120CF	289
837-534	198	838-098C	288	838-420C	288	8398-020	203, 695	847-160CF	288	850-120F	200
837-577	198	838-099	198	838-421	199	8398-030	203, 695	847-160F	199	851-005	73, 218
837-578	198	838-099C	288	838-421C	288	8398-040	203, 695	847-180F	199	851-005C	305
837-578C	288	838-101	198	838-422	199	8399-005	203, 695	847-200F	199	851-007	73, 218
837-580	198	838-101BL	569	838-422C	288	8399-007	203, 695	847-240F	199	851-007C	305
837-580C	288	838-101C	288	838-528	199	8399-010	203, 695	848-002	199	851-010	73, 218
837-582	198	838-127	198	838-528CSR	288, 357	8399-012	203, 695	848-002C	288	851-010C	305
837-582C	288	838-128CSR	288, 357	838-528SR	199, 352	8399-015	203, 695	848-002CSR	289, 357	851-012	73, 218
837-583	198	838-128SR	199, 352	838-530	199	8399-020	203, 695	848-002SR	199, 352	851-012C	305
837-583F	198	838-129	198	838-530C	288	8399-030	203, 695	848-003	199	851-015	73, 218
837-585	198	838-129BL	569	838-530CSR	288, 357	8399-040	203, 695	848-003C	288	851-015C	305
837-585C	288	838-129C	288	838-530SR	199, 352	842-005	191	848-003CSR	289, 357	851-020	73, 218
837-621	198	838-130	198	838-532	199	842-005C	281	848-003SR	199, 352	851-020C	305
837-621C	288	838-130BL	569	838-532C	288	842-007	191	848-005	199	851-025	73, 218
837-622	198	838-130C	288	838-532SR	199, 352	842-007C	281	848-005C	288	851-025C	305
837-623	198	838-131	198	839-041	197	842-010	191	848-005SR	199, 352	851-030	73, 218
837-623C	288	838-131BL	569	839-041C	287	842-010C	281	848-007	199	851-030C	305
837-624	198	838-131C	288	839-052	197	842-012	191	848-007C	288	851-040	73, 218
837-624C	288	838-166	198	839-052C	287	842-012C	281	848-007CSR	289, 357	851-040C	305
837-625F	198	838-166C	288	839-072	197	842-015	191	848-007SR	199, 352	851-050	73, 218
837-626	198	838-166SR	199, 352	839-072C	287	842-015C	281	848-010	199	851-050C	305
837-626C	288	838-167	198	839-073	197	842-020	191	848-010C	288	851-060	73, 218
837-628	198	838-167C	288	839-073C	287	842-020C	281	848-012	199	851-060C	305
837-628C	288	838-168	198	839-098	197	842-025	191	848-012C	288	851-080	73, 218
837-628CF	288	838-168C	288	839-098C	287	842-025C	281	848-015	199	851-080C	305
837-628F	198	838-206	199	839-099	197	842-030	191	848-015C	288	851-100F	73, 218
837-663	198	838-207	199	839-099C	287	842-030C	281	848-020	199	851-120F	73, 218
837-663CF	288	838-207C	288	839-101	197	842-040	191	848-020C	288	851-140F	73, 218
83											

Spears List Price Part Number Index



851-180F	73, 218	854-007-1SC	306	854-180-1S	221	856-080C	305	859-010SR	202, 353	866-337C	293
851-200F	73, 218	854-007BL	570	854-180-1SC	306	856-100	74, 220	859-012	201	866-338	205
851-240F	73, 219	854-007C	305	854-180C	305	856-100C	305	859-012BR	202, 355	866-338C	293
852-005	73, 219	854-007CL300	74, 219	854-180CL300	74, 219	856-120	74, 220	859-012C	291	866-415	205
852-005C	305	854-007CL300C	305	854-180FP	73, 219	856-120C	305	859-012CBR	291, 360	866-415C	293
852-005CSR	305, 358	854-010	73, 219	854-180FS	74, 220	856-140CF	305	859-012CSR	291, 358	866-416	205
852-005SR	73, 219	854-010-1SC	306	854-200-1SC	306	856-140FP	74, 220	859-012SR	202, 353	866-416C	293
	353	854-010BL	570	854-200CL300	74, 220	856-140FS	74, 220	859-015	201	866-417	205
852-007	73, 219	854-010C	305	854-200FP	73, 219	856-160CF	305	859-015BR	202, 355	866-417C	293
852-007C	305	854-010CL300	74, 219	854-200FS	74, 220	856-160FP	74, 220	859-015C	291	866-418	205
852-007CSR	305, 358	854-010CL300C	305	854-240-1SC	306	856-160FS	74, 220	859-015CBR	291, 360	866-418C	293
852-007SR	73, 219	854-012	73, 219	854-240CL300	74, 220	856-180FP	74, 220	859-015CSR	291, 358	866-419	205
	353	854-012-1SC	306	854-240FP	73, 219	856-180FS	74, 220	859-015SR	202, 353	866-419C	293
852-010	73, 219	854-012BL	570	854-240FS	74, 220	856-200FP	74, 220	859-020	201	866-420	205
852-010C	305	854-012C	305	854P-005-1S	221	856-200FS	74, 220	859-020BR	202, 355	866-420C	293
852-010CSR	305, 358	854-012CL300	74, 219	854P-007-1S	221	856-240FP	74, 220	859-020C	291	866-421	205
852-010SR	73, 219	854-012CL300C	306	854P-010-1S	221	856-240FS	74, 220	859-020CBR	291, 360	866-421C	293
	353	854-015	73, 219	854P-012-1S	221	856P-030	74, 220	859-020CSR	291, 358	866-422	205
852-012	73, 219	854-015-1SC	306	854P-015-1S	221	856P-040	74, 220	859-020SR	202, 353	866-422C	293
852-012C	305	854-015BL	570	854P-020-1S	221	856P-060	74, 220	859-025	201	866-523	205
852-012CSR	305, 358	854-015C	305, 578	854P-025-1S	221	856P-080	74, 220	859-025C	291	866-523C	293
852-012SR	73, 219	854-015CL300	74, 219	854P-030	73, 219	856P-100	74, 220	859-030	201	866-524	205
	353	854-015CL300C	306	854P-030-1S	221	856P-120	74, 220	859-030C	291	866-524C	293
852-015	73, 219	854-020	73, 219	854P-040	73, 219	857-002	200	859-030CSR	291, 358	866-525	205
852-015C	305	854-020-1SC	306	854P-040-1S	221	857-002C	289	859-030SR	202, 353	866-525C	293
852-015CSR	305, 358	854-020BL	570	854P-050	73, 219	857-003	200	859-040	201	866-526	205
852-015SR	73, 219	854-020C	305, 578	854P-050-1S	221	857-003C	289	859-040C	291	866-526C	293
	353	854-020CL300	74, 219	854P-060	73, 219	857-005	201	859-040CSR	291, 358	866-527	205
852-020	73, 219	854-020CL300C	306	854P-060-1S	221	857-005BL	570	859-040SR	202, 353	866-527C	293
852-020C	305	854-025	73, 219	854P-080	73, 219	857-005C	290	861-005	197	866-528	205
852-020CSR	305, 358	854-025-1SC	306	854P-080-1S	221	857-007	201	861-005C	287	866-528C	293
852-020SR	73, 219	854-025C	305	854P-100	73, 219	857-007BL	570	861-007	197	866-529	205
	353	854-025CL300	74, 219	854P-100-1S	221	857-007C	290	861-007C	287	866-529C	293
852-025	73, 219	854-025CL300C	306	854P-120	73, 219	857-010	201	861-010	197	866-530	205
852-025C	305	854-030	74, 219	854P-120-1S	221	857-010BL	570	861-010C	287	866-530C	293
852-025CSR	305, 358	854-030-1S	221	854P-140	73, 219	857-010C	290	861-012	197	866-532	205
852-025SR	73, 219	854-030-1SC	306	854P-140-1S	221	857-012	201	861-012C	287	866-532C	293
	353	854-030BL	570	854P-160	73, 219	857-012BL	570	861-015	197	866-573	205
852-030	73, 219	854-030C	305, 578	854P-160-1S	221	857-012C	290	861-015C	287	866-573C	293
852-030C	305	854-030CL300	74, 219	854P-180	73, 219	857-015	201	861-020	197	866-574	205
852-030CSR	305, 358	854-030CL300C	306	854P-180-1S	221	857-015BL	570	861-020C	287	866-574C	293
852-030SR	73, 219	854-030DE	692	854P-200-1S	221	857-015C	290	861-131	197	866-575	205
	353	854-030DIN	692	854P-240-1S	221	857-020	201	861-131C	287	866-575C	293
852-040	73, 219	854-040	74, 219	855-005	75, 220	857-020BL	570	8622-015	429, 465	866-576	205
852-040C	305	854-040-1S	221	855-005C	306	857-020C	290	8622-020	429, 465	866-576C	293
852-040CSR	305, 358	854-040-1SC	306	855-007	75, 220	857-025	201	865-419	31, 87	866-577	205
852-040SR	73, 219	854-040BL	570	855-007C	306	857-025C	290		212	866-577C	293
	353	854-040C	305, 578	855-010	75, 220	857-030	201	865-420	31, 87	866-578	205
852-060F	73, 219	854-040CL300	74, 219	855-010C	306	857-030C	290		212	866-578C	293
852-080F	73, 219	854-040CL300C	306	855-012	75, 220	857-040	201	865-527	31, 87	866-579	205
853-005	73, 219	854-040DE	692	855-012C	306	857-040C	290		212	866-579C	293
853-005C	305	854-040DIN	692	855-015	75, 221	858-002	201	865-528	31, 87	866-580	205
853-007	73, 219	854-050	74, 219	855-015C	306	858-002C	290		212	866-580C	293
853-007C	305	854-050-1S	221	855-020	75, 221	858-003	201	865-577	31, 87	866-582	205
853-010	73, 219	854-050-1SC	306	855-020C	306	858-003C	290		212	866-582C	293
853-010C	305	854-050C	305	855-025	75, 221	858-005	202	865-578	31, 87	866-585	205
853-012	73, 219	854-060	74, 219	855-025C	306	858-005C	291		212	866-585C	293
853-012C	305	854-060-1S	221	855-030	75, 221	858-007	202	8657-020	202, 694	866-621	205
853-015	73, 219	854-060-1SC	306	855-030C	306	858-007C	291	8657-025	202, 694	866-624	205
853-015C	305	854-060BL	570	855-040	75, 221	858-010	202	8657-032	202, 694	866-624C	293
853-020	73, 219	854-060C	305, 578	855-040C	306	858-010C	291	8657-040	202, 694	866-626	205
853-020C	305	854-060CL300	74, 219	855-060	75, 221	858-012	202	8657-050	202, 694	866-626C	293
853-025	73, 219	854-060CL300C	306	855-060C	306	858-012C	291	8657-063	202, 694	866-664	205
853-025C	305	854-080	74, 219	855-060F	75, 221	858-015	202	8657-090	202, 694	866-664C	293
853-030	73, 219	854-080-1S	221	855-080	75, 221	858-015C	291	8657-110	203, 694	866-666	205
853-030C	305	854-080-1SC	306	855-080C	306	858-020	202	8658-020	203, 694	866-666C	293
853-040	73, 219	854-080C	305, 578	855-080CF	306	858-020C	291	8658-025	203, 694	866S-247	205
853-040C	305	854-080CL300	74, 219	855-080F	75, 221	858-025	202	8658-032	203, 694	866S-247C	293
853-050F	73, 219	854-080CL300C	306	855-100F	75, 221	858-025C	291	8658-040	203, 694	866S-248	205
853-060	73, 219	854-100	74, 219	856-005	74, 220	858-030	202	8658-050	203, 694	866S-248C	293
853-060C	305	854-100-1S	221	856-005C	305	858-030C	291	8658-063	203, 694	866S-249	205
853-080	73, 219	854-100-1SC	306	856-007	74, 220	858-040	202	8658-090	203, 694	866S-249C	293
853-080C	305	854-100C	305, 578	856-007C	305	858-040C	291	8658-110	203, 694	866S-250	205
853-100	73, 219	854-100CL300	74, 219	856-010	74, 220	859-002	200	866-247	205	866S-250C	293
853-100C	305	854-100CL300C	306	856-010C	305	859-002CSR	291, 358	866-247C	293	866S-251	205
853-120	73, 219	854-120	74, 219	856-012	74, 220	859-002SR	202	866-248	205	866S-251C	293
853-120C	305	854-120-1S	221	856-012C	305	859-003	200	866-248C	293	866S-291	205
853-140CF	305	854-120-1SC	306	856-015	74, 220	859-003CSR	291, 358	866-249	205	866S-291C	293
853-140F	73, 219	854-120C	305, 578	856-015C	305	859-003SR	202	866-249C	293	866S-333	206
853-160CF	305	854-120CL300	74, 219	856-020	74, 220	859-005	201	866-250	205	866S-333C	293
853-160F	73, 219	854-120CL300C	306	856-020C	305	859-005C	291	866-250C	293	866S-334	206
853-180CF	305	854-140	74, 219	856-025	74, 220	859-005CSR	291, 358	866-251	205	866S-334C	294
853-180F	73, 219	854-140-1S	221	856-025C	305	859-005SR	202, 353	866-251C	293	866S-335	206
853-200CF	305	854-140-1SC	306	856-030	74, 220	859-007	201	866-291	205	866S-335C	294
853-200F	73, 219	854-140C	305, 578	856-030C	305	859-007BR	202, 355	866-291C	293	866S-336	206
853-240CF	305	854-140CL300	74, 219	856-030DE	692	859-007C	291	866-333	205	866S-336C	294
853-240F	73, 219	854-140CL300C	306	856-030DIN	692	859-007CBR	291, 360	866-333C	293	866S-337	206
854-005	73, 219	854-160	74, 219	856-040	74, 220	859-007CSR	291, 358	866-334			



Spears List Price Part Number Index

866S-417	206	866SV-421	205	866V-525	204	867-529CSR	295	867S-529CSR	295	867SV-528CSR	294
866S-417C	204	866SV-421C	293	866V-525C	292	867-529SR	207	867S-529SR	207	867SV-528SR	206
866S-418	206	866SV-422	205	866V-526	204	867-530CSR	295	867S-530CSR	295	867SV-529CSR	294
866S-418C	294	866SV-422C	293	866V-526C	292	867-530SR	207	867S-530SR	207	867SV-529SR	206
866S-419	206	866SV-523	205	866V-527	204	867-532CSR	295	867S-532CSR	295	867SV-530CSR	294
866S-419C	294	866SV-523C	293	866V-527C	292	867-532SR	207	867S-532SR	207	867SV-530SR	206
866S-420	206	866SV-524	205	866V-528	204	867-573CSR	295	867S-571CSR	295	867SV-532CSR	294
866S-420C	294	866SV-524C	293	866V-528C	292	867-573SR	207	867S-571SR	207	867SV-532SR	206
866S-421	206	866SV-525	205	866V-529	205	867-574CSR	295	867S-573CSR	295, 629	867SV-571CSR	294
866S-421C	294	866SV-525C	293	866V-529C	293	867-574SR	207	867S-573SR	207, 629	867SV-571SR	206
866S-422	206	866SV-526	205	866V-530	205	867-575CSR	295	867S-574CSR	295, 629	867SV-573CSR	294, 629
866S-422C	294	866SV-526C	293	866V-530C	293	867-575SR	207	867S-574SR	207, 629	867SV-573SR	206, 629
866S-523	206	866SV-527	205	866V-532	205	867-576CSR	295	867S-575CSR	295	867SV-574CSR	294, 629
866S-523C	294	866SV-527C	293	866V-532C	293	867-576SR	207	867S-575SR	207	867SV-574SR	206, 629
866S-524	206	866SV-528	205	866V-573	205	867-577CSR	295	867S-576CSR	295	867SV-575CSR	294
866S-524C	294	866SV-528C	293	866V-573C	293	867-577SR	207	867S-576SR	207	867SV-575SR	207
866S-525	206	866SV-529	205	866V-574	205	867-578CSR	295	867S-577CSR	295	867SV-576CSR	295
866S-525C	294	866SV-529C	293	866V-574C	293	867-578SR	207	867S-577SR	207	867SV-576SR	207
866S-526	206	866SV-530	205	866V-575	205	867-579CSR	295	867S-578CSR	295	867SV-577CSR	295
866S-526C	294	866SV-530C	293	866V-575C	293	867-579SR	207	867S-578SR	207	867SV-577SR	207
866S-527	206	866SV-532	205	866V-576	205	867-580CSR	295	867S-579CSR	295	867SV-578CSR	295
866S-527C	294	866SV-532C	293	866V-576C	293	867-580SR	207	867S-579SR	207	867SV-578SR	207
866S-528	206	866SV-573	205	866V-577	205	867-582CSR	295	867S-580CSR	295	867SV-579CSR	295
866S-528C	294	866SV-573C	293	866V-577C	293	867-582SR	207	867S-580SR	207	867SV-579SR	207
866S-529	206	866SV-574	205	866V-578	205	867-585CSR	295	867S-582CSR	295	867SV-580CSR	295
866S-529C	294	866SV-574C	293	866V-578C	293	867-585SR	207	867S-582SR	207	867SV-580SR	207
866S-530	206	866SV-575	205	866V-579	205	867-624CSR	295	867S-585CSR	295	867SV-582CSR	295
866S-530C	294	866SV-575C	293	866V-579C	293	867-624SR	207	867S-585SR	207	867SV-582SR	207
866S-532	206	866SV-576	205	866V-580	205	867-626CSR	295	867S-624CSR	295	867SV-585CSR	295
866S-532C	294	866SV-576C	293	866V-580C	293	867-626SR	207	867S-624SR	207	867SV-585SR	207
866S-573	206	866SV-577	205	866V-582	205	867-664CSR	295	867S-626CSR	295	867SV-624CSR	295
866S-573C	294	866SV-577C	293	866V-582C	293	867-664SR	207	867S-626SR	207	867SV-624SR	207
866S-574	206	866SV-578	205	866V-585	205	867-666CSR	295	867S-664CSR	295	867SV-626CSR	295
866S-574C	294	866SV-578C	293	866V-585C	293	867-666SR	207	867S-664SR	207	867SV-626SR	207
866S-575	206	866SV-579	205	866V-624	205	867S-245CSR	295	867S-666CSR	295	867SV-664CSR	295
866S-575C	294	866SV-579C	293	866V-624C	293	867S-245SR	207	867S-666SR	207	867SV-664SR	207
866S-576	206	866SV-580	205	866V-626	205	867S-247CSR	295, 629	867SV-245CSR	294	867SV-666CSR	295
866S-576C	294	866SV-580C	293	866V-626C	293	867S-247SR	207, 629	867SV-245SR	206	867SV-666SR	207
866S-577	206	866SV-582	205	866V-664	205	867S-248CSR	295, 629	867SV-247CSR	294, 629	867V-247CSR	294
866S-577C	294	866SV-582C	293	866V-664C	293	867S-248SR	207, 629	867SV-247SR	206, 629	867V-247SR	206
866S-578	206	866SV-585	205	866V-666	205	867S-249CSR	295	867SV-248CSR	294, 629	867V-248CSR	294
866S-578C	294	866SV-585C	293	866V-666C	293	867S-249SR	207	867SV-248SR	206, 629	867V-248SR	206
866S-579	206	866SV-624	205	867-247CSR	295	867S-250CSR	295	867SV-249CSR	294	867V-249CSR	294
866S-579C	294	866SV-624C	293	867-247SR	207	867S-250SR	207	867SV-249SR	206	867V-249SR	206
866S-580	206	866SV-626	205	867-248CSR	295	867S-251CSR	295	867SV-250CSR	294	867V-250CSR	294
866S-580C	294	866SV-626C	293	867-248SR	207	867S-251SR	207	867SV-250SR	206	867V-250SR	206
866S-582	206	866SV-664	205	867-249CSR	295	867S-291CSR	295	867SV-251CSR	294	867V-251CSR	294
866S-582C	294	866SV-664C	293	867-249SR	207	867S-291SR	207	867SV-251SR	206	867V-251SR	206
866S-585	206	866SV-666	205	867-250CSR	295	867S-331CSR	295	867SV-291CSR	294	867V-291CSR	294
866S-585C	294	866SV-666C	293	867-250SR	207	867S-331SR	207	867SV-291SR	206	867V-291SR	206
866S-624	206	866V-247	204	867-251CSR	295	867S-333CSR	295, 629	867SV-331CSR	294	867V-333CSR	294
866S-624C	294	866V-247C	292	867-251SR	207	867S-333SR	207, 629	867SV-331SR	206	867V-333SR	206
866S-626	206	866V-248	204	867-291CSR	295	867S-334CSR	295, 629	867SV-333CSR	294, 629	867V-334CSR	294
866S-626C	294	866V-248C	292	867-291SR	207	867S-334SR	207, 629	867SV-333SR	206, 629	867V-334SR	206
866S-664	206	866V-249	204	867-333CSR	295	867S-335CSR	295	867SV-334CSR	294, 629	867V-335CSR	294
866S-664C	294	866V-249C	292	867-333SR	207	867S-335SR	207	867SV-334SR	206, 629	867V-335SR	206
866S-666	206	866V-250	204	867-334CSR	295	867S-336CSR	295	867SV-335CSR	294	867V-336CSR	294
866S-666C	294	866V-250C	292	867-334SR	207	867S-336SR	207	867SV-335SR	206	867V-336SR	206
866SV-247	205	866V-251	204	867-335CSR	295	867S-337CSR	295	867SV-336CSR	294	867V-337CSR	294
866SV-247C	293	866V-251C	292	867-335SR	207	867S-337SR	207	867SV-336SR	206	867V-337SR	206
866SV-248	205	866V-291	204	867-336CSR	295	867S-338CSR	295	867SV-337CSR	294	867V-338CSR	294
866SV-248C	293	866V-291C	292	867-336SR	207	867S-338SR	207	867SV-337SR	206	867V-338SR	206
866SV-249	205	866V-333	204	867-337CSR	295	867S-413CSR	295	867SV-338CSR	294	867V-415CSR	294
866SV-249C	293	866V-333C	292	867-337SR	207	867S-413SR	207	867SV-338SR	206	867V-415SR	206
866SV-250	205	866V-334	204	867-338CSR	295	867S-415CSR	295, 629	867SV-413CSR	294	867V-416CSR	294
866SV-250C	293	866V-334C	292	867-338SR	207	867S-415SR	207, 629	867SV-413SR	206	867V-416SR	206
866SV-251	205	866V-335	204	867-415CSR	295	867S-416CSR	295, 629	867SV-415CSR	294, 629	867V-417CSR	294
866SV-251C	293	866V-335C	292	867-415SR	207	867S-416SR	207, 629	867SV-415SR	206, 629	867V-417SR	206
866SV-291	205	866V-336	204	867-416CSR	295	867S-417CSR	295	867SV-416CSR	294, 629	867V-418CSR	294
866SV-291C	293	866V-336C	292	867-416SR	207	867S-417SR	207	867SV-416SR	206, 629	867V-418SR	206
866SV-333	205	866V-337	204	867-417CSR	295	867S-418CSR	295	867SV-417CSR	294	867V-419CSR	294
866SV-333C	293	866V-337C	292	867-417SR	207	867S-418SR	207	867SV-417SR	206	867V-419SR	206
866SV-334	205	866V-338	204	867-418CSR	295	867S-419CSR	295	867SV-418CSR	294	867V-420CSR	294
866SV-334C	293	866V-338C	292	867-418SR	207	867S-419SR	207	867SV-418SR	206	867V-420SR	206
866SV-335	205	866V-415	204	867-419CSR	295	867S-420CSR	295	867SV-419CSR	294	867V-421CSR	294
866SV-335C	293	866V-415C	292	867-419SR	207	867S-420SR	207	867SV-419SR	206	867V-421SR	206
866SV-336	205	866V-416	204	867-420CSR	295	867S-421CSR	295	867SV-420CSR	294	867V-422CSR	294
866SV-336C	293	866V-416C	292	867-420SR	207	867S-421SR	207	867SV-420SR	206	867V-422SR	206
866SV-337	205	866V-417	204	867-421CSR	295	867S-422CSR	295	867SV-421CSR	294	867V-523CSR	294
866SV-337C	293	866V-417C	292	867-421SR	207	867S-422SR	207	867SV-421SR	206	867V-523SR	206
866SV-338	205	866V-418	204	867-422CSR	295	867S-521CSR	295	867SV-422CSR	294	867V-524CSR	294
866SV-338C	293	866V-418C	292	867-422SR	207	867S-521SR	207	867SV-422SR	206	867V-524SR	206
866SV-415	205	866V-419	204	867-523CSR	295	867S-523CSR	295, 629	867SV-521CSR	294	867V-525CSR	294
866SV-415C	293	866V-419C	292	867-523SR	207	867S-523SR	207, 629	867SV-521SR	206	867V-525SR	206
866SV-416	205	866V-420	204	867-524CSR	295	867S-524CSR	295, 629	867SV-523CSR	294, 629	867V-526CSR	294
866SV-416C	293	866V-420C	292	867-524SR	207	867S-524SR	207, 629	867SV-523SR	206, 629	867V-526SR	206
866SV-417	205	866V-421	204	867-525CSR	295	867S-525CSR	295	867SV-524CSR	294, 629	867V-527CSR	294
866SV-417C	293	866V-421C	292	867-525SR	207	867S-525SR	207	867SV-524SR	206, 629	867V-527SR	206
866SV-418	205	866V-422	204	867-526CSR	295	867S-526CSR	295	867SV-525CSR	294	867V-528CSR	294
866SV-418C	293	866V-422C	292	867-526SR	207	867S-526SR	207	867SV-525SR	206	867V-528SR	206
866SV-419	205	866V-523									

Spears List Price Part Number Index



867V-532CSR	294	868-576	208	868S-580	209	868SV-626	208	869-248CSR	298	869S-291CSR	298
867V-532SR	206	868-576C	296	868S-580C	297	868SV-626C	296	869-248SR	210	869S-291SR	210
867V-573CSR	294	868-577	208	868S-582	209	868SV-664	208	869-249CSR	298	869S-333CSR	298
867V-573SR	206	868-577C	296	868S-582C	297	868SV-664C	296	869-249SR	210	869S-333SR	210
867V-574CSR	294	868-578	208	868S-585	209	868SV-666	208	869-250CSR	298	869S-334CSR	298
867V-574SR	206	868-578C	296	868S-585C	297	868SV-666C	296	869-250SR	210	869S-334SR	210
867V-575CSR	294	868-579	208	868S-624	209	868V-247	207	869-251CSR	298	869S-335CSR	298
867V-575SR	206	868-579C	296	868S-624C	297	868V-247C	295	869-251SR	210	869S-335SR	210
867V-576CSR	294	868-580	208	868S-626	209	868V-248	207	869-291CSR	298	869S-336CSR	298
867V-576SR	206	868-580C	296	868S-626C	297	868V-248C	295	869-291SR	210	869S-336SR	210
867V-577CSR	294	868-582	208	868S-664	209	868V-249	207	869-333CSR	298	869S-337CSR	298
867V-577SR	206	868-582C	296	868S-664C	297	868V-249C	295	869-333SR	210	869S-337SR	210
867V-578CSR	294	868-585	209	868S-666	209	868V-250	207	869-334CSR	298	869S-338CSR	298
867V-578SR	206	868-585C	297	868S-666C	297	868V-250C	295	869-334SR	210	869S-338SR	210
867V-579CSR	294	868-624	209	868SV-247	208	868V-251	207	869-335CSR	298	869S-415CSR	298
867V-579SR	206	868-624C	297	868SV-247C	296	868V-251C	295	869-335SR	210	869S-415SR	210
867V-580CSR	294	868-626	209	868SV-248	208	868V-291	207	869-336CSR	298	869S-416CSR	298
867V-580SR	206	868-626C	297	868SV-248C	296	868V-291C	295	869-336SR	210	869S-416SR	210
867V-582CSR	294	868-664	209	868SV-249	208	868V-333	207	869-337CSR	298	869S-417CSR	298
867V-582SR	206	868-664C	297	868SV-249C	296	868V-333C	295	869-337SR	210	869S-417SR	210
867V-585CSR	294	868-666	209	868SV-250	208	868V-334	207	869-338CSR	298	869S-418CSR	298
867V-585SR	206	868-666C	297	868SV-250C	296	868V-334C	295	869-338SR	210	869S-418SR	210
867V-624CSR	294	868S-247	209	868SV-251	208	868V-335	208	869-415CSR	298	869S-419CSR	298
867V-624SR	206	868S-247C	297	868SV-251C	296	868V-335C	296	869-415SR	210	869S-419SR	210
867V-626CSR	294	868S-248	209	868SV-291	208	868V-336	208	869-416CSR	298	869S-420CSR	298
867V-626SR	206	868S-248C	297	868SV-291C	296	868V-336C	296	869-416SR	210	869S-420SR	210
867V-664CSR	294	868S-249	209	868SV-333	208	868V-337	208	869-417CSR	298	869S-421CSR	298
867V-664SR	206	868S-249C	297	868SV-333C	296	868V-337C	296	869-417SR	210	869S-421SR	210
867V-666CSR	294	868S-250	209	868SV-334	208	868V-338	208	869-418CSR	298	869S-422CSR	298
867V-666SR	206	868S-250C	297	868SV-334C	296	868V-338C	296	869-418SR	210	869S-422SR	210
868-247	208	868S-251	209	868SV-335	208	868V-415	208	869-419CSR	298	869S-523CSR	298
868-247C	296	868S-251C	297	868SV-335C	296	868V-415C	296	869-419SR	210	869S-523SR	210
868-248	208	868S-291	209	868SV-336	208	868V-416	208	869-420CSR	298	869S-524CSR	298
868-248C	296	868S-291C	297	868SV-336C	296	868V-416C	296	869-420SR	210	869S-524SR	210
868-249	208	868S-333	209	868SV-337	208	868V-417	208	869-421CSR	298	869S-525CSR	298
868-249C	296	868S-333C	297	868SV-337C	296	868V-417C	296	869-421SR	210	869S-525SR	210
868-250	208	868S-334	209	868SV-338	208	868V-418	208	869-422CSR	298	869S-526CSR	298
868-250C	296	868S-334C	297	868SV-338C	296	868V-418C	296	869-422SR	210	869S-526SR	210
868-251	208	868S-335	209	868SV-415	208	868V-419	208	869-523CSR	298	869S-527CSR	298
868-251C	296	868S-335C	297	868SV-415C	296	868V-419C	296	869-523SR	210	869S-527SR	210
868-291	208	868S-336	209	868SV-416	208	868V-420	208	869-524CSR	298	869S-528CSR	298
868-291C	296	868S-336C	297	868SV-416C	296	868V-420C	296	869-524SR	210	869S-528SR	210
868-333	208	868S-337	209	868SV-417	208	868V-421	208	869-525CSR	298	869S-529CSR	298
868-333C	296	868S-337C	297	868SV-417C	296	868V-421C	296	869-525SR	210	869S-529SR	210
868-334	208	868S-338	209	868SV-418	208	868V-422	208	869-526CSR	298	869S-530CSR	298
868-334C	296	868S-338C	297	868SV-418C	296	868V-422C	296	869-526SR	210	869S-530SR	210
868-335	208	868S-415	209	868SV-419	208	868V-523	208	869-527CSR	298	869S-532CSR	298
868-335C	296	868S-415C	297	868SV-419C	296	868V-523C	296	869-527SR	210	869S-532SR	210
868-336	208	868S-416	209	868SV-420	208	868V-524	208	869-528CSR	298	869S-573CSR	298
868-336C	296	868S-416C	297	868SV-420C	296	868V-524C	296	869-528SR	210	869S-573SR	210
868-337	208	868S-417	209	868SV-421	208	868V-525	208	869-529CSR	298	869S-574CSR	298
868-337C	296	868S-417C	297	868SV-421C	296	868V-525C	296	869-529SR	210	869S-574SR	210
868-338	208	868S-418	209	868SV-422	208	868V-526	208	869-530CSR	298	869S-575CSR	298
868-338C	296	868S-418C	297	868SV-422C	296	868V-526C	296	869-530SR	210	869S-575SR	210
868-415	208	868S-419	209	868SV-523	208	868V-527	208	869-532CSR	298	869S-576CSR	298
868-415C	296	868S-419C	297	868SV-523C	296	868V-527C	296	869-532SR	210	869S-576SR	210
868-416	208	868S-420	209	868SV-524	208	868V-528	208	869-573CSR	298	869S-577CSR	298
868-416C	296	868S-420C	297	868SV-524C	296	868V-528C	296	869-573SR	210	869S-577SR	210
868-417	208	868S-421	209	868SV-525	208	868V-529	208	869-574CSR	298	869S-578CSR	298
868-417C	296	868S-421C	297	868SV-525C	296	868V-529C	296	869-574SR	210	869S-578SR	210
868-418	208	868S-422	209	868SV-526	208	868V-530	208	869-575CSR	298	869S-579CSR	298
868-418C	296	868S-422C	297	868SV-526C	296	868V-530C	296	869-575SR	210	869S-579SR	210
868-419	208	868S-523	209	868SV-527	208	868V-532	208	869-576CSR	298	869S-580CSR	298
868-419C	296	868S-523C	297	868SV-527C	296	868V-532C	296	869-576SR	210	869S-580SR	210
868-420	208	868S-524	209	868SV-528	208	868V-573	208	869-577CSR	298	869S-582CSR	298
868-420C	296	868S-524C	297	868SV-528C	296	868V-573C	296	869-577SR	210	869S-582SR	210
868-421	208	868S-525	209	868SV-529	208	868V-574	208	869-578CSR	298	869S-585CSR	298
868-421C	296	868S-525C	297	868SV-529C	296	868V-574C	296	869-578SR	210	869S-585SR	210
868-422	208	868S-526	209	868SV-530	208	868V-575	208	869-579CSR	298	869S-624CSR	298
868-422C	296	868S-526C	297	868SV-530C	296	868V-575C	296	869-579SR	210	869S-624SR	210
868-523	208	868S-527	209	868SV-532	208	868V-576	208	869-580CSR	298	869S-626CSR	298
868-523C	296	868S-527C	297	868SV-532C	296	868V-576C	296	869-580SR	210	869S-626SR	210
868-524	208	868S-528	209	868SV-573	208	868V-577	208	869-582CSR	298	869S-664CSR	298
868-524C	296	868S-528C	297	868SV-573C	296	868V-577C	296	869-582SR	210	869S-664SR	210
868-525	208	868S-529	209	868SV-574	208	868V-578	208	869-585CSR	298	869S-666CSR	298
868-525C	296	868S-529C	297	868SV-574C	296	868V-578C	296	869-585SR	210	869S-666SR	210
868-526	208	868S-530	209	868SV-575	208	868V-579	208	869-624CSR	298	869SV-247CSR	297
868-526C	296	868S-530C	297	868SV-575C	296	868V-579C	296	869-624SR	210	869SV-247SR	209
868-527	208	868S-532	209	868SV-576	208	868V-580	208	869-626CSR	298	869SV-248CSR	297
868-527C	296	868S-532C	297	868SV-576C	296	868V-580C	296	869-626SR	210	869SV-248SR	209
868-528	208	868S-573	209	868SV-577	208	868V-582	208	869-664CSR	298	869SV-249CSR	297
868-528C	296	868S-573C	297	868SV-577C	296	868V-582C	296	869-664SR	210	869SV-249SR	209
868-529	208	868S-574	209	868SV-578	208	868V-585	208	869-666CSR	298	869SV-250CSR	297
868-529C	296	868S-574C	297	868SV-578C	296	868V-585C	296	869-666SR	210	869SV-250SR	209
868-530	208	868S-575	209	868SV-579	208	868V-624	208	869S-247CSR	298	869SV-251CSR	297
868-530C	296	868S-575C	297	868SV-579C	296	868V-624C	296	869S-247SR	210	869SV-251SR	209
868-532	208	868S-576	209	868SV-580	208	868V-626	208	869S-248CSR	298	869SV-291CSR	297
868-532C	296	868S-576C	297	868SV-580C	296	868V-626C	296	869S-248SR	210	869SV-291SR	209
868-573	208	868S-577	209	868SV-582	208	868V-664	208	869S-249CSR	298	869SV-333CSR	297
868-573C	296	868S-577C	297	868SV-582C	296	868V-664C	296	869S-249SR	210	869SV-333SR	209
868-574	208	868S-578	209	868SV-585	208	868V-666	208	869S-250CSR	298	869SV-334CSR	297
868-574C	296	868S-578C	297	868SV-585C	296	868V-666C	296	869S-250SR	210	869SV-334SR	209
868-575											



Spears List Price Part Number Index

869SV-336CSR	297	869V-416CSR	297	871E-010	216	875-211	192	875-696F	192	876-623F	193
869SV-336SR	209	869V-416SR	209	871E-012	216	875-211C	282	875-698CF	282	876-624CF	283
869SV-337CSR	297	869V-417CSR	297	871E-015	216	875-212	192	875-698F	192	876-624F	193
869SV-337SR	209	869V-417SR	209	871E-020	216	875-212C	282	875-700F	192	876-626CF	283
869SV-338CSR	297	869V-418CSR	297	871E-030	216	875-240F	191	875-702CF	282	876-626F	193
869SV-338SR	209	869V-418SR	209	871E-040	216	875-247	192	875-702F	192	876-628CF	283
869SV-415CSR	297	869V-419CSR	297	872-005	216	875-247C	282	875-754CF	282	876-628F	193
869SV-415SR	209	869V-419SR	209	872-005C	303	875-248	192	875-754F	192	876-661CF	283
869SV-416CSR	297	869V-420CSR	297	872-007	216	875-248C	282	875-756CF	282	876-661F	193
869SV-416SR	209	869V-420SR	209	872-007C	303	875-249	192	875-756F	192	876-662CF	283
869SV-417CSR	297	869V-421CSR	297	872-010	216	875-249C	282	875-758CF	282	876-662F	193
869SV-417SR	209	869V-421SR	209	872-010C	303	875-250	192	875-758F	192	876-663CF	283
869SV-418CSR	297	869V-422CSR	297	872-012	216	875-250C	282	875-760CF	282	876-663F	193
869SV-418SR	209	869V-422SR	209	872-012C	303	875-251	192	875-760F	192	876-664CF	283
869SV-419CSR	297	869V-523CSR	297	872-015	216	875-251C	282	875-762CF	282	876-664F	193
869SV-419SR	209	869V-523SR	209	872-015C	303	875-292	192	875-762F	192	876-666CF	283
869SV-420CSR	297	869V-524CSR	297	872-020	216	875-335	192	875-764CF	282	876-666F	193
869SV-420SR	209	869V-524SR	209	872-020C	303	875-335C	282	875-764F	192	876-668CF	283
869SV-421CSR	297	869V-525CSR	297	872-030	216	875-336	192	875-784CF	282	876-668F	193
869SV-421SR	209	869V-525SR	209	872-030C	303	875-336C	282	875-784F	192	876-670CF	283
869SV-422CSR	298	869V-526CSR	297	872-040	216	875-337	192	875-786CF	282	876-670F	193
869SV-422SR	210	869V-526SR	209	872-040C	303	875-337C	282	875-786F	192	878-005BR	196, 355
869SV-523CSR	298	869V-527CSR	297	872E-005	216	875-338	192	875-788CF	282	878-005CESR	286, 357
869SV-523SR	210	869V-527SR	209	872E-007	216	875-338C	282	875-788F	192	878-005CSR	286, 357
869SV-524CSR	298	869V-528CSR	297	872E-010	216	875-339	192	875-790CF	282	878-005ESR	196, 352
869SV-524SR	210	869V-528SR	209	872E-012	216	875-339C	282	875-790F	192	878-005SR	196, 352
869SV-525CSR	298	869V-529CSR	297	872E-015	216	875-420	192	875-792CF	282	878-007CESR	286, 357
869SV-525SR	210	869V-529SR	209	872E-020	216	875-420C	282	875-792F	192	878-007CSR	286, 357
869SV-526CSR	298	869V-530CSR	297	872E-030	216	875-420F	192	875-794CF	282	878-007ESR	196, 352
869SV-526SR	210	869V-530SR	209	872E-040	216	875-421	192	875-794F	192	878-007SR	196, 352
869SV-527CSR	298	869V-532CSR	297	8721-005	79, 396	875-421F	192	875-796CF	282	878-010BR	196, 355
869SV-527SR	210	869V-532SR	209	8721-007	79, 396	875-422	192	875-796F	192	878-010CESR	286, 357
869SV-528CSR	298	869V-573CSR	297	8721-010	79, 396	875-422C	282	875-814F	192	878-010CSR	286, 357
869SV-528SR	210	869V-573SR	209	8721-012	79, 396	875-525	192	875-816F	192	878-010ESR	196, 352
869SV-529CSR	298	869V-574CSR	297	8721-015	79, 396	875-528	192	875-818F	192	878-010SR	196, 352
869SV-529SR	210	869V-574SR	209	8721-020	79, 396	875-528C	282	875-820F	192	878-012CESR	287, 357
869SV-530CSR	298	869V-575CSR	297	8722-005	79, 396	875-528CF	282	875-822F	192	878-012CSR	286, 357
869SV-530SR	210	869V-575SR	209	8722-007	79, 396	875-528F	192	875-824F	192	878-012ESR	196, 352
869SV-532CSR	298	869V-576CSR	297	8722-010	79, 396	875-530	192	875-826F	192	878-012SR	196, 352
869SV-532SR	210	869V-576SR	209	8722-012	79, 396	875-530C	282	875-828F	192	878-015CESR	287, 357
869SV-573CSR	298	869V-577CSR	297	8722-015	79, 396	875-530CF	282	875-904F	192	878-015CSR	286, 357
869SV-573SR	210	869V-577SR	209	8722-020	79, 396	875-530F	192	875-906F	192	878-015ESR	196, 352
869SV-574CSR	298	869V-578CSR	297	875-005	191	875-532	192	875-908F	192	878-015SR	196, 352
869SV-574SR	210	869V-578SR	209	875-005C	282	875-532C	282	875-910F	192	878-020CESR	287, 357
869SV-575CSR	298	869V-579CSR	297	875-007	191	875-578	192	875-912F	192	878-020CSR	286, 357
869SV-575SR	210	869V-579SR	209	875-007C	282	875-578C	282	875-914F	192	878-020ESR	196, 352
869SV-576CSR	298	869V-580CSR	297	875-010	191	875-578CF	282	875-916F	192	878-020SR	196, 352
869SV-576SR	210	869V-580SR	209	875-010C	282	875-578F	192	875-918F	192	878-030CSR	286, 357
869SV-577CSR	298	869V-582CSR	297	875-012	191	875-579CF	282	875-920F	192	878-030SR	196, 352
869SV-577SR	210	869V-582SR	209	875-012C	282	875-579F	192	876-020CF	283	878-040CSR	286, 357
869SV-578CSR	298	869V-585CSR	297	875-015	191	875-580	192	876-020F	192	878-040SR	196, 352
869SV-578SR	210	869V-585SR	209	875-015C	282	875-580C	282	876-030CF	283	878-072CSR	287, 357
869SV-579CSR	298	869V-624CSR	297	875-020	191	875-580CF	282	876-030F	192	878-072SR	197, 352
869SV-579SR	210	869V-624SR	209	875-020C	282	875-580F	192	876-040CF	283	878-072SRBL	569
869SV-580CSR	298	869V-626CSR	297	875-025	191	875-582	192	876-040F	192	878-098CSR	287, 357
869SV-580SR	210	869V-626SR	209	875-025C	282	875-582C	282	876-060CF	283	878-098SR	197, 352
869SV-582CSR	298	869V-664CSR	297	875-030	191	875-582CF	282	876-060F	192	878-098SRBL	569
869SV-582SR	210	869V-664SR	209	875-030C	282	875-582F	192	876-080CF	283	878-128CSR	287, 357
869SV-585CSR	298	869V-666CSR	297	875-040	191	875-585	192	876-080F	192	878-128SR	197, 352
869SV-585SR	210	869V-666SR	209	875-040C	282	875-585C	282	876-100CF	283	878-128SRBL	569
869SV-624CSR	298	869V-020	203, 694	875-050F	191	875-585CF	282	876-100F	192	879-005	164
869SV-624SR	210	869V-025	203, 694	875-060	191	875-585F	192	876-120CF	283	879-005P	164
869SV-626CSR	298	869V-032	203, 694	875-060C	282	875-621CF	282	876-120F	192	879-015	164
869SV-626SR	210	869V-040	203, 694	875-080	191	875-621F	192	876-338	192	879-015P	164
869SV-664CSR	298	869V-050	203, 694	875-080C	282	875-622F	192	876-338C	283	879-020	164
869SV-664SR	210	869V-063	203, 694	875-080CF	282	875-623CF	282	876-420CF	283	879-020P	164
869SV-666CSR	298	869V-090	203, 694	875-080F	191	875-623F	192	876-420F	192	879-025	164
869SV-666SR	210	869V-110	203, 694	875-100CF	282	875-624CF	282	876-421CF	283	879-025P	164
869V-247CSR	297	8698-020	203, 694	875-100F	191	875-624F	192	876-421F	192	879-030	164
869V-247SR	209	8698-025	203, 694	875-101	192	875-625F	192	876-422CF	283	879-030P	164
869V-248CSR	297	8698-032	203, 694	875-101C	282	875-626	192	876-422F	192	879-035	164
869V-248SR	209	8698-040	203, 694	875-120CF	282	875-626C	282	876-528CF	283	879-035P	164
869V-249CSR	297	8698-050	203, 694	875-120F	191	875-626CF	282	876-528F	192	879-040	164
869V-249SR	209	8698-063	203, 694	875-130	192	875-626F	192	876-529CF	283	879-040P	164
869V-250CSR	297	8698-090	203, 694	875-130C	282	875-628	192	876-529F	192	879-045	164
869V-250SR	209	8698-110	203, 694	875-131	192	875-628C	282	876-530CF	283	879-045P	164
869V-251CSR	297	871-005	216	875-131C	282	875-628CF	282	876-530F	192	879-050	164
869V-251SR	209	871-005C	303	875-140CF	282	875-628F	192	876-532CF	283	879-050P	164
869V-291CSR	297	871-007	216	875-140F	191	875-661CF	282	876-532F	192	879-055	164
869V-291SR	209	871-007C	303	875-160CF	282	875-661F	192	876-578CF	283	879-055P	164
869V-333CSR	297	871-010	216	875-160F	191	875-662F	192	876-578F	192	879-060	164
869V-333SR	209	871-010C	303	875-166	192	875-663CF	282	876-579CF	283	879-060P	164
869V-334CSR	297	871-012	216	875-166C	282	875-663F	192	876-579F	193	879-070	164
869V-334SR	209	871-012C	303	875-167	192	875-664CF	282	876-580CF	283	879-070P	164
869V-335CSR	297	871-015	216	875-167C	282	875-664F	192	876-580F	193	879-080	164
869V-335SR	209	871-015C	303	875-168	192	875-666CF	282	876-582CF	283	879-080P	164
869V-336CSR	297	871-020	216	875-168C	282	875-666F	192	876-582F	193	879-090	164
869V-336SR	209	871-020C	303	875-180CF	282	875-668CF	282	876-585CF	283	879-090P	164
869V-337CSR	297	871-030	216	875-180F	191	875-668F	192	876-585F	193	879-100	164
869V-337SR	209	871-030C	303	875-200F	191	875-670CF	282	876-621CF	283	879-100P	164
869V-338CSR	297	871-040	216	875-209	192	875-670F	192	876-621F	193	879-110	164
869V-338SR	209	871-040C	303	875-209C							

Spears List Price Part Number Index



879-130	164	880-100P	164	881-040CP	172	881-420P	165	882-130	165	883-045CP	173
879-130P	164	880-110	164	881-040M	171	881-480	165	882-130C	172	883-045M	171
879-140	164	880-110C	172	881-040P	164	881-480C	172	882-130CP	172	883-045P	165
879-140P	164	880-110CP	172	881-045	164	881-480CP	172	882-130P	165	883-050	165
879-150	164	880-110P	164	881-045C	172	881-480P	165	882-140	165	883-050C	173
879-150P	164	880-120	164	881-045CP	172	882-005	165	882-140C	172	883-050CP	173
879-160	164	880-120C	172	881-045P	164	882-005C	172	882-140CP	172	883-050M	171
879-160P	164	880-120CP	172	881-050	164	882-005CP	172	882-140P	165	883-050P	165
879-170	164	880-120P	164	881-050C	172	882-005M	171	882-150	165	883-055	165
879-170P	164	880-130	164	881-050CP	172	882-005P	165	882-150C	173	883-055C	173
879-180	164	880-130C	172	881-050P	164	882-015	165	882-150CP	173	883-055CP	173
879-180P	164	880-130CP	172	881-055	164	882-015C	172	882-150P	165	883-055P	165
879-190	164	880-130P	164	881-055C	172	882-015CP	172	882-160	165	883-060	165
879-190P	164	880-140	164	881-055CP	172	882-015M	171	882-160C	173	883-060C	173
879-200	164	880-140C	172	881-055P	164	882-015P	165	882-160CP	173	883-060CM	178
879-200P	164	880-140CP	172	881-060	165	882-020	165	882-160P	165	883-060CP	173
879-220	164	880-140P	164	881-060C	172	882-020C	172	882-170	165	883-060M	171
879-220P	164	880-150	164	881-060CP	172	882-020CM	178	882-170C	173	883-060P	165
879-240	164	880-150C	172	881-060P	165	882-020CP	172	882-170CP	173	883-060UV	37
879-240P	164	880-150CP	172	881-070	165	882-020M	171	882-170P	165	883-070	165
879-300	164	880-150P	164	881-070C	172	882-020P	165	882-180	165	883-070C	173
879-300P	164	880-160	164	881-070CP	172	882-025	165	882-180C	173	883-070CP	173
879-360	164	880-160C	172	881-070P	165	882-025C	172	882-180CP	173	883-070P	165
879-360P	164	880-160CP	172	881-080	165	882-025CP	172	882-180P	165	883-080	165
879-420	164	880-160P	164	881-080C	172	882-025M	171	882-190	165	883-080C	173
879-420P	164	880-170	164	881-080CP	172	882-025P	165	882-190C	173	883-080CP	173
879-480	164	880-170C	172	881-080P	165	882-030	165	882-190CP	173	883-080M	171
879-480P	164	880-170CP	172	881-090	165	882-030C	172	882-190P	165	883-080P	165
880-005	164	880-170P	164	881-090C	172	882-030CM	178	882-200	165	883-080UV	37
880-005C	171	880-180	164	881-090CP	172	882-030CP	172	882-200C	173	883-090	165
880-005CM	178	880-180C	172	881-090P	165	882-030M	171	882-200CP	173	883-090C	173
880-005CP	171	880-180CP	172	881-100	165	882-030P	165	882-200P	165	883-090CP	173
880-005M	171	880-180P	164	881-100C	172	882-035	165	882-220	165	883-090P	165
880-005P	164	880-190	164	881-100CP	172	882-035C	172	882-220C	173	883-100	165
880-015	164	880-190C	172	881-100P	165	882-035CP	172	882-220CP	173	883-100C	173
880-015C	171	880-190CP	172	881-110	165	882-035P	165	882-220P	165	883-100CP	173
880-015CP	171	880-190P	164	881-110C	172	882-040	165	882-240	165	883-100M	171
880-015M	171	880-200	164	881-110CP	172	882-040C	172	882-240C	173	883-100P	165
880-015P	164	880-200C	172	881-110P	165	882-040CM	178	882-240CP	173	883-100UV	37
880-020	164	880-200CP	172	881-120	165	882-040CP	172	882-240P	165	883-110	165
880-020C	171	880-200P	164	881-120C	172	882-040M	171	882-300	165	883-110C	173
880-020CP	171	880-220	164	881-120CP	172	882-040P	165	882-300C	173	883-110CP	173
880-020M	171	880-220C	172	881-120P	165	882-045	165	882-300CP	173	883-110P	165
880-020P	164	880-220CP	172	881-130	165	882-045C	172	882-300P	165	883-120	165
880-025	164	880-220P	164	881-130C	172	882-045CP	172	882-360	165	883-120C	173
880-025C	171	880-240	164	881-130CP	172	882-045M	171	882-360C	173	883-120CP	173
880-025CP	171	880-240C	172	881-130P	165	882-045P	165	882-360CP	173	883-120M	171
880-025P	164	880-240CP	172	881-140	165	882-050	165	882-360P	165	883-120P	165
880-030	164	880-240P	164	881-140C	172	882-050C	172	882-420	165	883-120UV	37
880-030C	171	880-300	164	881-140CP	172	882-050CP	172	882-420C	173	883-130	165
880-030CP	171	880-300C	172	881-140P	165	882-050M	171	882-420CP	173	883-130C	173
880-030M	171	880-300CP	172	881-150	165	882-050P	165	882-420P	165	883-130CP	173
880-030P	164	880-300P	164	881-150C	172	882-055	165	882-480	165	883-130P	165
880-035	164	880-360	164	881-150CP	172	882-055C	172	882-480C	173	883-140	165
880-035C	171	880-360C	172	881-150P	165	882-055CP	172	882-480CP	173	883-140C	173
880-035CP	171	880-360CP	172	881-160	165	882-055P	165	882-480P	165	883-140CP	173
880-035P	164	880-360P	164	881-160C	172	882-060	165	883-005	165	883-140P	165
880-040	164	880-420	164	881-160CP	172	882-060C	172	883-005C	173	883-150	165
880-040C	171	880-420C	172	881-160P	165	882-060CP	172	883-005CP	173	883-150C	173
880-040CP	171	880-420CP	172	881-170	165	882-060M	171	883-005M	171	883-150CP	173
880-040M	171	880-420P	164	881-170C	172	882-060P	165	883-005P	165	883-150P	165
880-040P	164	880-480	164	881-170CP	172	882-060UV	37	883-015	165	883-160	166
880-045	164	880-480C	172	881-170P	165	882-070	165	883-015C	173	883-160C	173
880-045C	171	880-480CP	172	881-180	165	882-070C	172	883-015CP	173	883-160CP	173
880-045CP	171	880-480P	164	881-180C	172	882-070CP	172	883-015M	171	883-160P	166
880-045P	164	881-005	164	881-180CP	172	882-070M	171	883-015P	165	883-170	166
880-050	164	881-005C	172	881-180P	165	882-070P	165	883-020	165	883-170C	173
880-050C	171	881-005CP	172	881-190	165	882-080	165	883-020C	173	883-170CP	173
880-050CP	171	881-005P	164	881-190C	172	882-080C	172	883-020CP	173	883-170P	166
880-050M	171	881-015	164	881-190CP	172	882-080CP	172	883-020M	171	883-180	166
880-050P	164	881-015C	172	881-190P	165	882-080M	171	883-020P	165	883-180C	173
880-055	164	881-015CP	172	881-200	165	882-080P	165	883-025	165	883-180CP	173
880-055C	172	881-015M	171	881-200C	172	882-080UV	37	883-025C	173	883-180P	166
880-055CP	172	881-015P	164	881-200CP	172	882-090	165	883-025CP	173	883-190	166
880-055P	164	881-020	164	881-200P	165	882-090C	172	883-025M	171	883-190C	173
880-060	164	881-020C	172	881-220	165	882-090CP	172	883-025P	165	883-190CP	173
880-060C	172	881-020CP	172	881-220C	172	882-090P	165	883-030	165	883-190P	166
880-060CP	172	881-020M	171	881-220CP	172	882-100	165	883-030C	173	883-200	166
880-060P	164	881-020P	164	881-220P	165	882-100C	172	883-030CM	178	883-200C	173
880-070	164	881-025	164	881-240	165	882-100CP	172	883-030CP	173	883-200CP	173
880-070C	172	881-025C	172	881-240C	172	882-100M	171	883-030M	171	883-200P	166
880-070CP	172	881-025CP	172	881-240CP	172	882-100P	165	883-030P	165	883-220	166
880-070P	164	881-025P	164	881-240P	165	882-100UV	37	883-035	165	883-220C	173
880-080	164	881-030	164	881-300	165	882-101	171	883-035C	173	883-220CP	173
880-080C	172	881-030C	172	881-300C	172	882-110	165	883-035CP	173	883-220P	166
880-080CP	172	881-030CP	172	881-300CP	172	882-110C	172	883-035M	171	883-240	166
880-080P	164	881-030M	171	881-300P	165	882-110CP	172	883-035P	165	883-240C	173
880-090	164	881-030P	164	881-360	165	882-110P	165	883-040	165	883-240CP	173
880-090C	172	881-035	164	881-360C	172	882-120	165	883-040C	173	883-240P	166
880-090CP	172	881-035C	172	881-360CP	172	882-120C	172	883-040CP	173	883-300	166
880-090P	164	881-035CP	172	881-360P	165	882-120CP	172	883-040M	171	883-300C	173
880-100	164	881-035P	164	881-420	165	882-120M	171	883-040P	165	883-300CP	173
880-100C	172	881-040	164	881-420C	172	882-120P	165	883-045	165	883-300P	166
880-100CP	172	881-040C	172	881-420CP	172	882-120UV	37	883-045C	173	883-360	166



Spears List Price Part Number Index

883-360C	173	884-140	166	885-060CP	174	886-025	167	886-180CP	174	887-080P	167
883-360CP	173	884-140C	173	885-060M	171	886-025C	174	886-180P	167	887-090	167
883-360P	166	884-140CP	173	885-060P	166	886-025CP	174	886-190	167	887-090C	175
883-420	166	884-140P	166	885-070	166	886-025P	167	886-190C	174	887-090CP	175
883-420C	173	884-150	166	885-070C	174	886-030	167	886-190CP	174	887-090P	167
883-420CP	173	884-150C	173	885-070CP	174	886-030C	174	886-190P	167	887-100	167
883-420P	166	884-150CP	173	885-070P	166	886-030CP	174	886-200	167	887-100C	175
883-480	166	884-150P	166	885-080	166	886-030GG	178	886-200C	174	887-100CP	175
883-480C	173	884-160	166	885-080C	174	886-030M	171	886-200CP	174	887-100P	167
883-480CP	173	884-160C	173	885-080CP	174	886-030P	167	886-200P	167	887-110	167
883-480P	166	884-160CP	173	885-080P	166	886-030PG	178	886-220	167	887-110C	175
884-005	166	884-160P	166	885-090	166	886-030TG	178	886-220C	174	887-110CP	175
884-005C	173	884-170	166	885-090C	174	886-035	167	886-220CP	174	887-110P	167
884-005CM	178	884-170C	173	885-090CP	174	886-035C	174	886-220P	167	887-120	167
884-005CP	173	884-170CP	173	885-090P	166	886-035CP	174	886-240	167	887-120C	175
884-005M	171	884-170P	166	885-100	166	886-035P	167	886-240C	174	887-120CP	175
884-005P	166	884-180	166	885-100C	174	886-040	167	886-240CP	174	887-120P	167
884-015	166	884-180C	173	885-100CP	174	886-040C	174	886-240P	167	887-130	167
884-015P	166	884-180CP	173	885-100P	166	886-040CP	174	886-300	167	887-130C	175
884-020	166	884-180P	166	885-110	166	886-040GG	178	886-300C	174	887-130CP	175
884-020C	173	884-190	166	885-110C	174	886-040M	171	886-300CP	174	887-130P	167
884-020CM	178	884-190C	173	885-110CP	174	886-040P	167	886-300P	167	887-140	167
884-020CP	173	884-190CP	173	885-110P	166	886-040PG	178	886-360	167	887-140C	175
884-020M	171	884-190P	166	885-120	166	886-040TG	178	886-360C	174	887-140CP	175
884-020P	166	884-200	166	885-120C	174	886-045	167	886-360CP	174	887-140P	167
884-025	166	884-200C	173	885-120CP	174	886-045C	174	886-360P	167	887-150	167
884-025C	173	884-200CP	173	885-120M	171	886-045CP	174	886-420	167	887-150C	175
884-025CP	173	884-200P	166	885-120P	166	886-045P	167	886-420C	174	887-150CP	175
884-025M	171	884-220	166	885-130	166	886-050	167	886-420CP	174	887-150P	167
884-025P	166	884-220C	173	885-130C	174	886-050C	174	886-420P	167	887-160	167
884-030	166	884-220CP	173	885-130CP	174	886-050CP	174	886-480	167	887-160C	175
884-030C	173	884-220P	166	885-130P	166	886-050P	167	886-480C	174	887-160CP	175
884-030CP	173	884-240	166	885-140	166	886-055	167	886-480CP	174	887-160P	167
884-030M	171	884-240C	173	885-140C	174	886-055C	174	886-480P	167	887-170	167
884-030P	166	884-240CP	173	885-140CP	174	886-055CP	174	887-005	167	887-170C	175
884-035	166	884-240P	166	885-140P	166	886-055P	167	887-005C	174	887-170CP	175
884-035C	173	884-300	166	885-150	166	886-060	167	887-005CP	174	887-170P	167
884-035CP	173	884-300C	173	885-150C	174	886-060C	174	887-005M	171	887-180	167
884-035P	166	884-300CP	173	885-150CP	174	886-060CP	174	887-005P	167	887-180C	175
884-040	166	884-300P	166	885-150P	166	886-060GG	178	887-020	167	887-180CP	175
884-040C	173	884-360	166	885-160	166	886-060M	171	887-020C	174	887-180P	167
884-040CP	173	884-360C	173	885-160C	174	886-060P	167	887-020CP	174	887-190	167
884-040M	171	884-360CP	173	885-160CP	174	886-060PG	178	887-020P	167	887-190C	175
884-040P	166	884-360P	166	885-160P	166	886-060TG	178	887-025	167	887-190CP	175
884-045	166	884-420	166	885-170	166	886-070	167	887-025C	174	887-190P	167
884-045C	173	884-420C	173	885-170C	174	886-070C	174	887-025CP	174	887-200	167
884-045CP	173	884-420CP	173	885-170CP	174	886-070CP	174	887-025P	167	887-200C	175
884-045P	166	884-420P	166	885-170P	166	886-070M	171	887-030	167	887-200CP	175
884-050	166	884-480	166	885-180	166	886-070P	167	887-030C	174	887-200P	167
884-050C	173	884-480C	174	885-180C	174	886-080	167	887-030CP	174	887-220	167
884-050CP	173	884-480CP	174	885-180CP	174	886-080C	174	887-030GG	178	887-220C	175
884-050M	171	884-480P	166	885-180P	166	886-080CP	174	887-030M	171	887-220CP	175
884-050P	166	885-005	166	885-190	166	886-080M	171	887-030P	167	887-220P	167
884-055	166	885-005C	174	885-190C	174	886-080P	167	887-030PG	178	887-240	167
884-055C	173	885-005CP	174	885-190CP	174	886-090	167	887-030TG	178	887-240C	175
884-055CP	173	885-005M	171	885-190P	166	886-090C	174	887-035	167	887-240CP	175
884-055P	166	885-005P	166	885-200	166	886-090CP	174	887-035C	174	887-240P	167
884-060	166	885-020	166	885-200C	174	886-090P	167	887-035CP	174	887-300	167
884-060C	173	885-020C	174	885-200CP	174	886-100	167	887-035P	167	887-300C	175
884-060CP	173	885-020CP	174	885-200P	166	886-100C	174	887-040	167	887-300CP	175
884-060M	171	885-020M	171	885-220	166	886-100CP	174	887-040C	174	887-300P	167
884-060P	166	885-020P	166	885-220C	174	886-100M	171	887-040CP	174	887-360	167
884-070	166	885-025	166	885-220CP	174	886-100P	167	887-040GG	178	887-360C	175
884-070C	173	885-025C	174	885-220P	166	886-110	167	887-040M	171	887-360CP	175
884-070CP	173	885-025CP	174	885-240	166	886-110C	174	887-040P	167	887-360P	167
884-070P	166	885-025P	166	885-240C	174	886-110CP	174	887-040PG	178	887-420	167
884-080	166, 166	885-030	166	885-240CP	174	886-110P	167	887-040TG	178	887-420C	175
884-080C	173	885-030C	174	885-240P	166	886-120	167	887-045	167	887-420CP	175
884-080CP	173	885-030CP	174	885-300	166	886-120C	174	887-045C	174	887-420P	167
884-080M	171	885-030M	171	885-300C	174	886-120CP	174	887-045CP	174	887-480	167
884-090	166	885-030P	166	885-300CP	174	886-120M	171	887-045P	167	887-480C	175
884-090C	173	885-035	166	885-300P	166	886-120P	167	887-050	167	887-480CP	175
884-090CP	173	885-035C	174	885-360	166	886-130	167	887-050C	174	887-480P	167
884-090P	166	885-035CP	174	885-360C	174	886-130C	174	887-050CP	174	888-005	167
884-100	166	885-035P	166	885-360CP	174	886-130CP	174	887-050P	167	888-005C	175
884-100C	173	885-040	166	885-360P	166	886-130P	167	887-055	167	888-005CP	175
884-100CP	173	885-040C	174	885-420	166	886-140	167	887-055C	174	888-005P	167
884-100M	171	885-040CP	174	885-420C	174	886-140C	174	887-055CP	174	888-025	167
884-100P	166	885-040M	171	885-420CP	174	886-140CP	174	887-055P	167	888-025P	167
884-110	166	885-040P	166	885-420P	166	886-140P	167	887-060	167	888-030	167
884-110C	173	885-045	166	885-480	166	886-150	167	887-060C	174	888-030C	175
884-110CP	173	885-045C	174	885-480C	174	886-150C	174	887-060CP	174	888-030CP	175
884-110P	166	885-045CP	174	885-480CP	174	886-150CP	174	887-060GG	178	888-030P	167
884-120	166	885-045P	166	885-480P	166	886-150P	167	887-060M	171	888-035	167
884-120C	173	885-050	166	886-005	167	886-160	167	887-060P	167	888-035C	175
884-120CP	173	885-050C	174	886-005C	174	886-160C	174	887-060PG	178	888-035CP	175
884-120M	171	885-050CP	174	886-005CP	174	886-160CP	174	887-060TG	178	888-035P	167
884-120P	166	885-050P	166	886-005M	171	886-160P	167	887-070	167	888-040	167
884-130	166	885-055	166	886-005P	167	886-170	167	887-070C	174	888-040C	175
884-130C	173	885-055C	174	886-020	167	886-170C	174	887-070CP	174	888-040CP	175
884-130CP	173	885-055CP	174	886-020C	174	886-170CP	174	887-070P	167	888-040P	167
884-130P	166	885-055P	166	886-020CP	174	886-170P	167	887-080	167	888-045	167
884-130R	171	885-060	166	886-020M	171	886-180	167	887-080C	175	888-045C	175
884-131	171	885-060C	174	886-020P	167	886-180C	174	887-080CP	175	888-045CP	175

Spears List Price Part Number Index



888-045P	167	889-005C	175	889-200CP	175	890-130C	176	892-080	169	893-060CP	176
888-050	167	889-005CP	175	889-200P	168	890-130CP	176	892-080C	176	893-060P	169
888-050C	175	889-005P	168	889-220	168	890-130P	168	892-080CP	176	893-070	169
888-050CP	175	889-030	168	889-220C	175	890-140	168	892-080P	169	893-070C	176
888-050P	167	889-030C	175	889-220CP	175	890-140C	176	892-090	169	893-070CP	176
888-055	167	889-030CP	175	889-220P	168	890-140CP	176	892-090C	176	893-070P	169
888-055C	175	889-030GG	178	889-240	168	890-140P	168	892-090CP	176	893-080	169
888-055CP	175	889-030P	168	889-240C	175	890-150	168	892-090P	169	893-080C	176
888-055P	167	889-030PG	178	889-240CP	175	890-150C	176	892-100	169	893-080CP	176
888-060	167	889-030TG	178	889-240P	168	890-150CP	176	892-100C	176	893-080P	169
888-060C	175	889-035	168	889-300	168	890-150P	168	892-100CP	176	893-090	169
888-060CP	175	889-035C	175	889-300C	175	890-160	168	892-100P	169	893-090C	176
888-060P	167	889-035CP	175	889-300CP	175	890-160C	176	892-110	169	893-090CP	176
888-070	167	889-035P	168	889-300P	168	890-160CP	176	892-110C	176	893-090P	169
888-070C	175	889-040	168	889-360	168	890-160P	168	892-110CP	176	893-100	169
888-070CP	175	889-040C	175	889-360C	176	890-170	168	892-110P	169	893-100C	176
888-070P	167	889-040CP	175	889-360CP	176	890-170C	176	892-120	169	893-100CP	176
888-080	167	889-040GG	178	889-360P	168	890-170CP	176	892-120C	176	893-100P	169
888-080C	175	889-040P	168	889-420	168	890-170P	168	892-120CP	176	893-110	169
888-080CP	175	889-040PG	178	889-420C	176	890-180	168	892-120P	169	893-110C	176
888-080P	167	889-040TG	178	889-420CP	176	890-180C	176	892-130	169	893-110CP	176
888-090	167	889-045	168	889-420P	168	890-180CP	176	892-130C	176	893-110P	169
888-090C	175	889-045C	175	889-480	168	890-180P	168	892-130CP	176	893-120	169
888-090CP	175	889-045CP	175	889-480C	176	890-190	168	892-130P	169	893-120C	176
888-090P	167	889-045P	168	889-480CP	176	890-190C	176	892-140	169	893-120CP	176
888-100	168	889-050	168	889-480P	168	890-190CP	176	892-140C	176	893-120P	169
888-100C	175	889-050C	175	890-005	168	890-190P	168	892-140CP	176	893-130	169
888-100CP	175	889-050CP	175	890-005C	176	890-200	168	892-140P	169	893-130C	176
888-100P	168	889-050P	168	890-005CP	176	890-200C	176	892-150	169	893-130CP	176
888-110	168	889-055	168	890-005P	168	890-200CP	176	892-150C	176	893-130P	169
888-110C	175	889-055C	175	890-025	168	890-200P	168	892-150CP	176	893-140	169
888-110CP	175	889-055CP	175	890-025P	168	890-220	168	892-150P	169	893-140C	176
888-110P	168	889-055P	168	890-030	168	890-220C	176	892-160	169	893-140CP	176
888-120	168	889-060	168	890-030C	176	890-220CP	176	892-160C	176	893-140P	169
888-120C	175	889-060C	175	890-030CP	176	890-220P	168	892-160CP	176	893-150	169
888-120CP	175	889-060CP	175	890-030GG	178	890-240	168	892-160P	169	893-150C	176
888-120P	168	889-060GG	178	890-030P	168	890-240C	176	892-170	169	893-150CP	176
888-130	168	889-060P	168	890-030PG	178	890-240CP	176	892-170C	176	893-150P	169
888-130C	175	889-060PG	178	890-030TG	178	890-240P	168	892-170CP	176	893-160	169
888-130CP	175	889-060TG	178	890-035	168	890-300	168	892-170P	169	893-160C	177
888-130P	168	889-070	168	890-035C	176	890-300C	176	892-180	169	893-160CP	177
888-140	168	889-070C	175	890-035CP	176	890-300CP	176	892-180C	176	893-160P	169
888-140C	175	889-070CP	175	890-035P	168	890-300P	168	892-180CP	176	893-170	169
888-140CP	175	889-070P	168	890-040	168	890-360	168	892-180P	169	893-170C	177
888-140P	168	889-080	168	890-040C	176	890-360C	176	892-190	169	893-170CP	177
888-150	168	889-080C	175	890-040CP	176	890-360CP	176	892-190C	176	893-170P	169
888-150C	175	889-080CP	175	890-040GG	178	890-360P	168	892-190CP	176	893-180	169
888-150CP	175	889-080P	168	890-040P	168	890-420	169	892-190P	169	893-180C	177
888-150P	168	889-090	168	890-040PG	178	890-420C	176	892-200	169	893-180CP	177
888-160	168	889-090C	175	890-040TG	178	890-420CP	176	892-200C	176	893-180P	169
888-160C	175	889-090CP	175	890-045	168	890-420P	169	892-200CP	176	893-190	169
888-160CP	175	889-090P	168	890-045C	176	890-480	169	892-200P	169	893-190C	177
888-160P	168	889-100	168	890-045CP	176	890-480C	176	892-220	169	893-190CP	177
888-170	168	889-100C	175	890-045P	168	890-480CP	176	892-220C	176	893-190P	169
888-170C	175	889-100CP	175	890-050	168	890-480P	169	892-220CP	176	893-200	169
888-170CP	175	889-100P	168	890-050C	176	892-005	169	892-220P	169	893-200C	177
888-170P	168	889-110	168	890-050CP	176	892-005C	176	892-240	169	893-200CP	177
888-180	168	889-110C	175	890-050P	168	892-005CP	176	892-240C	176	893-200P	169
888-180C	175	889-110CP	175	890-055	168	892-005P	169	892-240CP	176	893-220	169
888-180CP	175	889-110P	168	890-055C	176	892-030C	176	892-240P	169	893-220C	177
888-180P	168	889-120	168	890-055CP	176	892-030CP	176	892-300	169	893-220CP	177
888-190	168	889-120C	175	890-055P	168	892-030GG	178	892-300C	176	893-220P	169
888-190C	175	889-120CP	175	890-060	168	892-030PG	178	892-300CP	176	893-240	169
888-190CP	175	889-120P	168	890-060C	176	892-030TG	178	892-300P	169	893-240C	177
888-190P	168	889-130	168	890-060CP	176	892-040	169	892-360	169	893-240CP	177
888-200	168	889-130C	175	890-060GG	178	892-040C	176	892-360C	176	893-240P	169
888-200C	175	889-130CP	175	890-060P	168	892-040CP	176	892-360CP	176	893-300	169
888-200CP	175	889-130P	168	890-060PG	178	892-040GG	178	892-360P	169	893-300C	177
888-200P	168	889-140	168	890-060TG	178	892-040P	169	892-420	169	893-300CP	177
888-220	168	889-140C	175	890-070	168	892-040PG	178	892-420C	176	893-300P	169
888-220C	175	889-140CP	175	890-070C	176	892-040TG	178	892-420CP	176	893-360	169
888-220CP	175	889-140P	168	890-070CP	176	892-045	169	892-420P	169	893-360C	177
888-220P	168	889-150	168	890-070P	168	892-045C	176	892-480	169	893-360CP	177
888-240	168	889-150C	175	890-080	168	892-045CP	176	892-480C	176	893-360P	169
888-240C	175	889-150CP	175	890-080C	176	892-045P	169	892-480CP	176	893-420	169
888-240CP	175	889-150P	168	890-080CP	176	892-050	169	892-480P	169	893-420C	177
888-240P	168	889-160	168	890-080P	168	892-050C	176	893-005	169	893-420CP	177
888-300	168	889-160C	175	890-090	168	892-050CP	176	893-005C	176	893-420P	169
888-300C	175	889-160CP	175	890-090C	176	892-050P	169	893-005CP	176	893-480	169
888-300CP	175	889-160P	168	890-090CP	176	892-055	169	893-005P	169	893-480C	177
888-300P	168	889-170	168	890-090P	168	892-055C	176	893-045	169	893-480CP	177
888-360	168	889-170C	175	890-100	168	892-055CP	176	893-045C	176	893-480P	169
888-360C	175	889-170CP	175	890-100C	176	892-055P	169	893-045CP	176	894-005	169
888-360CP	175	889-170P	168	890-100CP	176	892-060	169	893-045P	169	894-005C	177
888-360P	168	889-180	168	890-100P	168	892-060C	176	893-050	169	894-005CP	177
888-420	168	889-180C	175	890-110	168	892-060CP	176	893-050C	176	894-005P	169
888-420C	175	889-180CP	175	890-110C	176	892-060GG	178	893-050CP	176	894-020	169
888-420CP	175	889-180P	168	890-110CP	176	892-060P	169	893-050P	169	894-020P	169
888-420P	168	889-190	168	890-110P	168	892-060PG	178	893-055	169	894-045	169
888-480	168	889-190C	175	890-120	168	892-060TG	178	893-055C	176	894-045C	177
888-480C	175	889-190CP	175	890-120C	176	892-070	169	893-055CP	176	894-045CP	177
888-480CP	175	889-190P	168	890-120CP	176	892-070C	176	893-055P	169	894-045P	169
888-480P	168	889-200	168	890-120P	168	892-070CP	176	893-060	169	894-050	169
889-005	168	889-200C	175	890-130	168	892-070P	169	893-060C	176	894-050C	177



Spears List Price Part Number Index

894-050CP	177	895-050	170	897-003	200	899-040	202	91151J100-005	496	91232A101-015	487
894-050P	169	895-050C	177	897-003C	289	899-040C	291	91151J100-007	496	91232A101-020	487
894-055	169	895-050CP	177	897-005	201	899-040CSR	291, 358	91151J100-010	496	91232H100-005	497
894-055C	177	895-050P	170	897-005BL	570	899-040SR	202, 353	91151J100-012	496	91232H100-007	497
894-055CP	177	895-055	170	897-005C	290	91121A101-005	486	91151J100-015	496	91232H100-010	497
894-055P	169	895-055C	177	897-007	201	91121A101-007	486	91151J100-020	496	91232H100-012	498
894-060	169	895-055CP	177	897-007BL	570	91121A101-010	486	91151J850-005	490	91232H100-015	498
894-060C	177	895-055P	170	897-007C	290	91121A101-012	486	91151J850-007	490	91232H100-020	498
894-060CP	177	895-060	170	897-010	201	91121A101-015	486	91151J850-010	490	91232H850-005	491
894-060P	169	895-060C	177	897-010BL	570	91121A101-020	486	91151J850-012	490	91232H850-007	491
894-070	169	895-060CP	177	897-010C	290	91121H100-005	495	91151J850-015	490	91232H850-010	491
894-070C	177	895-060P	170	897-012	201	91121H100-007	495	91151J850-020	490	91232H850-012	491
894-070CP	177	895-070	170	897-012BL	570	91121H100-010	495	91151K850-005	490	91232H850-015	492
894-070P	169	895-070C	177	897-012C	291	91121H100-012	495	91151K850-007	490	91232H850-020	492
894-080	169	895-070CP	177	897-015	201	91121H100-015	495	91151K850-010	490	91232J100-005	497
894-080C	177	895-070P	170	897-015BL	570	91121H100-020	495	91151K850-012	490	91232J100-007	497
894-080CP	177	895-080	170	897-015C	291	91121H850-005	489	91151K850-015	490	91232J100-010	498
894-080P	169	895-080C	177	897-020	201	91121H850-007	489	91151K850-020	490	91232J100-012	498
894-090	169	895-080CP	177	897-020BL	570	91121H850-010	489	91152A101-005	487	91232J100-015	498
894-090C	177	895-080P	170	897-020C	291	91121H850-012	489	91152A101-007	487	91232J100-020	498
894-090CP	177	895-090	170	897-025	201	91121H850-015	489	91152A101-010	487	91232J850-005	492
894-090P	169	895-090C	177	897-025C	291	91121H850-020	489	91152A101-012	487	91232J850-007	492
894-100	169	895-090CP	177	897-030	201	91121J100-005	495	91152A101-015	487	91232J850-010	492
894-100C	177	895-090P	170	897-030C	291	91121J100-007	495	91152A101-020	487	91232J850-012	492
894-100CP	177	895-100	170	897-040	201	91121J100-010	495	91152H100-005	498	91232J850-015	492
894-100P	169	895-100C	177	897-040C	291	91121J100-012	495	91152H100-007	498	91232J850-020	492
894-110	169	895-100CP	177	898-002	201	91121J100-015	495	91152H100-010	498	91232K850-005	492
894-110C	177	895-100P	170	898-002C	290	91121J100-020	495	91152H100-012	498	91232K850-007	492
894-110CP	177	895-110	170	898-003	201	91121J850-005	489	91152H100-015	498	91232K850-010	492
894-110P	169	895-110C	177	898-003C	290	91121J850-007	489	91152H100-020	498	91232K850-012	492
894-120	169	895-110CP	177	898-005	202	91121J850-010	489	91152H850-005	492	91232K850-015	492
894-120C	177	895-110P	170	898-005C	291	91121J850-012	489	91152H850-007	492	91232K850-020	492
894-120CP	177	895-120	170	898-007	202	91121J850-015	489	91152H850-010	492	91251A101-005	486
894-120P	169	895-120C	177	898-007C	291	91121J850-020	489	91152H850-012	492	91251A101-007	486
894-130	169	895-120CP	177	898-010	202	91121K850-005	489	91152H850-015	492	91251A101-010	486
894-130C	177	895-120P	170	898-010C	291	91121K850-007	489	91152H850-020	492	91251A101-012	486
894-130CP	177	895-130	170	898-012	202	91121K850-010	489	91152J100-005	498	91251A101-015	486
894-130P	169	895-130C	177	898-012C	291	91121K850-012	489	91152J100-007	498	91251A101-020	486
894-140	169	895-130CP	177	898-015	202	91121K850-015	489	91152J100-010	498	91251H100-005	496
894-140C	177	895-130P	170	898-015C	291	91121K850-020	489	91152J100-012	498	91251H100-007	496
894-140CP	177	895-140	170	898-020	202	91122A101-005	486	91152J100-015	498	91251H100-010	497
894-140P	169	895-140C	177	898-020C	291	91122A101-007	486	91152J100-020	498	91251H100-012	497
894-150	169	895-140CP	177	898-025	202	91122A101-010	486	91152J850-005	492	91251H100-015	497
894-150C	177	895-140P	170	898-025C	291	91122A101-012	487	91152J850-007	492	91251H100-020	497
894-150CP	177	895-150	170	898-030	202	91122A101-015	487	91152J850-010	492	91251H850-005	490
894-150P	169	895-150C	177	898-030C	291	91122A101-020	487	91152J850-012	492	91251H850-007	490
894-160	169	895-150CP	177	898-040	202	91122H100-005	497	91152J850-015	492	91251H850-010	490
894-160C	177	895-150P	170	898-040C	291	91122H100-007	497	91152J850-020	492	91251H850-012	492
894-160CP	177	895-160	170	899-002	200	91122H100-010	497	91152K850-005	492	91251H850-015	490
894-160P	169	895-160C	177	899-002CSR	291, 358	91122H100-012	497	91152K850-007	492	91251H850-020	490
894-170	169	895-160CP	177	899-002SR	202, 353	91122H100-015	497	91152K850-010	492	91251J100-005	496
894-170C	177	895-160P	170	899-003	200	91122H100-020	497	91152K850-012	492	91251J100-007	497
894-170CP	177	895-170	170	899-003CSR	291, 358	91122H850-005	491	91152K850-015	492	91251J100-010	497
894-170P	169	895-170C	177	899-003SR	202, 353	91122H850-007	491	91152K850-020	492	91251J100-012	497
894-180	169	895-170CP	177	899-005	201	91122H850-010	491	91231A101-005	486	91251J100-015	497
894-180C	177	895-170P	170	899-005C	291	91122H850-012	491	91231A101-007	486	91251J100-020	497
894-180CP	177	895-180	170	899-005CSR	291, 358	91122H850-015	491	91231A101-010	486	91251J850-005	491
894-180P	169	895-180C	177	899-005SR	202, 353	91122H850-020	491	91231A101-012	486	91251J850-007	491
894-190	169	895-180CP	177	899-007	201	91122J100-005	497	91231A101-015	486	91251J850-010	491
894-190C	177	895-180P	170	899-007BR	202, 355	91122J100-007	497	91231A101-020	486	91251J850-012	491
894-190CP	177	895-190	170	899-007C	291	91122J100-010	497	91231H100-005	495	91251J850-015	491
894-190P	169	895-190C	177	899-007CBR	291, 360	91122J100-012	497	91231H100-007	495	91251J850-020	491
894-200	170	895-190CP	177	899-007CSR	291, 358	91122J100-015	497	91231H100-010	495	91251K850-005	491
894-200C	177	895-190P	170	899-007SR	202, 353	91122J100-020	497	91231H100-012	495	91251K850-007	491
894-200CP	177	895-200	170	899-010	201	91122J850-005	491	91231H100-015	496	91251K850-010	491
894-200P	170	895-200C	177	899-010BR	202, 355	91122J850-007	491	91231H100-020	496	91251K850-012	491
894-220	170	895-200CP	177	899-010C	291	91122J850-010	491	91231H850-005	489	91251K850-015	491
894-220C	177	895-200P	170	899-010CBR	291, 360	91122J850-012	491	91231H850-007	489	91251K850-020	491
894-220CP	177	895-220	170	899-010CSR	291, 358	91122J850-015	491	91231H850-010	489	91252A101-005	487
894-220P	170	895-220C	177	899-010SR	202, 353	91122J850-020	491	91231H850-012	489	91252A101-007	487
894-240	170	895-220CP	177	899-012	201	91122K850-005	491	91231H850-015	489	91252A101-010	487
894-240C	177	895-220P	170	899-012BR	202, 355	91122K850-007	491	91231H850-020	489	91252A101-012	487
894-240CP	177	895-240	170	899-012C	291	91122K850-010	491	91231J100-005	495	91252A101-015	487
894-240P	170	895-240C	177	899-012CBR	291, 360	91122K850-012	491	91231J100-007	495	91252A101-020	487
894-300	170	895-240CP	177	899-012CSR	291, 358	91122K850-015	491	91231J100-010	495	91252H100-005	499
894-300C	177	895-240P	170	899-012SR	202, 353	91122K850-020	491	91231J100-012	496	91252H100-007	499
894-300CP	177	895-300	170	899-015	202	91151A101-005	486	91231J100-015	496	91252H100-010	499
894-300P	170	895-300C	177	899-015BR	202, 355	91151A101-007	486	91231J100-020	496	91252H100-012	499
894-360	170	895-300CP	177	899-015C	291	91151A101-010	486	91231J850-005	489	91252H100-015	499
894-360C	177	895-300P	170	899-015CBR	291, 360	91151A101-012	486	91231J850-007	489	91252H100-020	499
894-360CP	177	895-360	170	899-015CSR	291, 358	91151A101-015	486	91231J850-010	490	91252H850-005	492
894-360P	170	895-360C	177	899-015SR	202, 353	91151A101-020	486	91231J850-012	490	91252H850-007	492
894-420	170	895-360CP	177	899-020	202	91151H100-005	496	91231J850-015	490	91252H850-010	493
894-420C	177	895-360P	170	899-020BR	202, 355	91151H100-007	496	91231J850-020	490	91252H850-012	493
894-420CP	177	895-420	170	899-020C	291						



Spears List Price Part Number Index

94032H850-010	491	95021A101-005	486	95023H100-025	500	95032K850-015	492	95052J850-020	492
94032H850-012	491	95021A101-007	486	95023H100-030	500	95032K850-020	492	95052K850-005	492
94032H850-015	492	95021A101-010	486	95023H100-040	500	95033A101-025	488	95052K850-007	492
94032H850-020	492	95021A101-012	486	95023J100-025	500	95033A101-030	488	95052K850-010	492
94032J100-005	497	95021A101-015	486	95023J100-030	500	95033A101-040	488	95052K850-012	492
94032J100-007	497	95021A101-020	486	95023J100-040	500	95033H100-025	500	95052K850-015	492
94032J100-010	498	95021A101-025	486	95031A101-005	486	95033H100-030	500	95052K850-020	492
94032J100-012	498	95021A101-030	486	95031A101-007	486	95033H100-040	500	95053A101-025	488
94032J100-015	498	95021A101-040	486	95031A101-010	486	95033J100-025	500	95053A101-030	488
94032J100-020	498	95021H100-005	495	95031A101-012	486	95033J100-030	500	95053A101-040	488
94032J850-005	492	95021H100-007	495	95031A101-015	486	95033J100-040	500	95053H100-025	500
94032J850-007	492	95021H100-010	495	95031A101-020	486	95051A101-005	486	95053H100-030	500
94032J850-010	492	95021H100-012	495	95031A101-025	486	95051A101-007	486	95053H100-040	500
94032J850-012	492	95021H100-015	495	95031A101-030	486	95051A101-010	486	95053J100-025	500
94032J850-015	492	95021H100-020	495	95031A101-040	486	95051A101-012	486	95053J100-030	500
94032J850-020	492	95021H100-025	495	95031H100-005	495	95051A101-015	486	95053J100-040	500
94032K850-005	492	95021H100-030	495	95031H100-007	495	95051A101-020	486		
94032K850-007	492	95021H100-040	495	95031H100-010	495	95051A101-025	486		
94032K850-010	492	95021H850-005	489	95031H100-012	495	95051A101-030	486		
94032K850-012	492	95021H850-007	489	95031H100-015	496	95051A101-040	486		
94032K850-015	492	95021H850-010	489	95031H100-020	496	95051H100-005	496		
94032K850-020	492	95021H850-012	489	95031H100-025	496	95051H100-007	496		
94051A101-005	486	95021H850-015	489	95031H100-030	496	95051H100-010	496		
94051A101-007	486	95021H850-020	489	95031H100-040	496	95051H100-012	496		
94051A101-010	486	95021J100-005	495	95031H850-005	489	95051H100-015	496		
94051A101-012	486	95021J100-007	495	95031H850-007	489	95051H100-020	496		
94051A101-015	486	95021J100-010	495	95031H850-010	489	95051H100-025	496		
94051A101-020	486	95021J100-012	495	95031H850-012	489	95051H100-030	496		
94051H100-005	496	95021J100-015	495	95031H850-015	489	95051H100-040	496		
94051H100-007	496	95021J100-020	495	95031H850-020	489	95051H850-005	490		
94051H100-010	496	95021J100-025	495	95031J100-005	495	95051H850-007	490		
94051H100-012	496	95021J100-030	495	95031J100-007	495	95051H850-010	490		
94051H100-015	496	95021J100-040	495	95031J100-010	495	95051H850-012	490		
94051H100-020	496	95021J100-060	495	95031J100-012	496	95051H850-015	490		
94051H850-005	490	95021J850-005	489	95031J100-015	496	95051H850-020	490		
94051H850-007	490	95021J850-007	489	95031J100-020	496	95051J100-005	496		
94051H850-010	490	95021J850-010	489	95031J100-025	496	95051J100-007	496		
94051H850-012	490	95021J850-012	489	95031J100-030	496	95051J100-010	496		
94051H850-015	490	95021J850-015	489	95031J100-040	496	95051J100-012	496		
94051H850-020	490	95021J850-020	489	95031J850-005	489	95051J100-015	496		
94051J100-005	496	95021K850-005	489	95031J850-007	489	95051J100-020	496		
94051J100-007	496	95021K850-007	489	95031J850-010	490	95051J100-025	496		
94051J100-010	496	95021K850-010	489	95031J850-012	490	95051J100-030	496		
94051J100-012	496	95021K850-012	489	95031J850-015	490	95051J100-040	496		
94051J100-015	496	95021K850-015	489	95031J850-020	490	95051J850-005	490		
94051J100-020	496	95021K850-020	489	95031K850-005	490	95051J850-007	490		
94051J850-005	490	95022A101-005	486	95031K850-007	490	95051J850-010	490		
94051J850-007	490	95022A101-007	486	95031K850-010	490	95051J850-012	490		
94051J850-010	490	95022A101-010	486	95031K850-012	490	95051J850-015	490		
94051J850-012	490	95022A101-012	487	95031K850-015	490	95051J850-020	490		
94051J850-015	490	95022A101-015	487	95031K850-020	490	95051K850-005	490		
94051J850-020	490	95022A101-020	487	95032A101-005	486	95051K850-007	490		
94051K850-005	490	95022A101-025	487	95032A101-007	486	95051K850-010	490		
94051K850-007	490	95022A101-030	487	95032A101-010	486	95051K850-012	490		
94051K850-010	490	95022A101-040	487	95032A101-012	487	95051K850-015	490		
94051K850-012	490	95022H100-005	497	95032A101-015	487	95051K850-020	490		
94051K850-015	490	95022H100-007	497	95032A101-020	487	95052A101-005	487		
94051K850-020	490	95022H100-010	497	95032A101-025	487	95052A101-007	487		
94052A101-005	487	95022H100-012	497	95032A101-030	487	95052A101-010	487		
94052A101-007	487	95022H100-015	497	95032A101-040	487	95052A101-012	487		
94052A101-010	487	95022H100-020	497	95032H100-005	497	95052A101-015	487		
94052A101-012	487	95022H100-025	497	95032H100-007	497	95052A101-020	487		
94052A101-015	487	95022H100-030	497	95032H100-010	497	95052A101-025	487		
94052A101-020	487	95022H100-040	497	95032H100-012	498	95052A101-030	487		
94052H100-005	498	95022H850-005	491	95032H100-015	498	95052A101-040	487		
94052H100-007	498	95022H850-007	491	95032H100-020	498	95052H100-005	498		
94052H100-010	498	95022H850-010	491	95032H100-025	498	95052H100-007	498		
94052H100-012	498	95022H850-012	491	95032H100-030	498	95052H100-010	498		
94052H100-015	498	95022H850-015	491	95032H100-040	498	95052H100-012	498		
94052H100-020	498	95022H850-020	491	95032H850-005	491	95052H100-015	498		
94052H850-005	492	95022J100-005	497	95032H850-007	491	95052H100-020	498		
94052H850-007	492	95022J100-007	497	95032H850-010	491	95052H100-025	498		
94052H850-010	492	95022J100-010	497	95032H850-012	491	95052H100-030	498		
94052H850-012	492	95022J100-012	497	95032H850-015	492	95052H100-040	498		
94052H850-015	492	95022J100-015	497	95032H850-020	492	95052H850-005	492		
94052H850-020	492	95022J100-020	497	95032J100-005	497	95052H850-007	492		
94052J100-005	498	95022J100-025	497	95032J100-007	497	95052H850-010	492		
94052J100-007	498	95022J100-030	497	95032J100-010	498	95052H850-012	492		
94052J100-010	498	95022J100-040	497	95032J100-012	498	95052H850-015	492		
94052J100-012	498	95022J850-005	491	95032J100-015	498	95052H850-020	492		
94052J100-015	498	95022J850-007	491	95032J100-020	498	95052J100-005	498		
94052J100-020	498	95022J850-010	491	95032J100-025	498	95052J100-007	498		
94052J850-005	492	95022J850-012	491	95032J100-030	498	95052J100-010	498		
94052J850-007	492	95022J850-015	491	95032J100-040	498	95052J100-012	498		
94052J850-010	492	95022J850-020	491	95032J850-005	492	95052J100-015	498		
94052J850-012	492	95022K850-005	491	95032J850-007	492	95052J100-020	498		
94052J850-015	492	95022K850-007	491	95032J850-010	492	95052J100-025	498		
94052J850-020	492	95022K850-010	491	95032J850-012	492	95052J100-030	498		
94052K850-005	492	95022K850-012	491	95032J850-015	492	95052J100-040	498		
94052K850-007	492	95022K850-015	491	95032J850-020	492	95052J850-005	492		
94052K850-010	492	95022K850-020	491	95032K850-005	492	95052J850-007	492		
94052K850-012	492	95023A101-025	488	95032K850-007	492	95052J850-010	492		
94052K850-015	492	95023A101-030	488	95032K850-010	492	95052J850-012	492		
94052K850-020	492	95023A101-040	488	95032K850-012	492	95052J850-015	492		

TAB LOCATOR - PART II TECHNICAL INFORMATION CATALOG

Convenient "Tab Locator" page lets you quickly thumb to each category matching shaded tabs in the outer margin of each page.

Product Overview	811-015
PVC White Schedule 40 Fittings, Unions & Saddles	816-896
EverTUFF® TURF™ Fittings	897-902
PVC & PP Insert Fittings	903-923
PVC & CPVC Schedule 80 Fittings, Unions, Tank Adapters, Expansion Joints & Saddles	924-1015
Thermoplastic Flanges	1016-1034
Thermoplastic Valves & Actuated Valves & Accessories	1035-1211
PVC DWV	1212-1241
CTS CPVC Pipe, Fittings & Valves Design & Installion	1242-1276
Low-Extractable Piping for Ultra-Pure Water	1277-1292
LabWaste™ CPVC Corrosive Waste Drainage Systems	1293-1325
Double Containment Design & Installation	1326-1342
Plastic Pipe Engineering Guide	1343-1428
FlameGuard® CPVC Fire Sprinkler Piping Products	1429-1457
Appendices	A1-H1



Spears® Super Sourcebook - Part 2: Technical Information Catalog

TABLE OF CONTENTS

Product Overview 811

PVC White Schedule 40 Fittings, Unions, Saddles 816

Tees	820
Elbows	833
Crosses	847
Couplings	850
Adapters & Extensions	859
Bushings	865
IPT Adapter	871
Caps	872
Plugs	874
Unions	876
Saddles	878
Insert Adapters	890
Wyes	891

EverTUFF® TURF™ Turf & Irrigation 897

Tees	900
Elbows	900
Coupling	901
Adapters	902
Bushing	902

PVC & PP Insert Fittings 903

PVC Twist Lock Coupling	907
PVC Spiral Barb Tees	907
PP Spiral Barb 90° Elbow	907
PVC Spiral Barb Couplings	908
PP Spiral Barb Adapter	908
PVC Tees	909
PVC Elbows	913
PVC Tees	916
PVC Cross	916
PVC Coupling	917
PVC Adapters	918
PVC Plug	921
Insert Adapter 90° Elbow (PVC White)	922
Reducing Spigot Adapter (PVC White)	922
Spigot Adapter (PVC White)	923
Socket Adapter (PVC White)	923

PVC & CPVC Schedule 80 Fittings, Unions, Tank Adapters, Expansion Joints & Saddles 924

Tees	929
------	-----



Elbows	940
Crosses	953
Couplings	956
Adapters	964
Bushings	971
Caps	978
Plugs	980
Saddles	982
Wyes	990
Unions	995
Tank Adapters	1005
Expansion Joints	1013

Thermoplastic Flanges 1016

PVC & CPVC Injection Molded Class 150 Flanges	1020
Flanges One Piece	1021
Blind Flange	1023
Flanges Van Stone Style	1023
PVC & CPVC Fabricated IPS, PIP & Class 300 Flanges	1028
Flanges Van Stone Style PIP	1030
Blind Flange	1030
Flanges Van Stone Style IPS	1031
Flanges Van Stone Style Class 300	1032
Flanges Van Stone Style IPS	1033

Thermoplastic Valves & Actuated Valves & Accessories 1035

Thermoplastic Valves & Accessories	1035
Introduction to Spears® Valves	1036
Materials	1039
Standards	1043
True Union 2000 Ball Valves Overview	1044
True Union 2000 Industrial Ball Valves	1045
True Union 2000 Industrial 3-way Ball Valve	1047
True Union 2000 Industrial Tee-Style Ball Valve	1051
True Union 2000 Industrial Ball Check Valves	1055
True Union 2000 Standard Ball Valves	1057
True Union Ball Valves (Regular Style)	1059
True Union Ball Check Valves (Regular Style)	1061
Compact 2000 Ball Valves	1063
Compact Ball Valves	1065
Single Entry Ball Valves	1067
Utility Ball Valves	1069
CWV Ball Valves	1071
CTS 1/4 Turn Angle Supply Stop	1073
CTS Ball Valves	1074
Ball Valve Accessories	1075
Lab Ball Valves	1087
Needle Valves	1089
Plug Gate Valves	1091
Gate Valves	1093



Spears® Super Sourcebook - Part 2: Technical Information Catalog

TABLE OF CONTENTS

Globe Valves	1097
Y-Pattern Valves	1099
Wafer Butterfly Valves	1101
Butterfly Valves	1103
Diaphragm Valves	1117
Tee-Style "Zero Dead-leg" Diaphragm Valves	1122
Industrial Swing & Spring Check Valves	1124
Sump Pump Swing Check Valves	1133
Swing Check Ball Valves	1134
Quiet Check Valves	1135
Y-Check Valves	1137
Diaphragm Check Valves	1142
In-Line Adjustable Spring Check Valves	1143
Backwater Valves	1145
Y-Strainer Valves	1147
Gauge Guards	1150
Basket Strainers	1151
Suction Strainers	1153
T-Style Cartridge Filters	1155
General Installation	1157
Solvent Cement Welded Joints	1158
Threaded Connections	1160
Valve Service & Replacement Kits	1162
Ball Valve Troubleshooting Guide	1169
Actuated Thermoplastic Valves	1172
Actuated Thermoplastic Valves	1172
Spears® Actuated Valve Packages	1173
Electro Series Actuated Ball Valves	1174
Premium Actuated Valve Packages	1177
Electric Actuated True Union Ball Valves	1178
Pneumatic Actuated True Union Ball Valves	1179
Electric Actuated Butterfly Valves	1180
Pneumatic Actuated Butterfly Valves	1181
Electric Actuated Diaphragm Valves	1182
Pneumatic Actuator Options & Accessories For Ball Valves & Butterfly Valve	1190
Pneumatic Actuator Options & Accessories For Diaphragm Valves	1193
Actuation Terminology & Definitions	1196
Premium Actuated Valve Part Number Selection	1198
Custom Actuated Valve Questionnaires	1209
PVC DWV	1212
Coupling	1214
Adapter	1214
Pipe Increaser - Reducer	1214
Pipe Increaser - Eccentric Reducer	1215
Trap Adapters	1215
Cleanout Adapters	1216
Cleanout Plug	1217
Bushings	1217
Male Adaptor	1218
Plug	1218
Cap	1218



Adapter Coupling	1219
Adapter Bushing	1219
Adapters	1219
Repair Coupling	1220
Bends	1220
Ells	1224
Tees	1225
2-way Cleanout	1229
Double Fixture Fittings	1230
Wyes	1230
Return Bend	1236
Tail Piece Adapters	1236
P-Traps	1236
Closet Flanges	1237
Expansion Joints	1240
Sewer Disconnect	1240
PVC Pipe Thermal Expansion	1241

CPVC CTS Pipe, Fittings & Valves Design & Installation 1242

Installation Guide	1245
Tees	1260
Elbows	1264
Couplings	1267
Adapters	1268
Bushings	1272
Transition Coupling	1273
Cap	1274
CTS Ball Valves	1274
CTS Union	1275
1/4-Turn Angle Supply Stops	1275

Low-Extractable Piping for Ultra-Pure Water Systems 1277

Testing	1280
System Components	1282
Fittings	1282
Valves	1286
System Design & Installation	1288
Assembly Instructions	1291
Sample Specification	1292

LabWate™ CPVC Corrosive Waste Drainage Systems 1293

Installation Guide	1294
Transition Fitting	1303
Couplings	1303
Female Adapter	1304
Reducers	1304
Adapters	1305
Square Head Cleanout Plug	1305
Flush Bushing	1305



Spears® Super Sourcebook - Part 2: Technical Information Catalog

TABLE OF CONTENTS

Male Adapter	1306
Counter Sunk Cleanout Plug	1306
Cap	1306
No-Hub Adapter	1306
Hub Adapter	1306
Repair Coupling	1307
Ells	1307
Tees	1310
Double Fixture Fitting	1312
Wyes	1312
Return Bend	1314
Tail Piece Adapter	1314
Traps	1314
Flange - Van Stone Style	1316
Drum Trap	1316
Waste Assembly	1316
Floor Drains	1317
Floor Cleanouts	1319
LabWaste™ Pipe	1319
LW-5 Solvent Cement	1319
Round Neutralization/Dilution Tanks	1321
Chemical Resistance Information	1322
Chemical Resistance Tables	1323

Double Containment Design & Installation Guide 1326

System Planning & Layout	1328
Double Containment Fitting & Component Design Overview	1329
Product Received	1330
General Installation Assembly	1331
Special Closure Fitting Installation	1334
Isolation Coupler Installation	1336
In-Line Valve Box Installation	1337
Expansion Joint Installation	1337
Sensor Saddle Installation	1339
Pressure Testing System	1339
General Solvent Cement Welding Procedures	1340
Sample Engineering Specification	1341

Plastic Pipe Engineering Guide 1343

Spears® PVC and CPVC Materials	1344
Physical Properties of PVC & CPVC Pipe	1345
Dimensions & Pressure Ratings	1346
Engineering and Design	1350
Installation	1369
Special Pipe - Spears® PVC Clear	1388
Special Pipe - Spears® Low Extractable PVC	1392
Special Pipe - Spears® LabWaste™ CPVC Corrosive Waste Drainage	1396
Special Pipe - Spears® FlameGuard® CPVC Fire Sprinkler Piping Systems	1397
Special Pipe - Spears® CTS CPVC Piping Systems	1398
Spears® PVC & CPVC Duct	1402

Spears® Super Sourcebook - Part 2: Technical Information Catalog
TABLE OF CONTENTS



Chemical Resistance Data for Pressure Piping	1408
Industry Standards & Test Methods	1415
Industry Piping Formulas	1417
Basic Conversions	1419
Glossary of Terms	1423

FlameGuard® CPVC Fire Sprinkler Piping Products 1429

General Information	1430
Tees	1433
Elbows	1437
Crosses	1442
Couplings	1443
Adapters & Bushings	1444
Cap	1451
Test Plugs	1452
Flanges	1453
Unions	1454
Short Repair Couplings	1455
Valves	1456
Socket Dimensions	1457

Appendices

Appendix A - Basic Abbreviations Used in this Catalog
Appendix B - Applicable Industry Standards & Test Methods
Appendix C - Product Approvals & Certificates
Appendix D - Recommendations for Installers & Users
Appendix E - Special Information on Fabricated Fittings
Appendix F - Sustainable Solutions for Total Piping System Needs
Appendix G - Discount Codes
Appendix H - Terms & Conditions



PLASTIC PIPE FITTINGS & VALVES



Valves for All Applications

Ball Valves & 3-Way Ball Valves - PVC & CPVC

True Union 2000 - 1/2" - 8" • Compact 1/2" - 6" (PVC & CPVC) •
Single Entry 1/2" - 4" (PVC Gray & White) • Utility 1/2" - 6" (PVC Gray, White & CPVC) •
CWV Ball Valves 1/2" - 2" (PVC White) • Swing Check Ball Valves 1-1/2" - 2" (PVC White)

Lab Valve Ball Valves - PVC & CPVC

With Tubing Adapter Kits 1/4" • General Purpose Valves 1/4" - 3/8"

PVC, CPVC & Polypropylene Industrial Swing Check Valves

Fully Serviceable • Quick Response • Flanged End Connection 3/4" - 8"

PVC Utility Swing Check & Spring Check Valves

White/Clear • Regular 1/2" - 8" • True Union Socket/Thread
& Compression End 1/2" - 4"

PVC In-line Adjustable Spring Check Valves

Male-Female • Female-Male • Female-Female Thread 1/2" - 1"

PVC & CPVC Diaphragm Check Valves

Self-Closing Design • Socket & Thread Style

PVC & CPVC Butterfly Check Valves

Wafer • Flanged • Thread • Spigot • Grooved Style 2" - 24"

PVC & CPVC Y-Pattern & Y-Check Valves

Socket • SR Thread • True Union Socket/Thread • Flanged 1/2" - 4"

Ball Check Valves - PVC & CPVC

True Union 1/2" - 8"

Diaphragm Valves - PVC, CPVC & Polypropylene

True Union Socket/Thread & SR Thread Style 1/2" - 2" •
Spigot Style 1/2" - 2" • Flanged Style 1/2" - 8"

PVC & CPVC Gate & Plug Gate Valves

Socket/Thread 1/2" - 4" • Flanged 1/2" - 6"

PVC & CPVC Globe Valves

Flanged 2-1/2" - 6"

Butterfly Valves - PVC, CPVC & Polypropylene

PVC & CPVC 1-1/2" - 14" • Polypropylene 1-1/2" - 60"

High Purity Butterfly Valves - PTFE Lined

Patented Non-Elastomer Contact Disc & Liner Seal •
Gear Operated 2" - 6"

Factory Actuated Valves

True Union Ball Valves 1/2" - 6" • Diaphragm Valves 1/2" - 8" •
Butterfly Valves 1-1/2" - 60" • Electric • Pneumatic •
Unitized Pneumatic Actuated Diaphragm Valves 1/2" - 2"



Widest Variety of Pressure Fittings & Specialty Products in the Industry

PVC Schedule 40 Fittings

White • Clear • Black •
Injection Molded 1/4" - 12" •
Unions 1/4" - 6" •
Fabricated Fittings through 24"

PVC Schedule 80 Fittings

Injection Molded Fittings 1/4" - 12" •
Unions 1/4" - 6" • Molded Flanges 1/2" - 16" •
Fabricated Fittings & Flanges through 24"

Schedule 80 Polypropylene Fittings

Special Reinforced (SR)
Plastic Thread Design
Sizes 1/2" - 2"

CPVC Schedule 80 Fittings

Injection Molded Fittings 1/4" - 12" •
Unions 1/4" - 6" • Molded Flanges 1/2" - 12" •
Fabricated Fittings & Flanges through 16"

CPVC CTS (Copper Tube Size) Pipe, Fittings & Valves

Injection Molded Fittings 1/2" - 2" • Patented SR Female
Adapters 1/2" - 1" • Socket Style Valves 1/2" - 2" • CTS Pipe 1/2" - 2"

PVC & CPVC Special Reinforced (SR) Fittings & Adapters

Patented Reinforcement Design Eliminates Split Threads •
Schedule 40 • Schedule 80 • CTS • Fire Sprinkler Adapters •
Selected Fittings • Female Adapters • Unions 1/2" - 6"

PVC & CPVC Clamp-On Saddles

Injection Molded 2-piece Saddle With Bolt Hardware •
Piloted O-ring Seal • Patented SR Threads • Single or Double
Outlet Configurations • For Pipe Sizes 2" - 12" • Socket/Thread
Outlets 1/2" - 6" • Mechanical Clamp-On Transition Saddles

PVC & CPVC Tank Adapters

Strong Buttress Thread Adapter Nut 1/2" - 8" •
PVC Schedule 40 Tank Adapters •
Neoprene • EPDM • FKM Gasket

Insert Fittings

PVC Multi Configurations 1/2" - 8" •
PVC Twist Lock Couplings 1/2" - 1" •
PVC & PP No-Clamp 3/8" Spiral Barbed Insert •
Couplings • Tees • 90° Elbows

CPVC Fire Sprinkler Pipe & Fittings & Repair Couplings

Multiple Fitting Configurations & Pipe 3/4" - 3" •
UL, FM & LPC Approved • **TorqueSafe™** •
Gasket Sealed Head Adapter • SR Head Adapters •
Grooved Couplings • Unions • Flanges



PVC EverTUFF TURF Swing Joints & Fittings

Multiple Configurations • Multiple Outlets 1", 1-1/4", 1-1/2" •
Spigot • MIPT • FIPT • SR FIPT • Male Acme Thread •
Buttress Thread Internal Connections • 315 PSI Rating •
Tees, Elbow, Couplings & Adapter 1" - 4"

PVC & CPVC Threaded Pipe Nipples

Schedule 80 • Lengths to 48" • Pipe Sizes 1/8" - 12"

PVC Irrigation Specialties

Irrigation Filters • Hose Filters • Hose Fittings •
Sprinkler Sleds • Dri-Splice Waterproof Connectors •
Manifold Fittings

PVC Schedule 40 Water Well Fittings

Caps • Couplings • Adapters 4-1/2" - 5"

PVC & CPVC Fabricated Duct Fittings

Vent Caps • Dampers • Fittings through 24"

PVC & CPVC Fabricated Fittings & Manifolds

Multiple Standard Configurations •
Specialty Fittings sizes 36" through 48" •
Low Head • PIP • Class • DWV •
Low Pressure Schedule 40 & 80 • Risers •
Flanges • Adapters • Gasketed Fittings

PVC White & Gray Compression Couplings

Buna-N, EPDM Gaskets • Sizes 1/2" - 6"

PVC & CPVC Repair Couplings

EPDM or FKM Seals • Sizes 1/2" - 6"

PVC Molded DWV Fittings

ASTM D 2665 • 1-1/2" - 12"

PVC Backwater Valves

With Optional Extensions • Socket 2" - 6"

PVC Clear & Clear UVR Pipe

Multi Sizes, Schedule 40 •
Plus Thin Walled Clear UVR Pipe

PVC & CPVC Industrial Pipe & Duct

CPVC Schedule 40 & Schedule 80 Pipe •
PVC Schedule 80 Pipe •
PVC & CPVC Fume & Air Duct •
Sizes through 12"

PVC Schedule 40 Pipe

Sizes through 1/2" - 16"



Complete Systems for Industry



LabWaste™ CPVC Corrosive Waste Drainage System

Solvent Cement Welded System •
Pipe - Cement - Fittings •
Sizes 1-1/2" - 12"



Low Extractable High Purity PVC System Pipe, Valves & Fittings Specialty Line

Sizes 1/2" - 6" Solvent Cement Weld System

Complete Double Containment Systems in Virtually Any Size

Constructed with Spears® Quality Fittings

Expansion Joints Compensate For Thermal Expansion & Contraction

O-ring sealed, telescoping, design 1/2" - 14"

Hot-Tap Saddles For Branch Line Connections Under Pressure

2" - 6" Saddles with 3/4" - 1-1/2" Outlets

PVC & CPVC Y-Strainers

Gray or Clear • Multiple Screen Options •
Socket, SR Thread, Union •
Sizes 1/2" - 4"



PVC & CPVC Basket Strainers

Full Flow Design 2" - 12"
Single & Duplex

PVC & CPVC Tee-Style Filters

50 & 100 GPM • 2-1/2"/3" x 2-1/2"/3" Inlet/Outlet

Assorted Process Monitoring Fittings

Gauge Guards • Needle Valves • Gauge Saddles •
Gauge & Probe Tees Featuring Special
Reinforced (SR) Thread Connections

Low VOC Solvent Cements & Primer

PVC, CPVC, ABS, ABS-TO-PVC, Multipurpose,
Specialty Cements, Primers & Accessories • Sizes
1/4 Pt, 1/2 Pt, Pint, Quarts, Gallons, 5-Gallon





PVC White Schedule 40 Fittings, Unions, & Saddles



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



Visit our web site
www.spearsmfg.com



Performance Engineered & Tested



SPEARS® Schedule 40 PVC fitting designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure the very best PVC fittings available.

Full 1/4" Through 12" Availability

Spears® comprehensive line of PVC fittings offers a variety of injection molded configurations in Schedule 40 sizes 1/4" through 12" conforming to ASTM D 2466.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF® Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

1/2" Through 16" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 40 White sizes 1/2" through 16".

Sample Engineering Specifications

All PVC Schedule 40 fittings shall be produced by Spears® Manufacturing Company from PVC Type I cell classification 12454, conforming to ASTM D 1784. All injection molded PVC Schedule 40 fittings shall be Certified for potable water service by NSF International and manufactured in strict compliance to ASTM D 2466. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings.



The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be ENGINEERED, INSTALLED and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

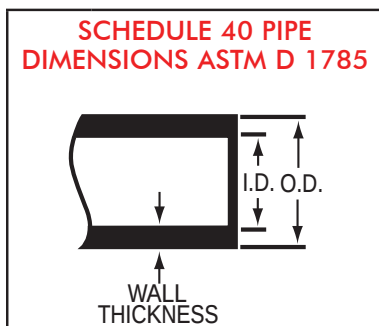
Threaded Connections — Use a quality grade thread sealant. **WARNING:** SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing Company recommends the use of Spears® BLUE 75™ Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVERTIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 40 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content $\leq 0.25\%$.

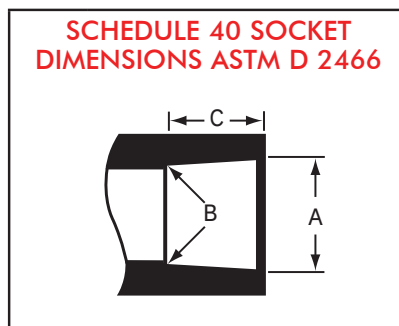


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

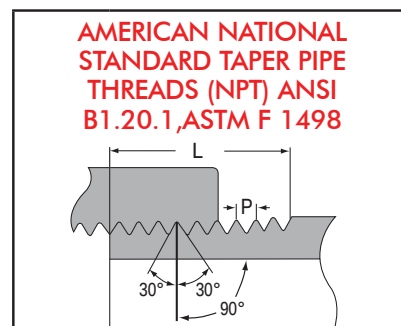
ASTM STANDARD DIMENSIONS



Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	.405	± .004	.068
1/4	.540	± .004	.088
3/8	.675	± .004	.091
1/2	.840	± .004	.109
3/4	1.050	± .004	.113
1	1.315	± .005	.133
1-1/4	1.660	± .005	.140
1-1/2	1.900	± .006	.145
2	2.375	± .006	.154
2-1/2	2.875	± .007	.203
3	3.500	± .008	.216
4	4.500	± .009	.237
5	5.563	± .010	.258
6	6.625	± .011	.280
8	8.625	± .015	.322
10	10.750	± .015	.365
12	12.750	± .015	.408



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	.417	.401	± .004	.500
1/4	.552	.536	± .004	.500
3/8	.687	.671	± .004	.594
1/2	.848	.836	± .004	.688
3/4	1.058	1.046	± .004	.719
1	1.325	1.310	± .005	.875
1-1/4	1.670	1.655	± .005	.938
1-1/2	1.912	1.894	± .006	1.094
2	2.387	2.369	± .006	1.156
2-1/2	2.889	2.868	± .007	1.750
3	3.516	3.492	± .008	1.875
4	4.518	4.491	± .009	2.000
5	5.583	5.553	± .010	3.000
6	6.647	6.614	± .011	3.000
8	8.655	8.610	± .015	4.000
10	10.780	10.735	± .015	5.000
12	12.780	12.735	± .015	6.000



Nominal Size In.	Threads Per Inch.	Effective Thread Length L	Pitch Of Thread P
1/8	27	.2639	.03704
1/4	18	.4018	.05556
3/8	18	.4078	.05556
1/2	14	.5337	.07143
3/4	14	.5457	.07143
1	11-1/2	.6828	.08696
1-1/4	11-1/2	.7068	.08696
1-1/2	11-1/2	.7235	.08696
2	11-1/2	.7565	.08696
2-1/2	8	1.1375	.12500
3	8	1.2000	.12500
4	8	1.3000	.12500
5	8	1.4063	.12500
6	8	1.5125	.12500
8	8	1.7125	.12500

Molded Schedule 40 products are manufactured to ASTM D 2466 for use with pipe manufactured to ASTM D 1785. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

Fabricated Schedule 40 pressure fittings (part numbers ending with "F") are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 40 products are manufactured from materials certified by NSF® for use in potable water service.

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



Injection Molded Dimension References:

- G** = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; $\pm 1/32$ inch.
- H** = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; $\pm 1/32$ inch.
- J** = Intersection of center lines to bottom of socket/thread; 45° elbows; $\pm 1/32$ inch

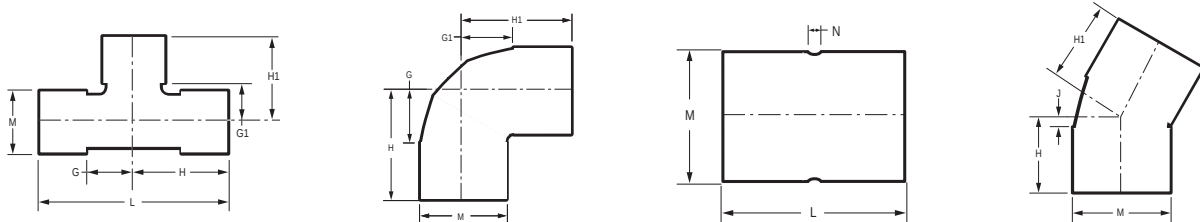
- L** = Overall length of fittings; $\pm 1/16$ inch.
- M** = Outside diameter of socket/thread hub; $\pm 1/16$ inch.
- N** = Socket bottom to socket bottom; couplings; $\pm 1/16$ inch.
- W** = Height of cap; $\pm 1/16$ inch.

Fabricated Dimension References:

- G** = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; $\pm 1/4$ inch; 14" & larger $\pm 1/2$ inch.
- H** = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; $\pm 1/4$ inch.; wyes $\pm 1/2$ inch; 14" & larger $\pm 1/2$ inch.
- J** = Intersection of center lines to bottom of socket/thread; 45° elbows; $\pm 1/4$ inch; 14" & larger $\pm 1/2$ inch.

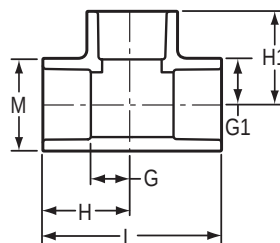
- L** = Overall length of fittings; $\pm 1/2$ inch.; wyes ± 1 inch; 14" & larger ± 1 inch.
- M** = Outside diameter of socket/thread hub; $\pm 1/4$ inch.
- N** = Socket bottom to socket bottom; couplings; $\pm 1/2$ inch.
- W** = Height of cap; $\pm 1/4$ inch.

Typical Fabricated Dimension References



TEE

Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
401-003	3/8	3/8	3/8	1-1/8	1-1/8	2-1/4	31/32	.04
401-005	1/2	1/2	1/2	1-1/4	1-1/4	2-1/2	1-3/32	.06
401-007	3/4	9/16	9/16	1-9/16	1-9/16	3-1/8	1-5/16	.10
401-010	1	11/16	11/16	1-3/4	1-3/4	3-1/2	1-5/8	.16
401-012	1-1/4	7/8	7/8	2-1/8	2-1/8	4-1/4	2	.25
401-015	1-1/2	1-3/32	1-3/32	2-11/32	2-11/32	4-11/16	2-1/4	.36
401-020	2	1-3/8	1-3/8	2-3/4	2-3/4	5-1/2	2-3/4	.51
401-025	2-1/2	1-21/32	1-21/32	3-13/32	3-13/32	6-13/16	3-11/32	1.03

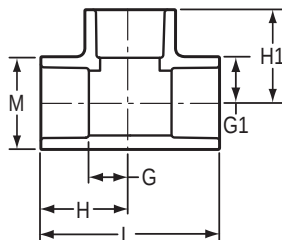


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

TEE

(continued)

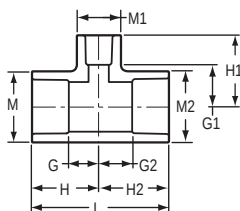
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
401-030	3	1-15/16	1-15/16	3-27/32	3-27/32	7-11/16	4	1.43
401-040	4	2-13/32	2-13/32	4-7/16	4-7/16	8-7/8	5-1/32	2.22
401-050	5	3	3	6	6	12	6-5/32	4.59
401-060	6	3-5/8	3-5/8	6-21/32	6-21/32	13-5/16	7-9/32	6.00
401-080	8	4-1/2	4-1/2	8-17/32	8-17/32	17-1/16	9-3/8	11.81
401-100	10	5-13/16	5-13/16	10-27/32	10-27/32	21-11/16	11-21/32	24.25
401-100F	10	9-7/8	9-3/8	15-1/8	14-5/8	30-1/4	11-1/2	36.21
401-120	12	6-27/32	6-27/32	12-27/32	12-27/32	25-11/16	13-3/4	37.94
401-120F	12	10-3/4	10-3/16	17	16-7/16	34	13-9/16	56.32
401-140F	14	11-3/8	11	18-3/8	18	36-3/4	14-7/8	75.11
401-160F	16	15	12-7/8	23	20-7/8	46	17	111.00
401-180F	18	15-7/8	13-3/8	24-7/8	22-3/8	49-3/4	19-1/8	151.26
401-200F	20	18-1/4	15-1/2	28-1/4	25-1/2	56-1/2	21-3/16	206.74
401-240F	24	21-1/8	17-1/2	33-1/8	29-1/2	66-1/4	25-3/8	337.03

REDUCING TEE

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-053	3/8x3/8x1/2	17/32	21/32	17/32	2-1/32	1-3/4	2-1/32	4-1/16	7/8	1-3/32	7/8	.08
401-074	1/2x1/2x3/4	9/16	9/16	9/16	1-5/16	1-9/16	1-5/16	2-5/8	1-1/16	1-9/32	1-1/16	.07
401-075	1/2x1/2x1	25/32	17/32	25/32	1-17/32	1-11/16	1-17/32	3-1/16	1-1/16	1-5/8	1-1/16	.11
401-094	3/4x1/2x1/2	17/32	21/32	17/32	1-17/32	1-13/32	1-7/32	2-13/16	1-5/16	1-3/32	1-3/32	.08
401-095	3/4x1/2x3/4	13/16	11/16	5/8	1-13/16	1-15/32	1-3/8	3-3/16	1-5/16	1-5/16	1-1/16	.10
401-101	3/4x3/4x1/2	17/32	5/8	17/32	1-7/16	1-3/8	1-7/16	2-29/32	1-5/16	1-1/8	1-5/16	.08
D401-101	3/4x3/4x1/2	9/16	19/32	17/32	1-17/32	1-27/32	1-17/32	3-1/16	1-5/16	1-3/32	1-5/16	.11
401-102	3/4x3/4x1	23/32	5/8	23/32	1-21/32	1-21/32	1-21/32	3-5/16	1-5/16	1-5/8	1-5/16	.11
401-122	1x1/2x1	23/32	23/32	27/32	1-25/32	1-25/32	1-19/32	3-7/16	1-5/8	1-5/8	1-3/32	.14

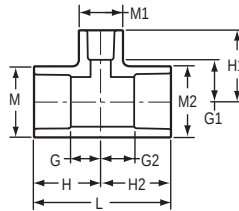
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



REDUCING TEE

(continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-124	1x3/4x1/2	5/8	23/32	19/32	1-21/32	1-15/32	1-1/2	3-5/32	1-5/8	1-3/32	1-5/16	.12
401-125	1x3/4x3/4	21/32	25/32	5/8	1-25/32	1-25/32	1-5/8	3-7/16	1-19/32	1-5/16	1-5/16	.14
401-126	1x3/4x1	3/4	13/16	13/16	1-29/32	1-15/16	1-13/16	3-3/4	1-5/8	1-5/8	1-5/16	.17
401-130	1x1x1/2	9/16	13/16	9/16	1-5/8	1-9/16	1-5/8	3-3/16	1-5/8	1-1/16	1-5/8	.13
D401-130	1x1x1/2	11/16	25/32	11/16	1-23/32	2-1/32	1-23/32	3-15/32	1-5/8	1-1/8	1-5/8	.15
401-131	1x1x3/4	19/32	3/4	19/32	1-5/8	1-21/32	1-5/8	3-9/32	1-5/8	1-5/16	1-5/8	.14
401-132	1x1x1-1/4	31/32	27/32	31/32	2-3/32	2-3/32	2-3/32	4-3/16	1-5/8	1-31/32	1-5/8	.22
401-133	1x1x1-1/2	1-1/8	13/16	1-1/8	2-1/4	2-1/8	2-1/4	4-1/2	1-5/8	2-9/32	1-5/8	.24
401-134	1x1x2	1-7/16	27/32	1-7/16	2-1/2	2-1/4	2-1/2	5	1-5/8	2-3/4	1-5/8	.31
401-156	1-1/4x1x1/2	21/32	1	17/32	1-25/32	1-3/4	1-21/32	3-7/16	2	1-1/16	1-5/8	.18
401-157	1-1/4x1x3/4	5/8	1	21/32	1-29/32	2	1-25/32	3-11/16	1-31/32	1-5/16	1-5/8	.20
401-158	1-1/4x1x1	13/16	1	7/8	2-1/16	2-3/32	2	4	1-31/32	1-21/32	1-5/8	.22
401-166	1-1/4x1-1/4x1/2	17/32	29/32	17/32	1-25/32	1-21/32	1-25/32	3-9/16	1-31/32	1-3/32	1-31/32	.18
D401-166	1-1/4x1-1/4x1/2	23/32	31/32	23/32	1-31/32	2-3/16	1-31/32	3-29/32	2	1-1/8	2	.22
401-167	1-1/4x1-1/4x3/4	21/32	31/32	21/32	1-29/32	1-31/32	1-29/32	3-13/16	2	1-11/32	2	.22
401-168	1-1/4x1-1/4x1	13/16	31/32	13/16	1-15/16	2-1/32	1-15/16	3-27/32	2	1-5/8	2	.22
401-169	1-1/4x1-1/4x1-1/2	1-3/32	1	1-3/32	2-11/32	2-5/16	2-11/32	4-11/16	1-31/32	2-7/32	1-31/32	.30
401-170	1-1/4x1-1/4x2	1-11/32	1	1-11/32	2-19/32	2-3/8	2-19/32	5-3/16	2	2-3/4	2	.38
401-199	1-1/2x1-1/4x1/2	17/32	1-1/8	17/32	1-27/32	1-7/8	1-25/32	3-5/8	2-7/32	1-1/16	1-31/32	.22
401-201	1-1/2x1-1/4x3/4	21/32	1-5/32	21/32	1-15/16	2-3/16	1-15/16	3-7/8	2-1/4	1-11/32	2	.26
401-202	1-1/2x1-1/4x1	13/16	1-3/16	13/16	2-1/8	2-9/32	2-1/16	4-3/16	2-1/4	1-5/8	2	.30
401-209	1-1/2x1-1/2x1/2	17/32	1-1/32	17/32	1-27/32	1-25/32	1-27/32	3-11/16	2-3/16	1-1/16	2-3/16	.21
D401-209	1-1/2x1-1/2x1/2	17/32	1-1/16	17/32	1-27/32	2-5/16	1-27/32	3-11/16	2-7/32	1-1/16	2-7/32	.23
401-210	1-1/2x1-1/2x3/4	21/32	1-3/32	21/32	1-31/32	2-3/32	1-31/32	3-29/32	2-7/32	1-5/16	2-7/32	.24
401-211	1-1/2x1-1/2x1	25/32	27/32	25/32	2-3/32	1-31/32	2-3/32	4-3/16	2-7/32	1-5/8	2-7/32	.28
401-212	1-1/2x1-1/2x1-1/4	1	1-3/16	1	2-9/32	2-7/16	2-9/32	4-19/32	2-1/4	2	2-1/4	.31
401-213	1-1/2x1-1/2x2	1-5/16	1-3/16	1-5/16	2-5/8	2-9/16	2-5/8	5-7/32	2-1/4	2-3/4	2-1/4	.39
401-214	1-1/2x1-1/2x2-1/2	1-21/32	1-3/16	1-21/32	2-31/32	2-15/16	2-31/32	5-15/16	2-1/4	3-11/32	2-1/4	.58
401-233	2x1x2	1-1/4	1-1/4	1-7/32	2-19/32	2-19/32	2-11/32	5	2-3/4	2-3/4	1-5/8	.40
401-238	2x1-1/2x3/4	21/32	1-13/32	21/32	2-1/32	2-13/32	1-31/32	4	2-23/32	1-5/16	2-1/4	.31
401-239	2x1-1/2x1	13/16	1-1/2	13/16	2-1/8	2-5/8	2-1/8	4-9/32	2-3/4	1-5/8	2-1/4	.38
401-241	2x1-1/2x1-1/2	1	1-9/32	1-1/32	2-3/8	2-9/16	2-5/16	4-11/16	2-23/32	2-7/32	2-7/32	.37
401-247	2x2x1/2	17/32	1-11/32	17/32	1-29/32	2-3/32	1-29/32	3-27/32	2-23/32	1-3/32	2-23/32	.30
D401-247	2x2x1/2	9/16	1-7/32	9/16	1-15/16	2-1/2	1-15/16	3-7/8	2-23/32	1-1/16	2-23/32	.31

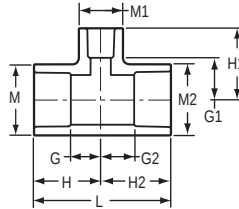


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING TEE

(continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-248	2x2x3/4	21/32	1-1/2	21/32	2-1/32	2-1/16	2-1/32	4-1/16	2-3/4	1-11/32	2-3/4	.32
401-249	2x2x1	13/16	1-3/8	13/16	2-3/16	2-1/2	2-3/16	4-3/8	2-23/32	1-5/8	2-23/32	.36
401-250	2x2x1-1/4	1	1-3/8	1	2-3/8	2-5/8	2-3/8	4-23/32	2-23/32	1-31/32	2-23/32	.39
401-251	2x2x1-1/2	1-1/16	1-5/16	1-1/16	2-3/8	2-9/16	2-3/8	4-3/4	2-23/32	2-1/4	2-23/32	.42
401-253 ¹	2x2x3	2-7/8	1-13/16	2-7/8	4-1/4	3-13/16	4-1/4	8-1/2	4	4	3-15/16	2.64
401-254 ¹	2x2x4	3-13/32	2-3/8	3-13/32	4-25/32	4-3/8	4-25/32	9-9/16	5-1/16	5-1/16	5-1/16	3.89
401-287	2-1/2x2-1/2x1/2	25/32	1-15/32	25/32	2-17/32	2-7/32	2-17/32	5-1/16	3-5/16	1-1/16	3-5/16	.56
401-288	2-1/2x2-1/2x3/4	7/8	1-9/16	7/8	2-5/8	2-1/2	2-5/8	5-9/32	3-5/16	1-5/16	3-5/16	.60
401-289	2-1/2x2-1/2x1	13/16	1-17/32	13/16	2-13/16	2-21/32	2-13/16	5-5/8	3-5/16	1-5/8	3-5/16	.67
401-290	2-1/2x2-1/2x1-1/4	1-7/32	1-21/32	1-7/32	2-31/32	2-29/32	2-31/32	5-31/32	3-11/32	2-1/32	3-11/32	.77
401-291	2-1/2x2-1/2x1-1/2	1-3/16	1-5/8	1-3/16	2-31/32	2-15/16	2-31/32	5-15/16	3-11/32	2-1/4	3-11/32	.76
401-292	2-1/2x2-1/2x2	1-13/32	1-21/32	1-13/32	3-3/16	3-1/32	3-3/16	6-3/8	3-5/16	2-3/4	3-5/16	.78
401-293 ¹	2-1/2x2-1/2x3	2-1/4	1-31/32	2-1/4	4-1/4	3-13/16	4-1/4	8-15/32	4	4	4	2.37
401-294 ¹	2-1/2x2-1/2x4	2-3/4	2-3/8	2-3/4	4-3/4	4-3/8	4-3/4	9-1/2	5-1/16	5	5-1/16	4.03
401-333	3x3x1/2	11/16	1-13/16	11/16	2-9/16	2-17/32	2-9/16	5-1/32	3-31/32	1-3/32	3-31/32	.76
401-334	3x3x3/4	3/4	2	3/4	2-21/32	3	2-21/32	5-9/32	4	1-11/32	4	.84
401-335	3x3x1	29/32	1-25/32	29/32	2-51/64	2-29/32	2-51/64	5-19/32	3-31/32	1-19/32	3-31/32	.85
401-336	3x3x1-1/4	1-7/32	1-31/32	1-7/32	2-31/32	3-7/32	2-31/32	5-15/16	4	2	4	.92
401-337	3x3x1-1/2	1-7/32	1-13/16	1-7/32	3-3/32	3-1/8	3-3/32	6-3/16	4-1/16	2-7/32	4-1/16	1.00
401-338	3x3x2-1/2	1-7/16	1-13/16	1-7/16	3-11/32	3-3/16	3-11/32	6-11/16	3-31/32	2-23/32	3-31/32	1.05
401-342	3x3x4	2-1/2	2-1/16	2-1/2	4-1/2	4-1/16	4-1/2	9	3-31/32	5	3-31/32	1.87
401-344 ¹	3x3x6	5-1/2	4	5-1/2	7-1/2	7	7-1/2	15	7-1/4	7-1/4	7-1/4	11.75
401-416	4x4x3/4	25/32	2-9/32	25/32	2-13/16	3-9/32	2-13/16	5-5/8	5-3/32	1-5/16	5-3/32	1.24
401-417	4x4x1	13/16	2-9/16	13/16	2-13/16	3-5/8	2-13/16	5-19/32	5-1/32	1-19/32	5-1/32	1.19
401-418	4x4x1-1/4	1-1/16	2-9/32	1-1/16	3-3/32	3-17/32	3-3/32	6-3/16	5	1-31/32	5	1.33
401-419	4x4x1-1/2	1-3/16	2-17/32	1-3/16	3-3/16	3-27/32	3-3/16	6-13/32	5-1/16	2-1/4	5-1/16	1.40
401-420	4x4x2	1-13/32	2-3/4	1-13/32	3-7/16	4-5/32	3-7/16	6-7/8	5-1/32	2-3/4	5-1/32	1.49
401-421 ¹	4x4x2-1/2	1-31/32	3-3/32	2-1/32	4-3/32	4-27/32	4-3/32	8-5/32	5-5/32	4-1/16	5-5/32	2.67
401-422	4x4x3	2-1/32	2-5/8	2-1/32	4-3/32	4-1/2	4-3/32	8-5/32	5-5/32	4-1/16	5-5/32	2.31
401-426 ¹	4x4x6	5-1/2	3-1/2	5-1/2	7-1/2	7	7-1/2	14-15/16	6-7/8	7-1/2	6-7/8	10.38
401-428 ¹	4x4x8	6-3/4	4-1/2	6-3/4	8-3/4	8-1/2	8-3/4	17-1/2	9-1/4	9-5/8	9-5/8	18.30
401-486	5x5x2	1-11/32	3-1/32	1-11/32	4-23/64	4-13/32	4-23/64	8-23/32	6-1/8	2-23/32	6-1/8	2.39
401-487 ¹	5x5x2-1/2	2	3-5/8	2	5-1/32	5-3/8	5-1/32	10-1/16	6-5/32	4-1/32	6-5/32	3.63
401-488	5x5x3	2	3-3/16	2	5-1/32	5-1/16	5-1/32	10-1/16	6-5/32	4-1/32	6-5/32	3.23
401-490	5x5x4	2-1/2	3-5/32	2-1/2	5-9/16	5-3/16	5-9/16	11-1/8	6-5/32	5-1/32	6-5/32	3.61
401-526 ¹	6x6x1-1/4	1-3/8	4-1/16	1-3/8	4-27/32	5-5/16	4-27/32	9-11/16	7-1/4	2-3/4	7-1/4	3.61

¹ Outlet sized with bushing

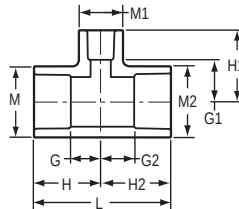
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



REDUCING TEE

(continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-527 ¹	6x6x1-1/2	1-3/8	3-7/8	1-3/8	4-27/32	5-3/16	4-27/32	9-11/16	7-1/4	2-11/16	7-1/4	3.60
401-528	6x6x2	1-13/32	3-5/8	1-13/32	4-13/32	4-31/32	4-13/32	8-27/32	7-1/4	2-3/4	7-1/4	3.28
401-529	6x6x2-1/2	2	3-15/16	2	5-1/2	5-15/16	5-1/2	10-15/16	7-3/16	3-15/16	7-3/16	4.29
401-530	6x6x3	1-31/32	3-5/8	1-31/32	4-31/32	5-1/2	4-31/32	10	7-1/4	4	7-1/4	3.90
401-532	6x6x4	2-3/32	3-5/8	2-3/32	5-9/16	5-5/8	5-9/16	11-1/8	7-7/32	5	7-7/32	4.35
401-533 ¹	6x6x5	3-1/2	4-1/2	3-1/2	7	7-1/2	7	14	7-3/16	7-3/16	7-3/8	8.46
401-535 ¹	6x6x8	5-3/8	5-1/2	5-3/8	8-7/8	9-1/2	8-7/8	17-3/4	9-1/2	9-3/4	9-1/2	19.21
401-537 ¹	6x6x10	8	5-13/16	8	11-3/8	10-13/16	11-3/8	22-3/4	11-1/2	11-9/16	11-1/2	38.30
401-578 ¹	8x8x2	2	5-7/8	2	6	7	6	12	9-1/4	4	9-1/4	11.71
401-579 ¹	8x8x2-1/2	2	5-5/16	2	6	7-5/16	6	12	9-5/16	4	9-5/16	6.62
401-580	8x8x3	1-31/32	4-3/4	1-31/32	6-1/32	6-3/4	6-1/32	12-1/16	9-11/32	4	9-11/32	6.44
401-582	8x8x4	2-17/32	4-11/16	2-17/32	6-17/32	6-11/16	6-17/32	13-1/16	9-9/32	4-31/32	9-9/32	7.02
401-583 ¹	8x8x5	3-21/32	5-1/4	3-21/32	7-21/32	8-1/4	7-21/32	15-5/16	9-5/16	7-1/4	9-5/16	10.60
401-585	8x8x6	3-5/8	4-3/4	3-5/8	7-21/32	7-25/32	7-21/32	15-11/32	9-11/32	7-1/4	9-11/32	8.90
401-589 ¹	8x8x10	6-23/32	5-11/16	6-23/32	11-7/32	10-1/2	11-7/32	22-7/16	11-9/16	11-9/16	11-9/16	34.76
401-621F	10x10x2	4-7/8	7-1/4	4-7/8	10-1/8	9	10-1/8	20-1/4	11-1/2	2-11/16	11-1/2	19.60
401-622F	10x10x2-1/2	5-5/8	7-3/4	5-5/8	10-7/8	9-3/4	10-7/8	21-3/4	11-1/2	3-1/4	11-1/2	20.26
401-623 ¹	10x10x3	3-13/16	7	3-13/16	9-3/8	9	9-3/8	18-3/4	12	7-1/2	12	25.54
401-624 ¹	10x10x4	3-27/32	7-3/8	3-27/32	9-11/32	9-3/8	9-11/32	18-11/16	12	7-1/2	12	25.63
401-626F	10x10x6	6-7/8	8-3/8	6-7/8	12-1/8	11-5/8	12-1/8	24-1/4	11-1/2	7-3/16	11-1/2	26.48
401-628 ¹	10x10x8	5-3/4	7-3/16	5-3/4	10-7/8	11-1/4	10-7/8	21-11/16	11-11/16	11-11/16	11-1/2	29.85
401-661F	12x12x2	5-1/4	8-1/4	5-1/4	11-1/2	10	11-1/2	23	13-9/16	2-11/16	13-1/2	25.00
401-662F	12x12x2-1/2	5-3/4	8-3/4	5-3/4	12	10-3/4	12	24	13-9/16	3-1/4	13-9/16	28.61
401-663F	12x12x3	5-3/4	9	5-3/4	12	11-1/4	12	24	13-9/16	3-15/16	13-9/16	31.41
401-664F	12x12x4	7	9-5/16	7	13-1/4	11-9/16	13-1/4	26-1/2	13-9/16	5	13-9/16	32.40
401-666 ¹	12x12x6	4-7/8	8-5/16	4-7/8	11-7/16	11-3/4	11-7/16	22-13/16	14-1/4	9-3/4	14-1/4	44.02
401-668	12x12x8	4-27/32	7-1/8	4-27/32	11-13/32	11-1/8	11-13/32	22-13/16	14-1/4	9-3/4	14-1/4	40.00
401-670	12x12x10	6-13/16	7-3/8	6-13/16	12-13/16	13-1/4	12-13/16	25-5/8	13-3/4	13-3/4	13-3/4	50.00
401-670F	12x12x10	10-1/4	10-3/8	10-1/4	16-1/2	15-5/8	16-1/2	33	13-9/16	11-1/2	13-9/16	50.00
401-676F	12x12x16	18-1/2	12-3/4	18-1/2	30-1/4	20-3/4	30-1/4	60-1/2	14-1/8	17	14-1/8	144.87
401-678F	12x12x18	14-1/4	13	17-7/8	23-1/4	22	23-7/8	47-3/4	19-1/8	19-1/8	19-1/8	252.00
401-691F	14x14x2	5-7/8	8-13/16	5-7/8	12-7/8	10-9/16	12-7/8	25-3/4	14-7/8	2-11/16	14-7/8	35.53
401-693F	14x14x3	6-1/2	9-9/16	6-1/2	13-1/2	11-13/16	13-1/2	27	14-7/8	3-15/16	14-7/8	38.35
401-694F	14x14x4	7-3/8	9-7/8	7-3/8	14-3/8	12-1/8	14-3/8	28-3/4	14-7/8	5	14-7/8	38.58
401-696F	14x14x6	7-7/8	9-15/16	7-7/8	14-7/8	13-3/16	14-7/8	29-3/4	14-7/8	7-3/16	14-7/8	45.70
401-698F	14x14x8	8-7/8	9-7/8	8-7/8	15-7/8	14-1/8	15-7/8	31-3/4	14-7/8	9-1/4	14-7/8	51.99

¹ Outlet sized with bushing

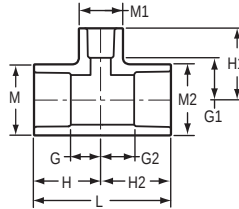


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING TEE

(continued)

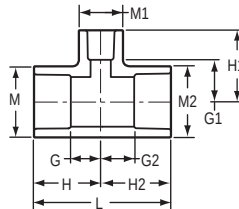
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-700F	14x14x10	10-3/8	10-15/16	10-3/8	17-3/8	16-3/16	17-3/8	34-3/4	14-7/8	11-1/2	14-7/8	61.56
401-702F	14x14x12	11-3/8	10-3/4	11-3/8	18-3/8	17	18-3/8	36-3/4	14-7/8	13-9/16	14-7/8	62.78
401-751F	16x16x2	6-3/8	9-3/4	6-3/8	14-3/8	11-1/2	14-3/8	28-3/4	17	2-11/16	17	51.76
401-753F	16x16x3	6-1/2	10-1/2	6-1/2	14-1/2	12-3/4	14-1/2	29	17	3-15/16	17	57.67
401-754F	16x16x4	8	10-13/16	8	16	13-1/16	16	32	17	5	17	58.90
401-756F	16x16x6	9	10-7/8	9	17	14-1/8	17	34	17	7-3/16	17	66.52
401-758F	16x16x8	10	10-13/16	10	18	15-1/16	18	36	17	9-1/4	17	73.17
401-760F	16x16x10	11	11-7/8	11	19	17-1/8	19	38	17	11-1/2	17	73.88
401-762F	16x16x12	12	11-11/16	12	20	17-15/16	20	40	17	13-9/16	17	85.48
401-764F	16x16x14	13	11-15/16	13	21	18-15/16	21	42	17	14-7/8	17	95.95
401-781F	18x18x2	6-1/4	10-11/16	6-1/4	15-1/4	12-7/16	15-1/4	30-1/2	19-1/8	2-11/16	19-1/8	65.63
401-783F	18x18x3	7-1/4	11-7/16	7-1/4	16-1/4	13-11/16	16-1/4	32-1/2	19-1/8	3-15/16	19-1/8	---
401-784F	18x18x4	7-3/4	11-3/4	7-3/4	16-3/4	14	16-3/4	33-1/2	19-1/8	5	19-1/8	82.00
401-786F	18x18x6	8-3/4	11-13/16	8-3/4	17-3/4	15-1/16	17-3/4	35-1/2	19-1/8	7-3/16	19-1/8	88.04
401-788F	18x18x8	9-3/4	11-3/4	9-3/4	18-3/4	16	18-3/4	37-1/2	19-1/8	9-1/4	19-1/8	107.00
401-790F	18x18x10	10-3/4	12-13/16	10-3/4	19-3/4	18-1/16	19-3/4	39-1/2	19-1/8	11-1/2	19-1/8	105.41
401-792F	18x18x12	11-3/4	12-5/8	11-3/4	20-3/4	18-7/8	20-3/4	41-1/2	19-1/8	13-9/16	19-1/8	113.48
401-794F	18x18x14	12-7/8	12-7/8	12-7/8	21-7/8	19-7/8	21-7/8	43-3/4	19-1/8	14-7/8	19-1/8	116.67
401-796F	18x18x16	13-7/8	13-13/16	13-7/8	22-7/8	21-13/16	22-7/8	45-3/4	19-1/8	17	19-1/8	134.41
401-811F	20x20x2	6-3/4	12-7/16	6-3/4	16-3/4	14-3/16	16-3/4	33-1/2	21-3/16	21-11/16	21-3/16	81.39
401-813F	20x20x3	7-1/4	12-7/16	7-1/4	17-1/4	14-11/16	17-1/4	34-1/2	21-3/16	3-15/16	21-3/16	91.14
401-814F	20x20x4	8-1/4	12-3/4	8-1/4	18-1/4	15	18-1/4	36-1/2	21-3/16	5	21-3/16	72.10
401-816F	20x20x6	9-1/4	12-13/16	9-1/4	19-1/4	16-1/16	19-1/4	38-1/2	21-3/16	7-3/16	21-3/16	106.19
401-818F	20x20x8	10-1/4	12-3/4	10-1/4	20-1/4	17	20-1/4	40-1/2	21-3/16	9-1/4	21-3/16	115.35
401-820F	20x20x10	11-1/4	13-13/16	11-1/4	21-1/4	19-1/16	21-1/4	42-1/2	21-3/16	11-1/2	21-3/16	125.44
401-822F	20x20x12	12-1/4	13-5/8	12-1/4	22-1/4	19-7/8	22-1/4	44-1/2	21-3/16	13-9/16	21-3/16	129.36
401-824F	20x20x14	13-1/4	13-7/8	13-1/4	23-1/4	20-7/8	23-1/4	46-1/2	21-3/16	14-7/8	21-3/16	123.55
401-826F	20x20x16	14-1/4	14-13/16	14-1/4	24-1/4	22-13/16	24-1/4	48-1/2	21-3/16	17	21-3/16	154.48
401-828F	20x20x18	15-1/4	14-3/8	15-1/4	25-1/4	23-3/8	25-1/4	50-1/2	21-3/16	19-1/8	21-3/16	176.98
401-901F	24x24x2	8-1/8	14-5/16	8-1/8	20-1/8	16-1/16	20-1/8	40-1/4	25-3/8	2-11/16	25-3/8	156.00
401-903F	24x24x3	8-5/8	14-5/16	8-5/8	20-5/8	16-9/16	20-5/8	41-1/4	25-3/8	3-15/16	25-3/8	161.00
401-904F	24x24x4	9-1/8	14-5/8	9-1/8	21-1/8	16-7/8	21-1/8	42-1/4	25-3/8	5	25-3/8	148.46
401-906F	24x24x6	10-1/8	14-11/16	10-1/8	22-1/8	17-15/16	22-1/8	44-1/4	25-3/8	7-3/16	25-3/8	159.56
401-908F	24x24x8	11-1/8	14-5/8	11-1/8	23-1/8	18-7/8	23-1/8	46-1/4	25-3/8	9-1/4	25-3/8	171.52
401-910F	24x24x10	12-1/8	15-11/16	12-1/8	24-1/8	20-15/16	24-1/8	48-1/4	25-3/8	11-1/2	25-3/8	213.94
401-912F	24x24x12	13-1/8	15-1/2	13-1/8	25-1/8	21-3/4	25-1/8	50-1/4	25-3/8	13-9/16	25-3/8	199.98

REDUCING TEE (continued)

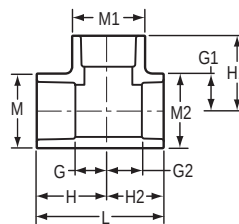
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-914F	24x24x14	13-3/4	15-3/4	13-3/4	25-3/4	22-3/4	25-3/4	51-1/2	25-3/8	14-7/8	25-3/8	232.53
401-916F	24x24x16	14-3/4	16-11/16	14-3/4	26-3/4	24-11/16	26-3/4	53-1/2	25-3/8	17	25-3/8	224.32
401-918F	24x24x18	15-3/4	16-1/4	15-3/4	27-3/4	25-1/4	27-3/4	55-1/2	25-3/8	19-1/8	25-3/8	237.92
401-920F	24x24x20	16-3/4	17-3/8	16-3/4	28-3/4	27-3/8	28-3/4	57-1/2	25-3/8	21-3/16	25-3/8	244.92

REDUCING SHORT SOCKET TEE

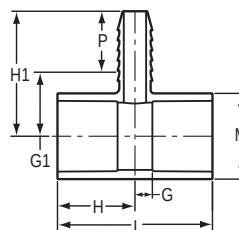
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
S401-249	2x2x1	11/16	2-7/32	11/16	2-3/32	1-1/4	1-11/32	3-7/16	2-23/32	1-5/8	2-23/32	.28
S401-251	2x2x1-1/2	1	1-1/4	31/32	2-3/8	2-3/8	1-5/8	4	2-23/32	2-7/32	2-23/32	.34

TRANSITION TEE

Socket x Socket x Insert



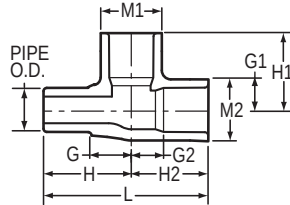
Part Number	Size	G	G1	H	H1	L	M	P	Approx. Wt. (Lbs.)
1102-007	3/4	13/32	3/4	1-13/32	2-1/4	2-13/16	1-5/16	1-1/2	.09
1102-130	1x1x1/2	3/16	13/16	1-7/16	2-5/16	2-7/8	1-19/32	1-1/2	.11
1102-248	2x2x3/4	1/2	1-7/16	1-27/32	2-15/16	3-11/16	2-23/32	1-1/2	.27
1102-250	2x2x1-1/4	11/16	1-15/32	2-1/16	2-31/32	4-1/8	2-3/4	1-1/2	.34



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

STREET TEE

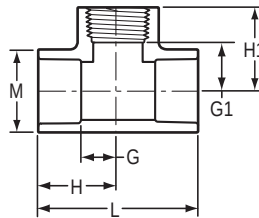
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
444-005	1/2	23/32	23/32	1/2	1-19/32	1-21/32	1-19/32	3-5/32	1-3/16	1-3/16	.10
444-007	3/4	13/16	27/32	7/8	1-13/16	1-7/8	1-13/16	3-5/8	1-13/32	1-13/32	.15
444-010	1	1	1-31/32	1-31/32	2-1/8	2	2-1/8	4-7/32	1-3/4	1-3/4	.25
444-012	1-1/4	1-1/4	1-5/32	1-1/8	2-7/16	2-5/16	2-7/16	4-27/32	2-3/32	2-3/32	.39
444-015	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-3/8	2-11/32	2-11/32	.51
444-020	2	1-19/32	1-11/16	1-19/32	3-3/32	3-3/16	3-3/32	6-5/32	2-7/8	2-7/8	.78

TEE

Socket x Socket x Fipt



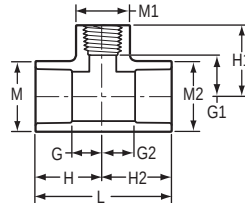
Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
402-003	3/8	7/16	1/2	1-11/16	1-1/16	3-3/8	29/32	.06
402-005	1/2	1/2	1/2	1-1/4	1-7/32	2-1/2	1-3/32	.07
402-007	3/4	21/32	23/32	1-21/32	1-7/16	3-9/32	1-5/16	.11
402-010	1	13/16	7/8	1-15/16	1-7/8	3-7/8	1-5/8	.17
402-012	1-1/4	29/32	1-1/8	2-5/32	2-1/16	4-5/16	2	.30
402-015	1-1/2	1-1/32	1-1/32	2-11/32	2-1/16	4-21/32	2-1/4	.36
402-020	2	1-5/16	1-15/32	2-5/8	2-13/32	5-7/32	2-3/4	.50
402-025	2-1/2	1-1/2	1-11/16	3-1/4	2-31/32	6-1/2	3-3/8	.96
402-030	3	1-13/16	2-1/32	3-11/16	3-3/8	7-11/32	4	1.38
402-040	4	2-5/16	2-15/32	4-11/32	3-15/16	8-21/32	5-1/16	2.22

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



REDUCING TEE

Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
402-071	1/2x1/2x1/8	9/32	17/32	9/32	1-1/32	1	1-1/32	2-1/16	1-3/32	9/16	1-3/32	.04
402-072	1/2x1/2x1/4	3/8	9/16	3/8	1-1/8	1-1/8	1-1/8	2-1/4	1-1/16	13/16	1-1/16	.05
402-074	1/2x1/2x3/4	21/32	1/2	21/32	1-13/32	1-5/16	1-13/32	2-13/16	1-1/16	1-11/32	1-3/32	.08
402-094	3/4x1/2x1/2	1/2	11/16	9/16	1-1/2	1-7/16	1-5/16	2-13/16	1-9/32	1-1/16	1-3/32	.10
402-095	3/4x1/2x3/4	13/16	21/32	5/8	1-13/16	1-7/16	1-3/8	3-3/16	1-5/16	1-5/16	1-3/32	.11
402-101	3/4x3/4x1/2	17/32	3/4	17/32	1-17/32	1-7/16	1-17/32	3-1/16	1-5/16	1-3/32	1-5/16	.09
402-124	1x3/4x1/2	17/32	13/16	17/32	1-21/32	1-9/16	1-17/32	3-3/16	1-5/8	1-1/16	1-5/16	.13
402-125	1x3/4x3/4	9/16	23/32	11/16	1-11/16	1-17/32	1-11/16	3-3/8	1-19/32	1-9/32	1-9/32	.13
402-130	1x1x1/2	15/32	27/32	15/32	1-5/8	1-17/32	1-5/8	3-1/4	1-5/8	1-3/32	1-5/8	.13
402-131	1x1x3/4	21/32	13/16	21/32	1-25/32	1-17/32	1-25/32	3-9/16	1-5/8	1-5/16	1-5/8	.15
402-156	1-1/4x1x1/2	19/32	1-9/32	19/32	1-25/32	1-25/32	1-3/4	3-17/32	2	1-1/8	1-5/8	.19
402-157	1-1/4x1x3/4	13/16	1-1/32	3/4	1-13/16	1-23/32	1-3/4	3-9/16	2	1-5/16	1-5/8	.18
402-158	1-1/4x1x1	13/16	1-5/32	13/16	2-1/16	2-1/8	1-15/16	4	1-31/32	1-21/32	1-5/8	.26
402-166	1-1/4x1-1/4x1/2	23/32	15/16	23/32	1-31/32	1-21/32	1-31/32	3-15/16	1-31/32	1-3/32	1-31/32	.21
402-167	1-1/4x1-1/4x3/4	13/16	1-1/16	13/16	2-1/16	1-3/4	2-1/16	4-1/8	2	1-5/16	2	.19
402-168	1-1/4x1-1/4x1	21/32	1-1/32	21/32	1-7/8	1-27/32	1-7/8	3-25/32	1-31/32	1-5/8	1-31/32	.22
402-199	1-1/2x1-1/4x1/2	19/32	1-9/32	19/32	1-27/32	1-29/32	27/32	3-23/32	2-1/4	1-1/8	2	.24
402-201	1-1/2x1-1/4x3/4	11/16	1-5/32	5/8	1-31/32	2-5/32	1-29/32	3-7/8	2-1/4	1-5/16	2	.26
402-202	1-1/2x1-1/4x1	13/16	1-1/8	3/4	2-1/8	2-1/4	2-1/16	4-3/16	2-1/4	1-5/8	2	.30
402-209	1-1/2x1-1/2x1/2	7/16	1-3/16	7-16	1-3/4	1-7/8	1-3/4	3-1/2	2-7/32	1-3/32	2-7/32	.20
402-210	1-1/2x1-1/2x3/4	21/32	1-3/32	21/32	1-31/32	1-27/32	1-31/32	3-29/32	2-1/4	1-5/16	2-1/4	.24
402-211	1-1/2x1-1/2x1	25/32	1-1/16	25/32	2-3/32	1-15/16	2-3/32	4-3/16	2-1/4	1-5/8	2-1/4	.27
402-212	1-1/2x1-1/2x1-1/4	1	1-3/32	1	2-9/32	2-1/32	2-9/32	4-19/32	2-1/4	2	2-1/4	.32
402-238	2x1-1/2x3/4	11/16	1-13/32	5/8	2-1/32	2-13/32	1-31/32	4	2-3/4	1-5/16	2-1/4	.32
402-239	2x1-1/2x1	13/16	1-13/32	3/4	2-3/16	2-17/32	2-1/8	4-5/16	2-3/4	1-5/8	2-1/4	.38
402-247	2x2x1/2	21/32	1-3/8	21/32	2-1/32	2-1/8	2-1/32	4-1/16	2-3/4	1-1/16	2-3/4	.33
402-248	2x2x3/4	21/32	1-11/32	21/32	2-1/32	2-3/32	2-1/32	4-1/32	2-3/4	1-11/32	2-3/4	.33
402-249	2x2x1	13/16	1-13/32	13/16	2-3/16	2-1/4	2-3/16	4-3/8	2-23/32	1-5/8	2-23/32	.35
402-250	2x2x1-1/4	1	1-3/8	1	2-3/8	2-5/16	2-3/8	4-3/4	2-23/32	1-31/32	2-23/32	.40
402-251	2x2x1-1/2	1-1/16	1-1/4	1-1/16	2-5/16	2-3/16	2-5/16	4-19/32	2-3/4	2-1/4	2-3/4	.41
402-287	2-1/2x2-1/2x1/2	1/2	1-11/16	1/2	2-1/4	2-3/8	2-1/4	4-1/2	3-3/8	1-3/16	3-3/8	.55
402-288	2-1/2x2-1/2x3/4	13/16	1-11/16	13/16	2-9/16	2-7/16	2-9/16	5-1/8	3-3/8	1-3/8	3-3/8	.64
402-289	2-1/2x2-1/2x1	1	1-23/32	1	2-3/4	2-5/8	2-3/4	5-1/2	3-11/32	1-11/16	3-11/32	.73
402-290	2-1/2x2-1/2x1-1/4	1-1/32	1-25/32	1-1/32	2-25/32	2-21/32	2-25/32	5-9/16	3-11/32	2-1/32	3-11/32	.75
402-291	2-1/2x2-1/2x1-1/2	1-1/16	1-25/32	1-1/16	2-13/16	2-3/4	2-13/16	5-5/8	3-3/8	2-13/32	3-3/8	.77
402-292	2-1/2x2-1/2x2	1-1/2	1-27/32	1-1/2	3-1/4	2-27/32	3-1/4	6-17/32	3-11/32	3	3-11/32	.98
402-333	3x3x1/2	19/32	2-1/16	19/32	2-15/32	2-25/32	2-15/32	4-15/16	3-31/32	1-3/16	3-31/32	.77

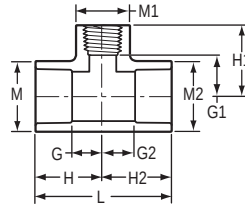


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING TEE

(continued)

Socket x Socket x Fipt

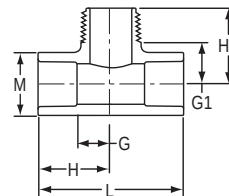


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
402-334	3x3x3/4	13/16	2-1/32	13/16	2-23/32	2-25/32	2-23/32	5-13/32	4	1-3/8	4	.83
402-335	3x3x1	31/32	2-1/32	31/32	2-7/8	2-15/16	2-7/8	5-23/32	4-1/32	1-11/16	4-1/32	.92
402-336	3x3x1-1/4	1	2-1/32	1	2-31/32	3-1/32	2-31/32	5-31/32	4	2	4	.95
402-337	3x3x1-1/2	1-7/32	2-1/8	1-7/32	3-3/32	3-1/16	3-3/32	6-3/16	4	2-13/32	4	1.05
402-338	3x3x2	1-1/2	2-1/8	1-1/2	3-3/8	3-1/8	3-3/8	6-25/32	4	3	4	1.22
402-417	4x4x1	27/32	2-5/8	27/32	2-7/8	3-1/2	2-7/8	5-3/4	5-1/32	1-11/16	5-1/32	1.26
402-419	4x4x1-1/2	1-1/8	2-1/2	1-1/8	3-1/8	3-1/2	3-1/8	6-1/4	5	2-1/4	5	1.33
402-420	4x4x2	1-3/8	2-3/4	1-3/8	3-13/32	3-3/4	3-13/32	6-25/32	5-1/32	3	5-1/32	1.67
402-422	4x4x3	2	2-1/2	2	4-1/32	3-29/32	4-1/32	8-1/16	5-1/16	4-9/32	5-1/16	2.18
402-490	5x5x4	2-1/2	3-1/8	2-1/2	5-17/32	4-29/32	5-17/32	11-1/16	6-3/32	5-1/32	6-3/32	3.69
402-525 ¹	6x6x1	1-3/8	4-11/32	1-3/8	4-27/32	5-11/32	4-27/32	9-11/16	7-7/32	2-23/32	7-7/32	3.66
402-528	6x6x2	1-3/8	3-19/32	1-3/8	4-27/32	4-23/32	4-27/32	9-23/32	7-1/4	2-25/32	7-1/4	3.58
402-530	6x6x3	2	3-19/32	2	5-15/32	5-7/32	5-15/32	10-15/16	7-1/4	4-1/32	7-1/4	4.22
402-532	6x6x4	2-1/2	3-5/8	2-1/2	6	5-11/32	6	12	7-7/32	5-1/16	7-7/32	4.73
402-578 ¹	8x8x2	2	6-1/8	2	6	7-1/8	6	12	9-5/16	3-15/16	9-5/16	6.81
402-580 ¹	8x8x3	2-9/16	5-23/32	1-31/32	6-9/16	7-5/16	6-9/16	13-1/8	9-5/16	5	9-5/16	7.69
402-582 ¹	8x8x4	2-1/2	4-15/16	2-1/2	6-31/32	6-21/32	6-31/32	13-15/16	9-5/16	5	9-5/16	11.20
402-621F	10x10x2	5-1/4	6-11/16	5-1/4	10-1/2	7-3/4	10-1/2	21	11-9/16	2-13/16	11-9/16	17.51
402-622F	10x10x2-1/2	5-1/2	8-1/2	5-1/2	10-3/4	10-1/4	10-3/4	21-1/2	11-9/16	3-5/16	11-9/16	14.80
402-624F	10x10x4	6-3/8	7	6-3/8	11-5/8	8-3/4	11-5/8	23-1/4	11-1/2	5-1/16	11-1/2	22.95
402-661F	12x12x2	5-3/4	7-13/16	5-3/4	12	8-7/8	12	24	13-5/8	2-13/16	13-5/8	26.92
402-663F	12x12x3	6-1/4	9	6-1/4	12-1/2	10-5/8	12-1/2	25	13-5/8	4	13-5/8	29.30
402-664F	12x12x4	6-7/8	8-1/4	6-7/8	13-1/8	10	13-1/8	26-1/4	13-9/16	5-1/16	13-9/16	31.48

¹ Outlet sized with bushing

TEE

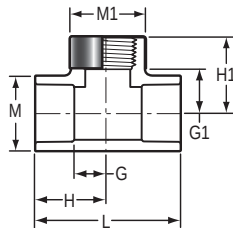
Socket x Socket x Mipt



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
402B-010	1	5/8	1-1/16	1-3/4	2	3-7/16	1-5/8	.15

SPECIAL REINFORCED TEE

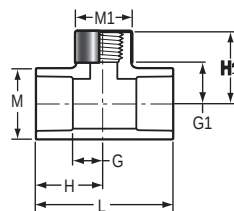
Socket x Socket x SR Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx Wt. (Lbs.)
402-005SR	1/2	19/32	15/32	1-15/32	1-11/32	2-15/16	1-5/32	13/16	.13
402-012SR	1-1/4	29/32	1-1/8	2-5/32	2-1/16	4-5/16	1-31/32	2-1/16	.31

SPECIAL REINFORCED REDUCING TEE

Socket x Socket x SR Fipt



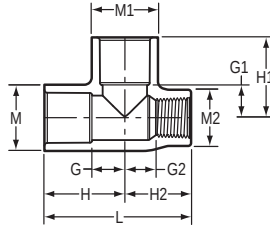
Part Number	Size	G	G1	H	H1	L	M	M1	Approx Wt. (Lbs.)
402-072SR	1/2x1/2x1/4	15/32	11/16	1-5/16	1-7/32	2-5/8	1-5/32	13/16	.09
402-098SR	3/4x3/4x1/4	7/16	13/16	1-7/16	1-11/32	2-7/8	1-3/8	13/16	.12
402-101SR	3/4x3/4x1/2	25/32	1/2	1-5/8	1-7/16	3-1/4	1-3/8	1-3/16	.15
402-166SR	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-7/8	3-3/8	2-3/32	1-3/16	.27
402-168SR	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-23/32	.35
402-212SR	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.49
402-287SR	2-1/2x2-1/2x1/2	1/2	1-11/16	2-1/4	2-3/8	4-1/4	3-3/8	1-3/16	.55
402-288SR	2-1/2x2-1/2x3/4	13/16	1-23/32	2-9/16	2-7/16	5-1/8	3-3/8	1-3/8	.66
402-289SR	2-1/2x2-1/2x1	1	1-23/32	2-3/4	2-5/8	5-1/2	3-11/32	1-11/16	.75
402-290SR	2-1/2x2-1/2x1-1/4	1-1/32	1-25/32	2-25/32	2-21/32	5-9/16	3-11/32	2-1/32	.77
402-291SR	2-1/2x2-1/2x1-1/2	1-1/16	1-25/32	2-13/16	2-3/4	5-5/8	3-3/8	2-7/16	.80
402-292SR	2-1/2x2-1/2x2	1-1/2	1-27/32	3-1/4	2-27/32	6-17/32	3-11/32	3	1.02
402-333SR	3x3x1/2	19/32	2-1/16	2-15/32	2-25/32	4-15/16	3-31/32	1-3/16	.78
402-334SR	3x3x3/4	13/16	2-1/32	2-23/32	2-25/32	5-13/32	4	1-3/8	.84
402-335SR	3x3x1	31/32	2	2-7/8	2-29/32	5-23/32	4-1/32	1-23/32	.94
402-336SR	3x3x1-1/4	1-1/32	2-3/32	2-29/32	3-3/32	5-13/16	4	2-1/16	1.00
402-337SR	3x3x1-1/2	1-7/32	2-1/8	3-3/32	3-3/32	6-9/32	3-31/32	2-7/16	1.06
402-338SR	3x3x2	1-1/2	2-1/16	3-13/32	3-1/16	6-7/8	4	3	1.20
402-417SR	4x4x1	27/32	2-5/8	27/32	3-17/32	5-3/4	5-1/32	1-23/32	1.28
402-419SR	4x4x1-1/2	1-1/8	2-25/32	3-1/8	3-3/4	6-9/32	5-1/32	2-7/16	1.52
402-420SR	4x4x2	1-3/8	2-25/32	3-13/32	3-25/32	6-25/32	5-1/32	3-1/32	1.71
402-422SR	4x4x3	2	2-1/2	4-1/32	3-15/16	8-1/16	5-1/16	4-9/32	2.19



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING TEE

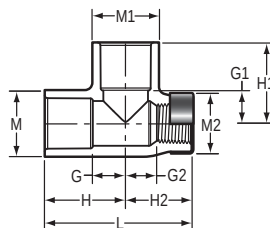
Socket x Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
403-095	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-3/8	3-3/32	1-13/32	1-13/32	1-3/16	.15

SPECIAL REINFORCED REDUCING TEE

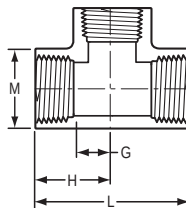
Socket x SR Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
403-095SR	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-13/32	3-1/8	1-13/32	1-13/32	1-7/32	.16

TEE

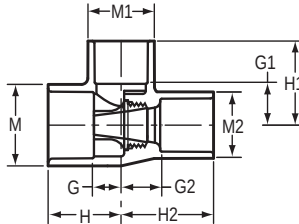
Fipt x Fipt x Fipt



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
405-005	1/2	17/32	1-1/4	2-1/2	1-3/32	.08
405-007	3/4	19/32	1-3/8	2-3/4	1-9/32	.10
405-010	1	11/16	1-19/32	3-3/16	1-23/32	.19
405-012	1-1/4	15/16	1-15/16	3-7/8	2-7/32	.48
405-015	1-1/2	1	2	4-1/32	2-7/32	.34
405-020	2	1-1/4	2-5/16	4-19/32	2-23/32	.56

VENTURIED TEE

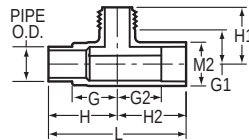
1" Socket x 3/4" Socket (1" Spigot) x 3/4" Socket (1" Spigot)



Part Number	Size	G	G1	G2	H	H1	H2	M	M1	M2	Approx. Wt. (Lbs.)
473-825	1x3/4x3/4	19/32	27/32	3/4	1-1/2	1-11/16	1-25/32	1-5/8	1-5/16	1-5/16	.15

MANIFOLD TEE

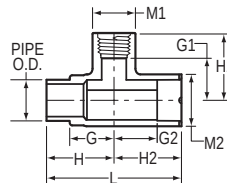
Spigot x Socket x Mipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M2	Approx. Wt. (Lbs.)
476-010	1	1-23/32	1-11/32	1-11/16	2-5/8	2-5/32	2-5/8	5-1/4	1-21/32	.24

MANIFOLD TEE

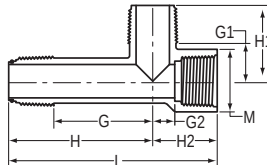
Spigot x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
477-010	1	1-23/32	1-1/4	1-11/16	2-5/8	2-5/32	2-5/8	5-1/4	1-21/32	1-21/32	.27

O-RING SEALED MANIFOLD TEE

O-ring Sealed Mipt x Fipt x Mipt



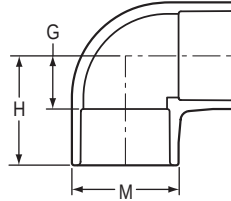
Part Number	Size	G	G1	G2	H	H1	H2	L	M	Approx. Wt. (Lbs.)
451A-010	1	2-19/32	31/32	3/4	3-13/16	1-31/32	1-11/16	5-1/2	1-21/32	.19



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

90° ELBOW

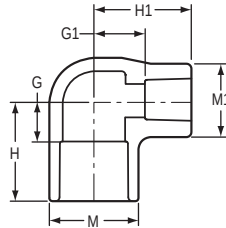
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-003	3/8	3/8	1-1/8	7/8	.03
406-005	1/2	1/2	1-1/4	1-1/8	.05
406-007	3/4	9/16	1-1/2	1-11/32	.07
406-010	1	11/16	1-13/16	1-5/8	.12
406-012	1-1/4	31/32	2-5/32	2	.20
406-015	1-1/2	1-1/16	2-11/32	2-1/4	.25
406-020	2	1-15/32	2-27/32	2-3/4	.42
406-025	2-1/2	1-1/2	3-1/4	3-11/32	.73
406-030	3	1-27/32	3-23/32	4	1.03
406-040	4	2-13/32	4-13/32	5-1/32	1.73
406-045F	4-1/2	8-5/8	6-1/8	5-7/16	3.13
406-050	5	3-1/16	6-1/8	6-5/32	3.58
406-060	6	3-17/32	6-9/16	7-9/32	4.52
406-080	8	4-7/16	8-15/32	9-11/32	8.70
406-100	10	5-13/16	10-27/32	11-19/32	15.75
406-100F	10	9-1/2	14-3/4	11-1/2	17.40
406-120	12	7-1/16	13-9/16	14-1/4	27.98
406-120F	12	10-1/2	16-3/4	13-9/16	25.94
406-140F	14	12-1/4	19-1/4	14-7/8	47.26
406-160F	16	14-1/8	22-1/8	17	69.70
406-180F	18	17-1/4	26-1/4	19-1/8	104.20
406-200F	20	18-3/4	28-3/4	21-3/16	131.93
406-240F	24	22-1/4	34-1/4	25-3/8	216.00

REDUCING 90° ELBOW

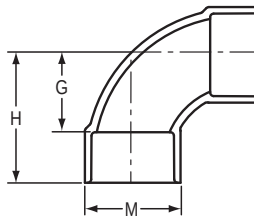
Socket x Socket



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
406-053	3/8x1/2	11/32	9/16	1-19/32	2-1/16	7/8	1-1/8	.06
406-101	3/4x1/2	1/2	19/32	1-1/2	1-11/32	1-5/16	1-3/32	.06
D406-101	3/4x1/2	1/2	11/16	1-1/2	1-15/16	1-5/16	1-1/8	.08
406-130	1x1/2	9/16	1-1/16	1-11/16	1-13/16	1-5/8	1-1/8	.08
D406-130	1x1/2	9/16	19/32	1-11/16	1-27/32	1-5/8	1-3/32	.13
406-131	1x3/4	21/32	23/32	1-25/32	1-23/32	1-19/32	1-5/16	.12
406-166	1-1/4x1/2	9/16	1	1-13/16	1-3/4	2	1-3/32	.11
D406-166	1-1/4x1/2	9/16	1	1-25/32	2-1/4	2	1-3/32	.14
406-167	1-1/4x3/4	23/32	1	1-31/32	1-15/16	2	1-5/16	.13
406-168	1-1/4x1	11/16	7/8	1-15/16	2	2	1-21/32	.16
406-209	1-1/2x1/2	17/32	1-27/32	1-3/32	1-27/32	2-7/32	1-3/32	.15
406-211	1-1/2x1	11/16	1-3/32	2-1/8	2-5/32	2-1/4	1-5/8	.20
406-212	1-1/2x1-1/4	31/32	1-3/32	2-9/32	2-11/32	2-7/32	1-31/32	.24
406-249	2x1	27/32	1-11/32	2-7/32	2-15/32	2-23/32	1-19/32	.26
406-250	2x1-1/4	1-1/32	1-7/16	2-13/32	2-21/32	2-23/32	1-31/32	.31
406-251	2x1-1/2	1-1/8	1-5/16	2-15/32	2-9/16	2-3/4	2-1/4	.32
406-251N	2x1-1/2(2)	1-1/16	1-21/32	2-7/16	2-15/16	2-3/4	2-3/8	.43
406-292	2-1/2x2	1-1/4	1-1/2	3	2-7/8	3-11/32	2-23/32	.56
406-292N	2-1/2x2(2-1/2)	1-1/4	2-9/32	3	3-3/16	3-5/16	2-7/8	.71

90° SWEEP ELBOW

Socket x Socket



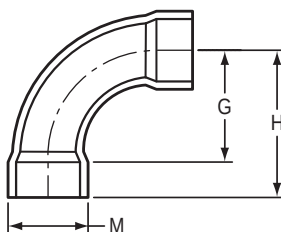
Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-005S	1/2	27/32	1-23/32	1-3/16	.08
406-007S	3/4	1-1/32	2-1/32	1-13/32	.12
406-010S	1	1-5/16	2-7/16	1-23/32	.20
406-012S	1-1/4	1-9/16	2-13/16	2-3/32	.30
406-015S	1-1/2	1-3/4	3-5/32	2-11/32	.36
406-020S	2	2-5/16	3-13/16	2-7/8	.68
406-025S	2-1/2	3-3/16	4-31/32	3-11/32	.88
406-030S	3	3-1/32	4-15/16	4	1.25



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

LONG SWEEP ELBOW

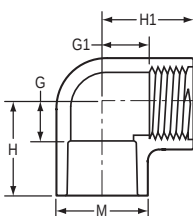
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-025LSF	2-1/2	5-7/16	7-7/16	3-1/4	1.26
406-030LSF	3	6-3/8	8-5/8	3-15/16	1.87
406-040LSF	4	8-3/8	10-5/8	5	2.69
406-060LSF	6	13	16-1/4	7-3/16	6.92
406-080LSF	8	22-7/16	26-11/16	9-1/4	19.43

90° ELBOW

Socket x Fipt

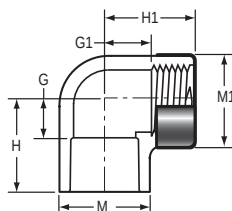


Part Number	Size	G	G1	H	H1	M	Approx. Wt. (Lbs.)
407-005	1/2	1/2	1/2	1-1/4	1-1/4	1-3/32	.06
407-007	3/4	9/16	9/16	1-9/16	1-9/32	1-5/16	.08
407-010	1	11/16	21/32	1-13/16	1-9/16	1-5/8	.14
407-012	1-1/4	7/8	1-5/32	2-1/8	2-1/32	2-1/16	.26
407-015	1-1/2	1	1-1/16	2-5/16	2	2-1/4	.25
407-020	2	1-3/16	1-9/32	2-11/32	2-11/32	2-11/32	.47
407-025	2-1/2	1-1/2	1-1/2	3-1/2	3-1/16	3-5/16	.94
407-030	3	1-13/16	1-31/32	3-11/16	3-21/32	4	1.14
407-040	4	2-5/16	2-15/32	4-5/16	3-15/16	5-1/16	1.85

SPECIAL REINFORCED

90° ELBOW

Socket x SR Fipt



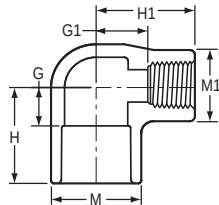
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-005SR	1/2	1/2	9/16	1-1/4	1-9/32	1-3/32	1-7/32	.07
407-007SR	3/4	9/16	21/32	1-13/32	1-13/32	1-3/8	1-13/32	.11
407-010SR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.20
407-012SR	1-1/4	7/8	1-5/32	2-1/8	2-1/32	2-1/16	2-1/16	.28

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



REDUCING 90° ELBOW

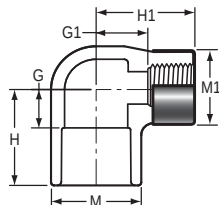
Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-053	3/8x1/2	17/32	17/32	1-9/32	1-9/32	7/8	1-3/32	.04
407-074	1/2x3/4	21/32	9/16	1-13/32	1-11/32	1-5/16	1-3/32	.07
407-101	3/4x1/2	9/16	5/8	1-1/2	1-3/8	1-5/16	1-3/32	.07
407-130	1x1/2	7/16	23/32	1-19/32	1-7/16	1-5/8	1-3/32	.12
407-131	1x3/4	11/16	7/8	1-13/16	1-5/8	1-5/8	1-5/16	.11
407-168	1-1/4x1	1	1-1/32	2-1/4	2	2	1-5/8	.19
407-211	1-1/2x1	13/16	1-1/8	2-3/32	2	2-1/4	1-5/8	.21
407-212	1-1/2x1-1/4	15/16	1-1/4	2-1/4	2-7/32	2-3/16	1-15/16	.24
407-249	2x1	13/16	1-9/16	2-5/16	2-3/8	2-3/4	1-11/16	.31
407-250	2x1-1/4	1	1-1/4	2-3/8	2-7/32	2-3/4	2	.31
407-251	2x1-1/2	1-1/8	1-9/16	2-1/2	2-1/2	2-23/32	2-13/32	.42

SPECIAL REINFORCED REDUCING 90° ELBOW

Socket x SR Fipt



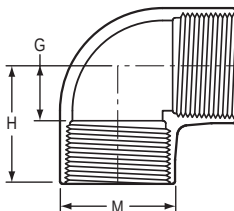
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-249SR	2x1	1-3/16	1-9/16	2-5/16	2-3/8	2-3/4	1-1/16	.33
407-251SR	2x1-1/2	1-1/8	1-19/32	2-1/2	2-17/32	2-23/32	2-7/16	.45



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

90° ELBOW

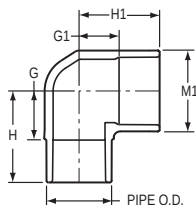
Fipt x Fipt



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
408-005	1/2	1/2	1-7/32	1-3/32	.06
408-007	3/4	1/2	1-1/4	1-5/16	.09
408-010	1	5/8	1-17/32	1-5/8	.16
408-012	1-1/4	1	2	1-31/32	.26
408-015	1-1/2	1	2	1-15/16	.34
408-020	2	1-5/16	2-11/32	2-3/4	.50

90° STREET ELBOW

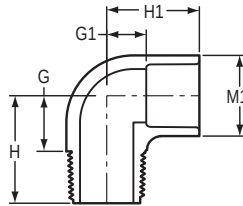
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
409-005	1/2	11/16	13/32	1-7/16	1-5/32	1-5/32	.05
409-007	3/4	27/32	17/32	1-27/32	1-17/32	1-11/32	.08
409-010	1	1	23/32	2-1/8	1-13/16	1-5/8	.12
409-012	1-1/4	1-3/16	13/16	2-15/32	2-1/16	1-31/32	.19
409-015	1-1/2	1-11/32	1-1/16	2-5/8	2-3/8	2-1/4	.25
409-020	2	1-19/32	1-1/4	2-31/32	2-5/8	2-23/32	.35
409-025	2-1/2	1-15/32	1-17/32	3-23/32	3-3/8	3-11/32	.76
409-030	3	2-9/32	1-13/16	4-5/32	3-11/16	4	1.09
409-040	4	2-29/32	2-5/16	4-15/16	4-11/32	5-1/16	1.86
409-050	5	4-1/2	3	7-3/4	6	6-1/8	4.36
409-060	6	5-1/4	3-1/2	8-7/8	6-15/16	7-1/2	5.95
409-080	8	6-3/8	4-15/32	10-9/16	8-1/2	9-5/16	10.37
409-080F	8	7-1/2	7-1/2	11-3/4	11-3/4	9-1/4	10.02
409-100F	10	8-1/4	5-3/4	13-1/2	13-3/4	11-1/2	18.20
409-140F	14	12-1/4	12-1/4	19-1/4	19-1/4	14-7/8	39.38
409-160F	16	18-5/8	14-1/8	27-5/8	22-1/8	17	75.48
409-180F	18	21-3/4	17-1/4	31-3/4	26-1/4	19-1/8	115.96
409-200F	20	25-3/4	18-3/4	34-3/4	28-3/4	21-3/16	151.63

90° STREET ELBOW

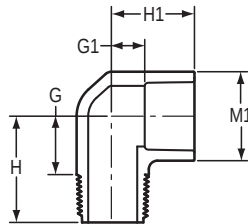
Mipt x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
410-005	1/2	21/32	3/8	1-11/32	1-5/32	1-3/32	.04
410-007	3/4	27/32	15/32	1-17/32	1-15/32	1-5/16	.08
410-010	1	1-1/32	11/16	1-29/32	1-13/16	1-5/8	.13
410-012	1-1/4	1-9/32	25/32	2-7/32	2	1-31/32	.18
410-015	1-1/2	1-13/32	1	2-13/32	2-5/16	2-7/32	.40
410-020	2	1-5/8	1-11/32	2-9/16	2-23/32	2-23/32	.41

REDUCING 90° STREET ELBOW

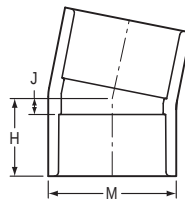
Mipt x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
410-101	3/4x1/2	23/32	13/32	1-7/16	1-1/4	1-3/32	.06
410-102	3/4x1	3/4	1/2	1-3/4	1-11/32	1-5/8	.09

11-1/4° ELBOW

Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
411-005F	1/2	1-5/16	5/16	1-1/16	.05
411-007F	3/4	1-5/16	5/16	1-1/4	.07
411-010F	1	1-9/16	5/16	1-9/16	.10
411-012F	1-1/4	2	1/2	1-5/16	.21
411-015	1-1/2	1-19/32	7/32	2-3/8	.24

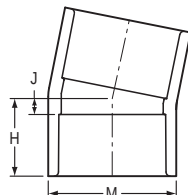


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

11-1/4° ELBOW

(continued)

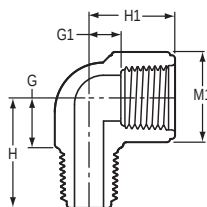
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
411-015F	1-1/2	2	1/2	2-3/16	.21
411-020	2	1-3/4	1/4	2-13/16	.33
411-025F	2-1/2	2-11/16	11/16	3-1/4	.57
411-030	3	1-7/8	5/16	4-1/8	.88
411-040	4	2-21/32	13/32	5-1/4	1.51
411-045F	4-1/2	3-1/4	3/4	5-7/16	1.32
411-050F	5	3-13/16	13/16	6-1/16	2.18
411-060F	6	4-1/4	1	7-3/16	2.75
411-080F	8	5-5/16	1-1/16	9-1/4	5.29
411-100F	10	6-27/32	1-15/32	11-1/2	9.42
411-120F	12	7-31/32	1-23/32	13-5/8	14.08
411-140F	14	8-3/4	1-3/4	14-7/8	18.71
411-160F	16	10-1/4	2-1/4	17	28.40
411-180F	18	12	3-1/8	19-1/8	45.02
411-200F	20	13-3/8	3-3/8	21-3/16	57.11
411-240F	24	15-1/8	4-1/8	25-1/2	90.42

90° STREET ELBOW

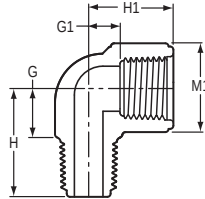
Mipt x Fipt



Part Number		Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)	
PVC	HDPE							PVC	HDPE
412-005	M412-005	1/2	23/32	11/32	1-13/32	1-1/16	1-1/8	.05	.04
412-007	M412-007	3/4	13/16	7/16	1-17/32	1-3/16	1-11/32	.07	.04
412-010	M412-010	1	15/16	9/16	1-25/32	1-7/16	1-5/8	.13	.08
412-012	M412-012	1-1/4	1-7/32	7/8	2-7/32	1-7/8	1-31/32	.19	.15
412-015	M412-015	1-1/2	1-11/32	1-1/8	2-11/32	2-1/8	2-9/32	.24	.20
412-020	N/A	2	1-19/32	1-1/4	2-3/4	2-5/16	2-23/32	.39	---
412-030	N/A	3	2-25/32	1-7/8	4-15/32	3	4-3/4	1.50	---

90° STREET ELBOW (Short Pattern)

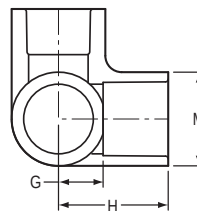
Mipt x Fipt



Part Number - HDPE	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
MS412-005	1/2	21/32	5/16	1-3/16	31/32	1-1/16	.02
MS412-007	3/4	3/4	7/16	1-5/16	1-3/32	1-9/32	.03
MS412-010	1	7/8	9/16	1-9/16	1-3/8	1-9/16	.06
MS412-101	3/4x1/2	21/32	1/2	1-7/32	1-1/8	1	.03

SIDE OUTLET ELBOW

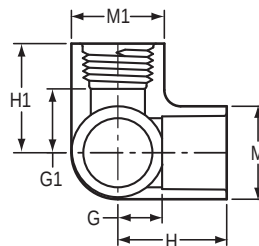
Socket x Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
413-005	1/2	1/2	1-1/4	1-3/32	.06
413-007	3/4	9/16	1-9/16	1-5/16	.10
413-010	1	3/16	1-7/8	1-5/8	.17
413-015	1-1/2	1-1/16	2-5/16	2-1/4	.31
413-020	2	1-5/16	2-5/8	2-3/4	.47

SIDE OUTLET ELBOW

Socket x Socket x Fipt



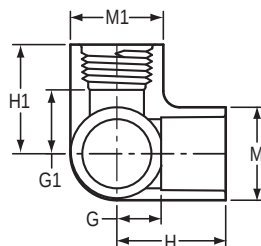
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
414-005	1/2	1/2	1/2	1-1/4	1-1/4	1-3/32	1-3/32	.07
414-007	3/4	9/16	5/8	1-9/16	1-7/16	1-9/32	1-9/32	.10



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

SIDE OUTLET ELBOW (continued)

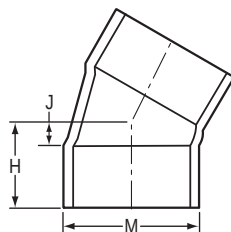
Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
414-101	3/4x3/4x1/2	9/16	21/32	1-9/16	1-13/32	1-5/16	1-1/16	.09
414-130	1x1x1/2	11/16	3/4	1-13/16	1-9/16	1-5/8	1-1/16	.14

30° ELBOW

Socket x Socket



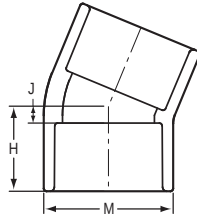
Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
415-005F	1/2	1-3/8	3/8	1-1/16	0.04
415-007F	3/4	1-7/16	7/16	1-1/4	0.07
415-010F	1	1-3/4	1/2	1-9/16	0.12
415-012F	1-1/4	2-1/8	5/8	1-15/16	0.17
415-015F	1-1/2	2-3/16	11/16	2-3/16	0.19
415-020F	2	2-1/2	3/4	2-11/16	0.34
415-025F	2-1/2	2-15/16	15/16	3-1/4	0.62
415-030F	3	3-5/16	1-1/16	3-15/16	0.93
415-040F	4	3-7/16	1-3/16	5	1.39
415-045F	4-1/2	3-3/4	1-1/4	5-7/16	1.48
415-050F	5	4-5/16	1-5/16	6-1/16	2.27
415-060F	6	4-7/8	1-5/8	7-3/16	3.25
415-080F	8	6-1/8	1-7/8	9-1/4	5.40
415-100F	10	7-1/4	2	11-1/2	10.67
415-120F	12	9-5/16	2-9/16	13-1/2	16.56
415-140F	14	9-3/4	2-3/4	14-7/8	20.68
415-160F	16	11-7/8	3-7/8	17	32.27
415-180F	18	13-1/2	4-1/2	19-1/8	48.74
415-200F	20	15-1/4	5-1/4	21-1/4	63.01
415-240F	24	17	6	25-1/2	104.12

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



22-1/2° ELBOW

Socket x Socket



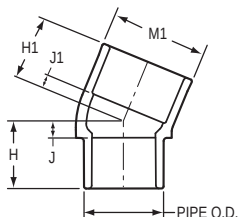
Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
416-005	1/2	1-1/16	3/16	1-5/32	.06
416-007	3/4	1-3/16	3/16	1-7/16	.09
416-010	1	1-3/8	9/32	1-23/32	.13
416-012	1-1/4	1-1/2	11/32	2-3/32	.21
416-015	1-1/2	1-11/32	11/32	2-11/32	.26
416-020	2	1-23/32	3/8	2-25/32	.24
416-025	2-1/2	2-1/4	1/2	3-1/2	.69
416-025F	2-1/2	2-13/16	13/16	3-1/4	.63
416-030	3	2-13/32	9/16	4-5/32	.83
416-040	4	2-27/32	19/32	5-3/16	1.69
416-045F	4-1/2	3-9/16	1-1/16	5-7/16	1.59
416-050F	5	4-1/8	1-1/8	6-1/16	2.27
416-060	6	4-9/16	1-9/32	7-3/16	4.39
416-060F	6	4-5/8	1-3/8	7-3/16	3.25
416-080	8	5-7/8	1-3/4	9-3/4	8.38
416-080F	8	5-13/16	1-9/16	9-1/4	5.73
416-100F	10	7-7/16	2-3/16	11-1/2	10.04
416-120F	12	8-1/2	2-1/4	13-9/16	15.74
416-140F	14	9-1/2	2-1/2	15	19.69
416-160F	16	11-1/4	3-1/4	17	30.98
416-180F	18	13-1/2	4-1/2	19-3/16	45.38
416-200F	20	14-1/2	4-1/2	21-3/16	59.07
416-240F	24	16-1/8	5-1/8	25-1/2	98.64



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

22-1/2° STREET ELBOW

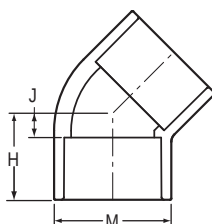
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
442-005	1/2	1-1/16	1	1/4	1/4	1-5/32	.05
442-010	1	1-15/32	1-3/8	11/32	9/32	1-11/16	.13
442-012	1-1/4	1-1/2	1-3/8	3/16	1-11/16	2-1/16	.20
442-015	1-1/2	1-21/32	1-7/8	9/32	1/2	2-3/8	.26
442-020	2	2	1-29/32	15/32	13/32	2-7/8	.40
442-025F	2-1/2	4-9/16	1-13/16	13/16	3/16	3-1/4	.81
442-030	3	2-1/2	2-5/16	21/32	7/16	4-5/32	.95
442-040	4	4-3/8	2-7/8	1-7/8	5/8	5-1/4	2.14
442-060	6	5-11/16	3-15/16	2-3/8	7/8	7-5/8	5.87
442-080	8	7-3/8	5-1/8	3-1/8	1-1/8	9-3/4	11.34

45° ELBOW

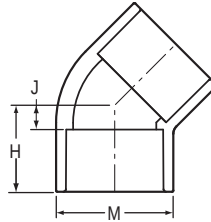
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
417-005	1/2	1-1/8	11/32	1-3/32	.04
417-007	3/4	1-3/8	7/16	1-5/16	.07
417-010	1	1-1/2	15/32	1-21/32	.11
417-012	1-1/4	1-19/32	3/8	1-31/32	.15
417-015	1-1/2	1-29/32	19/32	2-1/4	.22
417-020	2	2-1/16	11/16	2-3/4	.31
417-025	2-1/2	2-7/16	21/32	3-11/32	.56
417-030	3	2-27/32	27/32	4	.84
417-040	4	3-3/32	1-3/32	5-1/32	1.22
417-045F	4-1/2	4-3/16	1-11/16	5-7/16	1.59
417-050	5	4-3/8	1-3/8	6-1/16	2.41
417-060	6	4-3/4	1-11/16	7-9/32	3.47
417-080	8	6-7/16	2	9-9/32	6.56
417-100	10	8-1/8	3-1/8	11-1/2	20.72

45° ELBOW (continued)

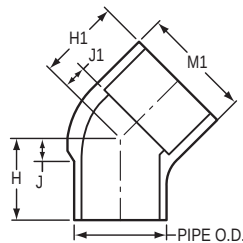
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
417-120	12	9-19/32	3-3/32	14-5/16	34.15
417-120F	12	9-19/32	3-11/32	13-9/16	17.39
417-140F	14	10-7/8	3-7/8	14-7/8	24.61
417-160F	16	12-1/2	4-1/2	17	34.85
417-180F	18	14-7/8	5-7/8	19-1/8	52.10
417-200F	20	16-1/2	6-1/2	21-3/16	68.92
417-240F	24	19-7/8	7-7/8	25-1/2	112.34

45° STREET ELBOW

Spigot x Socket



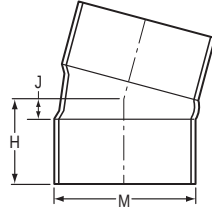
Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
427-005	1/2	1-9/32	1-9/32	11/32	13/32	1-3/16	.06
427-007	3/4	1-1/2	1-17/32	7/16	17/32	1-13/32	.09
427-010	1	1-19/32	1-21/32	13/32	17/32	1-23/32	.10
427-012	1-1/4	1-25/32	1-29/32	1/2	21/32	2-3/32	.22
427-015	1-1/2	2-1/32	2-3/32	19/32	23/32	2-11/32	.19
427-020	2	2	2	5/8	15/32	2-23/32	.30
427-025	2-1/2	2-5/8	2-5/8	3/4	7/8	3-11/32	.59
427-030	3	2-31/32	3-1/32	1	1-7/32	4-5/32	1.19
427-040	4	3-21/32	3-13/16	1-9/32	1-9/16	5-3/16	2.07
427-050	5	6-1/8	4-3/8	2-7/8	1-3/8	6-1/16	3.49
427-060	6	5-1/4	6-1/4	1-3/4	3	7-5/8	6.16
427-080	8	6-5/8	5-31/32	2-19/32	1-3/4	9-3/4	10.60



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

15° ELBOW

Socket x Socket



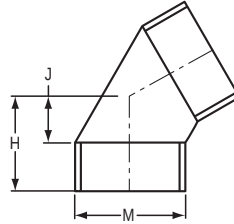
Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
418-005F	1/2	1-5/16	5/16	1-1/16	.05
418-007F	3/4	1-5/16	5/16	1-1/4	.07
418-010F	1	1-5/8	3/8	1-9/16	.11
418-012F	1-1/4	2	1/2	1-15/16	.14
418-015F	1-1/2	2	1/2	2-3/16	.20
418-020F	2	2-5/16	9/16	2-11/16	.34
418-025F	2-1/2	2-3/4	3/4	3-1/4	.57
418-030F	3	3	3/4	3-15/16	.82
418-040F	4	3	13/16	5	1.39
418-045F	4-1/2	3-3/8	7/8	5-7/16	1.36
418-050F	5	3-7/8	7/8	6-1/16	1.88
418-060F	6	4-3/8	1-1/8	7-3/16	2.95
418-080F	8	5-1/2	1-1/4	9-1/4	5.29
418-100F	10	6-31/32	1-19/32	11-1/2	9.42
418-120F	12	8-1/4	2	13-9/16	14.91
418-140F	14	9-1/8	2-1/8	15	19.69
418-160F	16	10-5/8	2-5/8	17	29.69
418-180F	18	12-1/4	3-1/4	19-1/8	43.70
418-200F	20	13-5/8	3-5/8	21-1/4	57.11
418-240F	24	14-7/8	3-7/8	25-1/2	90.42

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



60° ELBOW

Socket x Socket



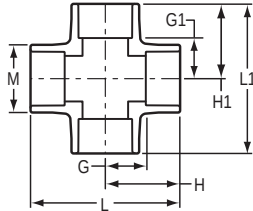
Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
424-005F	1/2	1-5/8	5/8	1-1/16	.13
424-007F	3/4	1-11/16	11/16	1-1/4	.07
424-010F	1	2	3/4	1-9/16	.17
424-012F	1-1/4	2-1/2	1	1-15/16	.38
424-015F	1-1/2	2-9/16	1-1/16	2-3/16	.27
424-020F	2	2-15/16	1-3/16	2-11/16	.59
424-025F	2-1/2	3-1/2	1-1/2	3-1/4	1.38
424-030F	3	3-5/8	1-3/8	3-15/16	1.70
424-040F	4	4-1/4	2	5	1.52
424-045F	4-1/2	4-5/8	2-1/8	5-7/16	2.96
424-050F	5	5-5/16	2-5/16	6-1/16	2.42
424-060F	6	6-1/16	2-13/16	7-3/16	6.20
424-080F	8	7-5/8	3-3/8	9-1/4	11.89
424-100F	10	9-1/4	4	11-1/2	20.09
424-120F	12	11	4-3/4	13-9/16	31.47
424-140F	14	17-1/2	10-1/2	15	42.32
424-160F	16	20-1/4	12-1/4	17	36.39
424-180F	18	22-7/8	13-7/8	19-3/16	94.11
424-200F	20	26-1/4	16-1/4	21-1/4	122.09
424-240F	24	31	20	25-1/2	199.58



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

CROSS

Socket x Socket x Socket x Socket



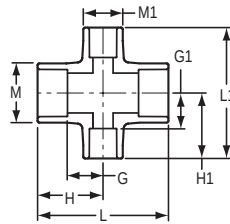
Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
420-005	1/2	17/32	17/32	1-9/32	1-9/32	2-17/32	2-17/32	1-3/32	.07
420-007	3/4	9/16	9/16	1-9/16	1-9/16	3-1/8	3-1/8	1-5/16	.12
420-010	1	13/16	13/16	1-15/16	1-15/16	3-7/8	3-7/8	1-5/8	.25
420-012	1-1/4	1-3/32	1-3/32	2-11/32	2-11/32	4-23/32	4-23/32	2-1/16	.43
420-015	1-1/2	1-1/4	1-1/4	2-19/32	2-19/32	5-5/32	5-5/32	2-5/16	.54
420-020	2	1-17/32	1-17/32	2-29/32	2-29/32	5-27/32	5-27/32	2-13/16	.78
420-025	2-1/2	1-21/32	1-21/32	3-21/32	3-21/32	7-11/32	7-11/32	3-3/8	1.61
420-030	3	2-1/16	2-1/16	3-15/16	3-15/16	7-29/32	7-29/32	4-1/32	1.74
420-040	4	2-1/2	2-1/2	4-1/2	4-1/2	9-1/32	9-1/32	5-1/32	3.22
420-050F	5	6	6	9	9	18	18	6-1/16	13.68
420-060F	6	6-3/16	6-3/16	9-7/16	9-7/16	18-7/8	18-7/8	7-3/16	12.36
420-080F	8	8-9/16	8-9/16	12-13/16	12-13/16	25-5/8	25-5/8	9-1/4	26.10
420-100F	10	9-7/8	9-3/8	15-1/8	14-5/8	30-1/4	29-1/4	11-1/2	43.81
420-120F	12	10-3/4	10-3/16	17	16-7/16	34	32-7/8	13-9/16	66.22
420-140F	14	11-1/4	11	18-3/8	18	36-3/4	36	14-7/8	84.87
420-160F	16	15	12-7/8	23	20-7/8	46	41-3/4	17	128.99
420-180F	18	15-7/8	13-3/8	24-7/8	22-3/8	49-3/4	44-3/4	19-1/8	176.46
420-200F	20	18-1/4	15-1/2	28-1/4	25-1/2	56-1/2	51	21-3/16	153.70
420-240F	24	21-1/8	17-1/2	33-1/8	29-1/2	66-1/4	59	25-3/8	253.36

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



REDUCING CROSS

Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-101 ¹	3/4x3/4x1/2x1/2	1-7/16	1-1/16	1-9/16	1-13/16	3-1/8	3-5/8	1-5/16	1-5/16	.17
420-131	1x1x3/4x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-17/32	.30
420-167 ¹	1-1/4x1-1/4x3/4x3/4	1-1/8	1-21/32	2-11/32	2-21/32	4-11/16	5-5/16	2-1/32	2-1/32	.71
420-168 ¹	1-1/4x1-1/4x1x1	1-3/32	1-9/16	2-11/32	2-5/8	4-23/32	5-7/32	2-1/16	2-1/16	.56
420-248	2x2x3/4x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.55
420-249	2x2x1x1	13/16	1-3/8	2-3/16	2-1/2	4-3/8	5	2-3/4	1-5/8	.39
420-250 ¹	2x2x1-1/4x1-1/4	1-9/16	2-1/16	2-15/16	3-15/16	5-27/32	6-5/8	2-13/16	2-13/16	1.34
420-251 ¹	2x2x1-1/2x1-1/2	1-17/32	1-25/32	2-29/32	3-1/8	5-13/16	6-1/4	2-25/32	2-25/32	1.18
420-289 ¹	2-1/2x2-1/2x1x1	1-21/32	2-27/32	3-21/32	3-31/32	7-11/32	7-29/32	3-3/8	3-3/8	2.31
420-335 ¹	3x3x1x1	1-15/16	3-1/4	3-15/16	4-3/8	7-7/8	8-3/4	4	4	3.12
420-336 ¹	3x3x1-1/4x1-1/4	2	3-1/8	3-15/16	4-3/8	7-7/8	8-3/4	4	4	3.11
420-337 ¹	3x3x1-1/2x1-1/2	1-31/32	3-1/16	3-31/32	4-3/8	7-15/16	8-23/32	4-1/32	4-1/32	3.14
420-338 ¹	3x3x2x2	2-1/16	2-5/8	3-31/32	4-9/32	7-29/32	8-9/16	4-1/32	4-1/32	2.72
420-339 ¹	3x3x2-1/2x2-1/2	1-15/16	2-11/32	3-15/16	4-11/32	7-7/8	8-11/16	4	4	2.97
420-420 ¹	4x4x2x2	2-1/2	3-17/32	4-1/2	4-29/32	9-1/32	9-13/16	5-1/32	5-1/4	4.99
420-420F	4x4x2x2	4-1/2	4-1/4	6-3/4	6	13-1/2	12	5-1/16	2-11/16	3.37
420-421 ¹	4x4x2-1/2x2-1/2	2-1/2	2-15/16	4-1/2	4-15/16	9	9-7/8	5	5	5.08
420-422 ¹	4x4x3x3	2-1/2	2-15/16	4-1/2	4-15/16	9	9-7/8	5	5	4.90
420-528F	6x6x2x2	5-1/8	5-5/16	8-3/8	7-1/16	16-3/4	14-1/8	7-3/16	2-11/16	7.71
420-529F	6x6x2-1/2x2-1/2	5-3/8	5-13/16	8-5/8	7-13/16	17-1/4	15-5/8	7-3/16	3-1/4	9.21
420-530F	6x6x3x3	5-7/8	6-1/16	9-1/8	8-5/16	18-1/4	16-5/8	7-3/16	3-15/16	9.21
420-532F	6x6x4x4	5	6-3/8	8-1/4	8-5/8	16-1/2	17-1/4	7-3/16	5	10.35
420-578F	8x8x2x2	5-5/16	6-1/4	9-9/16	8	19-1/8	16	9-1/4	2-11/16	11.23
420-580F	8x8x3x3	5-11/16	7	9-15/16	9-1/4	19-7/8	18-1/2	9-1/4	3-15/16	14.45
420-582F	8x8x4x4	6-5/16	7-5/16	10-9/16	9-9/16	21-1/8	19-1/8	9-1/4	5	16.52
420-585F	8x8x6x6	7-5/16	7-3/8	11-9/16	10-5/8	23-1/8	21-1/4	9-1/4	7-3/16	20.11
420-621F	10x10x2x2	4-7/8	7-1/4	10-1/8	9	20-1/4	18	11-1/2	2-11/16	16.08
420-622F	10x10x2-1/2	5-5/8	7-3/4	10-7/8	9-3/4	21-3/4	19-1/2	11-1/2	3-1/4	20.48
420-623F	10x10x3x3	5-3/8	8	10-5/8	10-1/4	21-1/4	20-1/2	11-1/2	3-15/16	22.78
420-624F	10x10x4x4	5-7/8	8-5/16	11-1/8	10-9/16	22-1/4	21-1/8	11-1/2	5	22.73
420-626F	10x10x6x6	6-7/8	8-3/8	12-1/8	11-5/8	24-1/4	23-1/4	11-1/2	7-3/16	30.13
420-628F	10x10x8x8	8-1/2	8-5/16	13-3/4	12-9/16	27-1/2	25-1/8	11-1/2	9-1/4	35.40
420-661F	12x12x2x2	5-1/4	8-1/4	11-1/2	10	23	20	13-9/16	2-11/16	29.47
420-662F	12x12x2-1/2x2-1/2	5-3/4	8-3/4	12	10-3/4	24	21-1/2	13-9/16	3-1/4	29.06
420-663F	12x12x3x3	5-3/4	9	12	11-1/4	24	22-1/2	13-9/16	3-15/16	34.47
420-664F	12x12x4x4	7	9-5/16	13-1/4	11-9/16	26-1/2	23-1/8	13-9/16	5	33.96
420-666F	12x12x6x6	8	9-3/8	14-1/4	12-5/8	28-1/2	25-1/4	13-9/16	7-3/16	39.69
420-668F	12x12x8x8	8-3/4	9-5/16	15	13-9/16	30	27-1/8	13-9/16	9-1/4	45.81
420-670F	12x12x10x10	10-1/4	10-3/8	16-1/2	15-5/8	33	31-1/4	13-9/16	11-1/2	53.90
420-691F	14x14x2x2	5-7/8	8-13/16	12-7/8	10-9/16	25-3/4	21-1/8	14-7/8	2-11/16	34.95

¹ Outlet sized with bushing

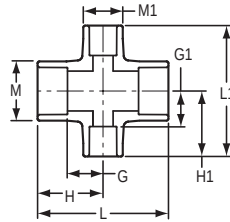


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING CROSS

Socket x Socket x Socket x Socket

(continued)

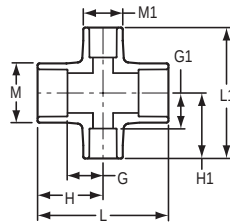


Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-693F	14x14x3x3	6-1/2	9-9/16	13-1/2	11-13/16	27	23-5/8	14-7/8	3-15/16	38.68
420-694F	14x14x4x4	7-3/8	9-7/8	14-3/8	12-1/8	28-3/4	24-1/4	14-7/8	5	40.35
420-696F	14x14x6x6	7-7/8	9-15/16	14-7/8	13-3/16	29-3/4	26-3/8	14-7/8	7-3/16	46.98
420-698F	14x14x8x8	8-7/8	9-7/8	15-7/8	14-1/8	31-3/4	28-1/4	14-7/8	9-1/4	44.67
420-700F	14x14x10x10	10-3/8	10-15/16	17-3/8	16-3/16	34-3/4	32-3/8	14-7/8	11-1/2	44.43
420-702F	14x14x12x12	11-3/8	10-3/4	18-3/8	17	36-3/4	34	14-7/8	13-9/16	66.57
420-751F	16x16x2x2	6-3/8	9-3/4	14-3/8	11-1/2	28-3/4	23	17	2-11/16	50.82
420-753F	16x16x3x3	6-1/2	10-1/2	14-1/2	12-3/4	29	25-1/2	17	3-15/16	56.76
420-754F	16x16x4x4	8	10-13/16	16	13-1/16	32	26-1/8	17	5	62.49
420-756F	16x16x6x6	9	10-7/8	17	14-1/8	34	28-1/4	17	7-3/16	66.61
420-758F	16x16x8x8	10	10-13/16	18	15-1/16	36	30-1/8	17	9-1/4	77.97
420-760F	16x16x10x10	11	11-7/8	19	17-1/8	38	34-1/4	17	11-1/2	86.09
420-762F	16x16x12x12	12	11-11/16	20	17-15/16	40	35-7/8	17	13-9/16	91.41
420-764F	16x16x14x14	13	11-15/16	21	18-15/16	42	37-7/8	17	14-7/8	109.43
420-781F	18x18x2x2	6-1/4	10-11/16	15-1/4	12-7/16	30-1/2	24-7/8	19-1/8	2-11/16	66.00
420-783F	18x18x3x3	7-1/4	11-7/16	16-1/4	13-11/16	32-1/2	27-3/8	19-1/8	3-15/16	73.00
420-784F	18x18x4x4	7-3/4	11-3/4	16-3/4	14	33-1/2	28	19-1/8	5	76.00
420-786F	18x18x6x6	8-3/4	11-13/16	17-3/4	15-1/16	35-1/2	30-1/8	19-1/8	7-3/16	84.00
420-788F	18x18x8x8	9-3/4	11-3/4	18-3/4	16	37-1/2	32	19-1/8	9-1/4	93.50
420-790F	18x18x10x10	10-3/4	12-13/16	19-3/4	18-1/16	39-1/2	36-1/8	19-1/8	11-1/2	---
420-792F	18x18x12x12	11-3/4	12-5/8	20-3/4	18-7/8	41-1/2	37-3/4	19-1/8	13-9/16	111.65
420-794F	18x18x14x14	12-7/8	12-7/8	21-7/8	19-7/8	43-3/4	39-3/4	19-1/8	14-7/8	129.34
420-796F	18x18x16x16	13-7/8	13-13/16	22-7/8	21-13/16	45-3/4	43-5/8	19-1/8	17	145.80
420-811F	20x20x2x2	6-3/4	12-7/16	16-3/4	14-3/16	33-1/2	28-3/8	21-3/16	2-11/16	83.00
420-813F	20x20x3x3	7-1/4	12-7/16	17-1/4	14-11/16	34-1/2	29-3/8	21-3/16	3-15/16	92.00
420-814F	20x20x4x4	8-1/4	12-3/4	18-1/4	15	36-1/2	30	21-3/16	5	95.82
420-816F	20x20x6x6	19-1/4	12-13/16	19-1/4	16-1/16	38-1/2	32-1/8	21-3/16	7-3/16	105.00
420-818F	20x20x8x8	10-1/4	12-3/4	20-1/4	17	40-1/2	34	21-3/16	9-1/4	115.00
420-820F	20x20x10x10	11-1/4	13-13/16	21-1/4	19-1/16	42-1/2	38-1/8	21-3/16	11-1/2	126.30
420-822F	20x20x12x12	12-1/4	13-5/8	22-1/4	19-7/8	44-1/2	39-3/4	21-3/16	13-9/16	140.46
420-824F	20x20x14x14	13-1/4	13-7/8	23-1/4	20-7/8	46-1/2	41-3/4	21-3/16	14-7/8	140.77
420-826F	20x20x16x16	14-1/4	14-13/16	24-1/4	22-13/16	48-1/2	45-5/8	21-3/16	17	165.34
420-828F	20x20x18x18	15-1/4	14-3/8	25-1/4	23-3/8	50-1/2	46-3/4	21-3/16	19-1/8	193.92
420-901F	24x24x2x2	8-1/8	14-5/16	20-1/8	16-1/16	40-1/4	32-1/8	25-3/8	2-11/16	156.00
420-903F	24x24x3x3	8-5/8	14-5/6	20-5/8	16-9/16	41-1/4	33-1/8	25-3/8	3-15/16	162.00

REDUCING CROSS

Socket x Socket x Socket x Socket

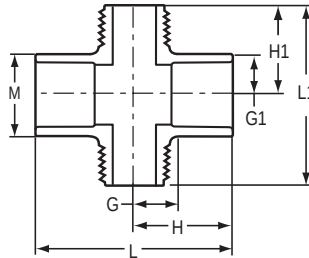
(continued)



420-904F	24x24x4x4	9-1/8	14-5/8	21-1/8	16-7/8	42-1/4	33-3/4	25-3/8	5	167.00
Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-906F	24x24x6x6	10-1/8	14-11/16	22-1/8	17-15/16	44-1/4	35-7/8	25-3/8	7-3/16	179.90
420-908F	24x24x8x8	11-1/8	14-5/8	23-1/8	18-7/8	46-1/4	37-3/4	25-3/8	9-1/4	193.00
420-910F	24x24x10x10	12-1/8	15-11/16	24-1/8	20-15/16	48-1/4	41-7/8	25-3/8	11-1/2	190.14
420-912F	24x24x12x12	13-1/8	15-1/2	25-1/8	21-3/4	50-1/4	43-1/2	25-3/8	13-9/16	205.85
420-914F	24x24x14x14	13-3/4	15-3/4	25-3/4	22-3/4	51-1/2	45-1/2	25-3/8	14-7/8	103.61
420-916F	24x24x16x16	14-3/4	16-11/16	26-3/4	24-11/16	53-1/2	49-3/8	25-3/8	17	243.82
420-918F	24x24x18x18	15-3/4	16-1/4	27-3/4	25-1/4	55-1/2	50-1/2	25-3/8	19-1/8	268.14
420-920F	24x24x20x20	16-3/4	17-3/8	28-3/4	27-3/8	57-1/2	54-3/4	25-3/8	21-3/16	292.79

CROSS

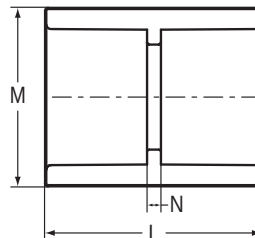
Socket x Mipt x Socket x Mipt



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
421A-010	1x1x1x1	5/8	1	1-5/8	1-7/8	3-13/32	3-3/4	1-5/8	.18

COUPLING

Socket x Socket



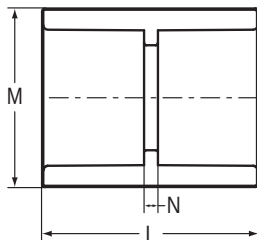
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
429-003	3/8	2-5/8	7/8	1/8	.03
429-005	1/2	1-19/32	1-3/32	3/32	.03
429-005N	1/2	1-5/8	1-1/16	1/8	.02



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

COUPLING Socket x Socket

(continued)

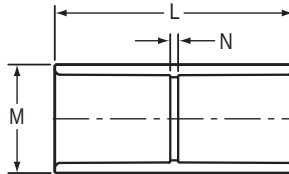


Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
429-007	3/4	2-3/32	1-5/16	3/32	.05
429-007N	3/4	2-3/32	1-5/16	3/32	.05
429-010	1	2-1/8	1-19/32	1/8	.07
429-010N	1	2-11/32	1-21/32	3/32	.10
429-012	1-1/4	2-11/32	1-31/32	3/32	.11
429-015	1-1/2	2-5/8	2-7/32	1/16	.13
429-020	2	2-7/8	2-3/4	3/32	.21
429-025	2-1/2	3-3/4	3-5/16	3/16	.41
429-030	3	3-31/32	4	3/16	.57
429-040	4	4-1/4	5-1/32	3/16	.85
429-045F	4-1/2	6-7/8	5-7/16	1-7/8	1.43
429-050	5	6-3/16	6-1/8	3/16	1.67
429-060	6	6-5/16	7-1/4	1/4	2.11
429-080	8	8-11/32	9-11/32	1/4	4.22
429-100	10	10-3/8	11-9/16	15/32	7.24
429-100F	10	12-3/8	11-1/2	1-7/8	8.16
429-120	12	12-3/8	13-21/32	3/8	11.68
429-120F	12	14-3/4	13-9/16	2-1/4	13.25
429-140	14	14-13/32	15-5/8	7/16	27.27
429-140F	14	16-1/4	14-7/8	2-1/4	18.22
429-160F	16	18-5/8	17	2-5/8	23.23
429-180F	18	21-3/4	19-1/8	3-3/4	38.65
429-200F	20	24	21-3/16	4	48.63
429-240F	24	29-1/4	25-3/8	5-1/4	82.20



DEEP SOCKET COUPLING

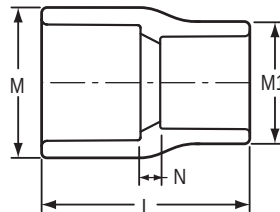
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
479-005N	1/2	2-1/2	1-1/16	3/16	.04
479-007	3/4	2-7/8	1-5/16	3/32	.07
479-010	1	3-5/8	1-5/8	3/32	.13
479-015	1-1/2	4-5/8	2-1/4	1/8	.24
479-020	2	5-3/32	2-3/4	3/32	.36
479-025	2-1/2	7-1/2	3-5/16	1/4	.79
479-030	3	8	4	1/4	1.06
479-040	4	8-3/16	5	5/16	1.53
479-045F	4-1/2	9-1/2	5-7/16	1-1/2	1.92
479-060F	6	12	7-3/16	1-1/2	3.72

REDUCER COUPLING

Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-101	3/4x1/2	1-25/32	1-5/16	1-3/32	1/8	.04
429-130	1x1/2	2-7/32	1-5/8	1-3/32	13/32	.07
429-131	1x3/4	2-1/8	1-5/8	1-5/16	1/8	.07
429-166	1-1/4x1/2	2-9/16	2-3/32	1-5/32	7/16	.13
429-168	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.17
429-210	1-1/2x3/4	2-13/16	2-11/32	1-13/32	7/16	.19
429-211	1-1/2x1	2-23/32	2-7/32	1-5/8	3/8	.13
429-212	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.22
429-247	2x1/2	3-3/32	2-7/8	1-5/32	11/16	.30
429-248	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.30
429-249	2x1	3-1/2	2-13/16	2-5/16	3/4	.41
429-250 ¹	2x1-1/4	3-1/16	2-23/32	2-1/4	13/32	.25
429-251	2x1-1/2	2-13/16	2-27/32	2-1/4	1/8	.19
429-291	2-1/2x1-1/2	3-3/4	3-1/2	2-3/8	19/32	.52
429-292	2-1/2x2	3-5/8	3-15/32	2-7/8	7/16	.48
429-335 ¹	3x1	4-3/16	4-5/32	2-7/8	1-1/4	.91
429-337 ¹	3x1-1/2	4-3/16	4-5/32	2-29/32	1	.87

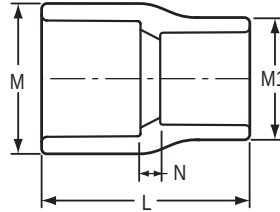
¹ Outlet sized with bushing



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCER COUPLING (continued)

Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-338	3x2	4	4-3/16	2-7/8	21/32	.73
429-339 ¹	3x2-1/2	4-5/16	4	4	21/32	.95
429-340F	3x2-1/2	5-5/8	3-7/8	3-1/4	1-3/8	.68
429-416 ¹	4x3/4	5-7/32	5-1/32	2-25/32	2-3/16	1.04
429-417	4x1	5-1/4	5-1/32	2-25/32	2-5/32	1.04
429-420	4x2	5	5-1/32	2-23/32	1-9/16	.83
429-421	4x2-1/2	5	5-1/4	4-1/8	3/4	1.63
429-422	4x3	4-5/8	5-1/4	4-5/32	15/32	1.25
429-422F	4x3	6-1/2	4-15/16	3-15/16	2	1.04
429-460F	4-1/2x4	6-11/16	5-7/16	5	1-15/16	1.39
429-488F	5x3	8	6-1/16	5-1/4	3-1/8	2.29
429-490F	5x4	7-11/16	6-1/16	5	2-7/16	1.60
429-491F	5x4-1/2	7-7/16	6-1/16	5-7/16	1-15/16	1.59
429-528F	6x2	9-1/4	7-1/8	5-1/16	4-5/8	2.75
429-530F	6x3	9-3/16	7-1/8	5-1/4	4-1/16	2.89
429-532	6x4	6-15/32	7-1/4	5-1/32	1-11/32	2.05
429-532F	6x4	8-7/8	7-1/8	5	3-3/8	1.80
429-533F	6x5	8-5/8	7-1/8	6-1/16	2-3/8	2.50
429-534F	6x4-1/2	8-11/16	7-1/8	5-7/16	2-15/16	2.05
429-578F	8x2	14-7/8	9-3/16	5	9-1/4	5.75
429-580F	8x3	14-13/16	9-3/16	5	8-11/16	5.71
429-582	8x4	8-7/16	9-11/32	5-1/16	2-11/32	4.02
429-582F	8x4	14-1/2	9-3/16	5	8	5.11
429-583F	8x5	14-1/4	9-3/16	6-1/16	7	5.07
429-585	8x6	8-13/32	9-11/32	7-9/32	1-11/32	4.07
429-585F	8x6	11	9-3/16	7-3/16	3-1/2	4.63
429-621F	10x2	17-5/8	11-3/8	5	11	8.15
429-623F	10x3	17-9/16	11-3/8	5	10-7/16	7.97
429-624	10x4	10-7/16	11-17/32	5-1/16	3-11/32	7.40
429-624F	10x4	17-1/4	11-3/8	5	9-3/4	7.18
429-625F	10x5	17	11-3/8	6-1/16	8-3/4	7.31
429-626	10x6	10-7/16	11-9/16	7-9/32	2-1/4	7.11
429-626F	10x6	13-7/8	11-3/8	7-1/4	5-3/8	6.61
429-628	10x8	10-7/16	11-5/8	9-3/8	1-3/8	7.07
429-628F	10x8	13-1/4	11-9/16	9-7/16	3-3/4	8.95
429-661F	12x2	24-3/8	13-9/16	5	16-3/4	19.16
429-663F	12x3	24-5/16	13-9/16	5	16-3/16	14.92
429-664F	12x4	24	13-9/16	5	15-1/2	15.20
429-665F	12x5	23-3/4	13-9/16	6-1/16	14-1/2	21.03

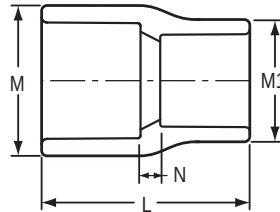
¹ Outlet sized with bushing

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



REDUCER COUPLING (continued)

Socket x Socket



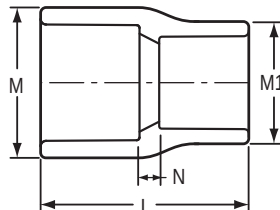
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-666	12x6	12-13/32	13-21/32	7-9/32	3-9/32	10.73
429-666F	12x6	20-1/2	13-9/16	7-1/4	11	14.23
429-668	12x8	12-13/32	13-21/32	9-3/8	2-1/4	10.58
429-668F	12x8	15-3/4	13-9/16	9-7/16	5-1/4	12.31
429-670	12x10	12-3/8	13-21/32	11-19/32	1-9/32	10.84
429-670F	12x10	15-1/8	13-9/16	11-9/16	3-5/8	13.16
429-693F	14x3	26-3/16	14-13/16	5	17-5/16	39.67
429-694F	14x4	25-7/8	14-13/16	5	16-5/8	20.57
429-696F	14x6	22-3/8	14-13/16	7-1/4	12-1/8	20.57
429-698F	14x8	21-13/16	14-3/4	9-1/4	10-9/16	18.37
429-700F	14x10	17	14-13/16	11-9/16	4-3/4	15.36
429-702F	14x12	16-1/2	15	13-3/4	3-1/4	19.59
429-751F	16x2	32-7/8	17	5	23-1/2	33.96
429-754F	16x4	32-1/2	17	5	22-1/4	33.96
429-756F	16x6	29	17	7-3/16	17-3/4	33.53
429-758F	16x8	24-3/4	17	9-7/16	12-1/2	33.90
429-760F	16x10	24	17	11-9/16	10-3/4	35.66
429-762F	16x12	18-7/8	17	13-3/4	4-5/8	22.40
429-764F	16x14	18-1/2	16-7/8	14-7/8	3-1/2	21.66
429-786F	18x6	38	19	7-3/16	25-3/4	60.39
429-788F	18x8	33-3/4	19	9-7/16	20-1/2	43.61
429-790F	18x10	33	19	11-9/16	18-3/4	46.43
429-792F	18x12	27-7/8	19	13-5/8	12-5/8	44.78
429-794F	18x14	27-1/2	19	14-7/8	11-1/2	43.23
429-796F	18x16	21-5/8	19	17	4-5/8	30.98
429-814F	20x4	50-1/2	21-1/8	5	38-1/4	---
429-816F	20x6	47	21-1/8	7-3/16	33-3/4	74.45
429-818F	20x8	42-3/4	21-1/8	9-7/16	28-1/2	97.93
429-820F	20x10	42	21-1/8	11-9/16	26-3/4	82.76
429-822F	20x12	36-7/8	21-1/8	13-3/4	20-5/8	74.24
429-824F	20x14	36-1/2	21-3/8	14-7/8	19-1/2	71.00
429-826F	20x16	30-5/8	21-1/8	17	12-5/8	58.53
429-828F	20x18	23-1/4	21-1/8	19-1/8	4-1/4	45.38
429-906F	24x6	59-1/4	25-3/16	7-3/16	44	120.00
429-908F	24x8	55	25-3/16	9-7/16	38-3/4	124.96
429-910F	24x10	54-1/4	25-3/16	11-9/16	37	126.88
429-912F	24x12	49-1/8	25-3/16	13-3/4	30-7/8	120.00
429-914F	24x14	48-3/4	25-3/16	14-7/8	29-3/4	111.51
429-916F	24x16	42-7/8	25-3/16	17	22-7/8	107.16



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCER COUPLING (continued)

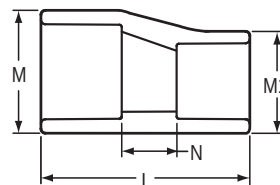
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-918F	24x18	35-1/2	25-3/16	19-1/8	14-1/2	84.69
429-920F	24x20	28-3/4	25-3/16	21-3/16	6-3/4	61.04

ECCENTRIC REDUCER COUPLING

Socket x Socket

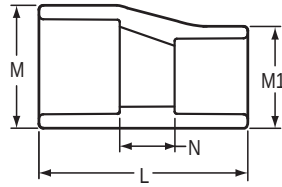


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-168FE	1-1/4x1	4-7/8	1-15/16	1-9/16	2-1/8	.28
429-212FE	1-1/2x1-1/4	4-5/8	2-3/16	1-15/16	1-5/8	.24
429-250FE	2x1-1/4	5-3/4	2-5/8	1-15/16	2-1/2	.26
429-251FE	2x1-1/2	5-1/2	2-11/16	2-3/16	2-1/4	.29
429-290FE	2-1/2x1-1/4	9-5/8	3-3/16	1-15/16	6-1/8	.81
429-291FE	2-1/2x1-1/2	9-3/8	3-3/16	2-3/16	5-7/8	.79
429-292FE	2-1/2x2	6-3/8	3-3/16	2-11/16	2-5/8	.44
429-336FE	3x1-1/4	11-1/8	3-13/16	1-15/16	7-3/8	.85
429-337FE	3x1-1/2	10-7/8	3-13/16	2-3/16	7-1/8	.77
429-338E	3x2	5-7/8	4-5/32	2-7/8	2-15/32	1.01
429-338FE	3x2	7-15/16	3-13/16	2-11/16	3-15/16	.63
429-339FE	3x2-1/2	6-3/4	3-7/8	3-1/4	2-1/2	.79
429-418FE	4x1-1/4	16-1/8	4-15/16	1-15/16	12-3/8	1.96
429-419FE	4x1-1/2	15-7/8	4-15/16	2-3/16	12-1/8	1.72
429-420E	4x2	7-15/32	5	2-23/32	4-1/16	1.24
429-420FE	4x2	12-13/16	4-15/16	2-11/16	8-13/16	1.65
429-421FE	4x2-1/2	11-3/4	4-15/16	3-1/4	7-1/2	1.78
429-422FE	4x3	8-5/8	4-15/16	3-15/16	4-1/8	1.28
429-490FE	5x4	9-7/16	6-1/16	5	4-3/16	5.95
429-527FE	6x1-1/2	23-9/16	7-1/8	2-3/16	18-13/16	6.23
429-528FE	6x2	15-7/8	7-1/8	2-11/16	11-1/4	4.41
429-529FE	6x2-1/2	19-7/16	7-1/8	3-1/4	14-3/16	3.77
429-530FE	6x3	16-5/16	7-1/8	3-15/16	10-13/16	3.92
429-532E	6x4	8-31/32	7-9/32	5-1/32	3-15/16	2.90



ECCENTRIC REDUCER COUPLING (continued)

Socket x Socket



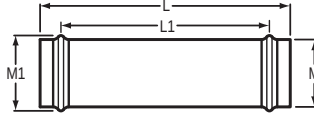
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-532FE	6x4	11-1/8	7-1/8	5	5-5/8	2.27
429-533FE	6x5	10-5/8	7-1/8	6-1/16	4-3/8	2.84
429-578FE	8x2	27-1/8	9-3/16	2-11/16	21-1/2	8.22
429-580FE	8x3	25-5/16	9-3/16	3-15/16	18-13/16	7.20
429-582FE	8x4	19-5/8	9-3/16	5	13-3/8	8.22
429-583FE	8x5	15-5/8	9-3/16	6-1/16	12-3/8	6.81
429-585FE	8x6	14-3/8	9-3/16	7-3/16	6-7/8	5.53
429-624FE	10x4	22-3/8	11-3/8	5	15-1/8	12.85
429-625FE	10x5	22-3/8	11-3/8	6-1/16	14-1/8	10.65
429-626FE	10x6	17-1/8	11-3/8	7-1/4	8-5/8	7.49
429-628FE	10x8	16-5/16	11-3/8	9-1/4	6-13/16	9.69
429-664FE	12x4	32-3/8	13-1/2	5	24-1/8	20.84
429-665FE	12x5	32-3/8	13-1/2	6-1/16	23-1/8	20.37
429-666FE	12x6	27-1/8	13-1/2	7-1/4	17-5/8	16.81
429-668FE	12x8	26-5/16	13-1/2	9-1/4	15-3/16	23.88
429-670FE	12x10	18-3/8	13-1/2	11-1/2	6-7/8	15.07
429-696FE	14x6	31-3/8	15	7-1/4	21-1/8	26.82
429-698FE	14x8	30-9/16	15	9-1/4	19-5/16	26.76
429-700FE	14x10	22-3/4	15	11-3/4	10-1/2	23.23
429-702FE	14x12	19	15	13-3/4	5-3/4	25.66
429-756FE	16x6	43-5/8	17	7-1/4	32-3/8	49.49
429-758FE	16x8	42-13/16	17	9-1/4	30-9/16	47.87
429-760FE	16x10	34-7/8	17	11-1/2	21-5/8	39.76
429-762FE	16x12	26-1/2	17	13-3/4	12-1/4	34.02
429-764FE	16x14	19	16-7/8	14-7/8	6-3/4	24.61
429-786FE	18x6	56	19	7-1/4	43-3/4	71.11
429-788FE	18x8	55-3/16	19	9-1/4	41-15/16	70.93
429-790FE	18x10	47-1/4	19	11-1/2	33	65.32
429-792FE	18x12	38-7/8	19	13-3/4	23-5/8	62.16
429-794FE	18x14	34-1/8	19	14-7/8	18-1/8	54.24
429-796FE	18x16	25	19	17	8	38.72



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

FABRICATED REPAIR COUPLING

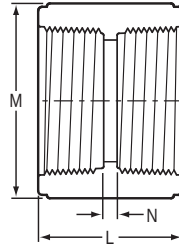
Gasket x Gasket



Part Number	Size	L	L1	M	M1	Approx. Wt. (Lbs.)
428-020F	2	9-1/8	6	2-11/16	3-1/16	.59
428-030F	3	15-1/2	11	3-15/16	4-9/16	1.99
428-040F	4	19-1/2	16-1/4	5	5-3/4	4.18
428-060F	6	23-1/2	19-3/4	7-3/8	7-3/4	8.33
428-080F	8	26-1/8	21-1/4	9-3/8	10-1/8	14.01
428-100F	10	27-1/4	22-3/8	11-5/8	12-3/8	20.95
428-120F	12	28-3/8	22-3/8	13-3/4	14-11/16	28.49
428-140F	14	18-3/8	12	14-7/8	16-1/4	24.45
428-160F	16	21	14-3/4	17	18-1/2	36.03

COUPLING

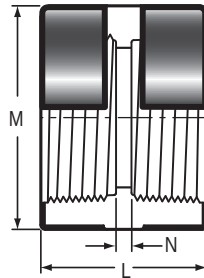
Fipt x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
430-005	1/2	1-9/16	1-1/8	7/32	.04
430-007	3/4	1-9/16	1-11/32	3/32	.05
430-010	1	2-1/16	1-11/16	3/32	.09
430-012	1-1/4	2-3/16	2-3/16	3/16	.21

SPECIAL REINFORCED COUPLING

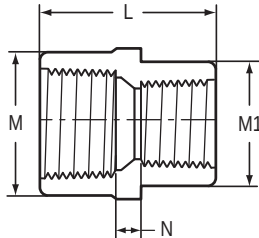
SR Fipt x SR Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
430-005SR	1/2	1-9/16	1-3/16	1/16	.07
430-007SR	3/4	1-29/32	1-3/8	3/32	.08
430-010SR	1	1-15/16	1-23/32	1/16	.13
430-012SR	1-1/4	2-1/16	2-1/16	3/16	.19
430-015SR	1-1/2	2-3/16	2-7/16	1/4	.29
430-020SR	2	2-1/4	3	1/4	.42

REDUCER COUPLING

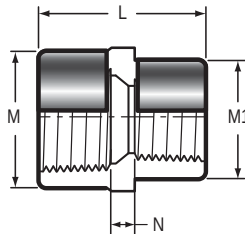
Fipt x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
430-101	3/4x1/2	1-11/16	1-3/8	1-3/16	1/4	.06

SPECIAL REINFORCED REDUCER COUPLING

SR Fipt x SR Fipt



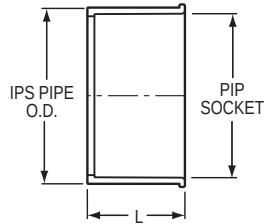
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
430-101SR	3/4x1/2	1-3/4	1-3/8	1-7/32	1/4	.08



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

IPS TO PIP ADAPTER

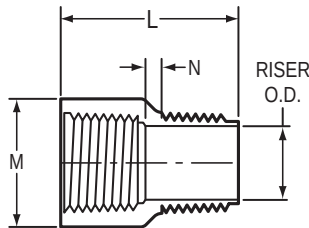
Spigot x Socket



Part Number	Size	L	Approx. Wt. (Lbs.)
431-060	6	3-9/16	.91
431-080	8	4-21/32	1.43
431-100F	10	5-5/8	2.71
431-120F	12	6-3/4	3.61

RISER EXTENSION

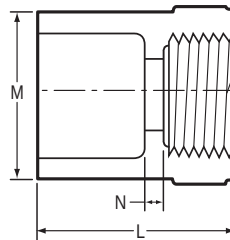
Fipt x Mipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
434-005	1/2	1-1/2	1-1/8	1/8	.03
434-007	3/4	1-17/32	1-5/16	5/32	.04
434-010	1	1-29/32	1-5/8	3/16	.07

FEMALE ADAPTER

Socket x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
435-003	3/8	1-7/16	1	3/32	.03
435-005	1/2	1-19/32	1-3/32	3/32	.04
D435-005	1/2	2-1/8	1-1/8	1/8	.04
435-007	3/4	1-27/32	1-5/16	3/32	.05

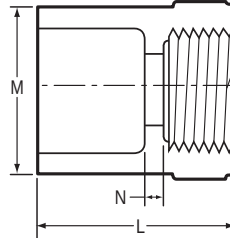
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



FEMALE ADAPTER

Socket x Fipt

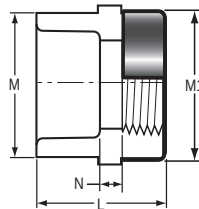
(continued)



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
D435-007	3/4	2-7/32	1-5/16	3/32	.06
435-010	1	2	1-21/32	3/32	.08
435-012	1-1/4	2-9/32	1-31/32	1/16	.11
435-015	1-1/2	2-5/16	2-7/32	3/32	.14
435-020	2	2-1/2	2-3/4	1/8	.19
435-025	2-1/2	3-1/4	3-5/16	3/16	.41
435-030	3	3-1/2	4	1/4	.56
435-040	4	3-23/32	5-1/32	3/16	.83
435-050	5	5-1/16	6-5/16	3/16	1.47
435-060	6	5-3/4	7-3/16	5/16	2.07
435-080	8	6-15/16	9-3/8	1/4	3.88
435-100F	10	10-1/4	11-15/16	3	10.88
435-120F	12	11-1/8	14-1/8	2-5/8	16.56

SPECIAL REINFORCED FEMALE ADAPTER

Socket x SR Fipt



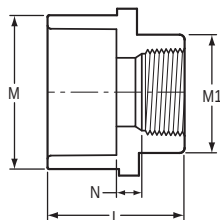
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-002SR	1/4	1-5/16	13/16	13/16	5/32	.03
435-003SR	3/8	1-7/16	15/16	15/16	1/16	.04
435-005SR	1/2	1-3/4	1-3/16	1-3/16	3/16	.06
435-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
435-010SR	1	2-1/8	1-3/4	1-3/4	1/8	.13
435-012SR	1-1/4	2-5/16	2-3/32	2-3/32	1/8	.19
435-015SR	1-1/2	2-7/16	2-7/16	2-7/16	1/8	.27
435-020SR	2	2-11/16	3	3	1/4	.43
435-025SR	2-1/2	3-1/4	3-9/16	3-9/16	1/4	.68
435-030SR	3	3-1/2	4-9/32	4-5/16	5/16	.95
435-040SR	4	3-15/16	5-7/32	5-7/32	3/16	1.37



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING FEMALE ADAPTER

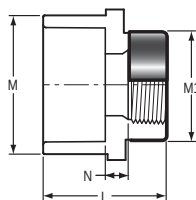
Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-072	1/2x1/4	1-19/32	1-3/32	13/16	1/4	.03
435-073	1/2x3/8	1-17/32	1-3/32	15/16	3/16	.03
435-074	1/2x3/4	1-19/32	1-3/32	1-5/16	3/16	.05
435-101	3/4x1/2	1-13/16	1-5/16	1-1/8	3/32	.05
435-102	3/4x1	1-15/16	1-5/8	1-5/16	3/32	.07
435-130	1x1/2	1-27/32	1-5/8	1-1/8	3/32	.07
435-131	1x3/4	2-1/8	1-5/8	1-5/16	3/8	.07
435-133	1x1-1/2	2-3/8	1-5/8	2-7/32	1/4	.13
435-168	1-1/4x1	2-1/2	1-31/32	1-5/8	11/32	.12
435-247	2x1/2	2-25/32	2-23/32	1-3/16	21/32	.19
435-460F	4-1/2x4	8-1/4	5-5/8	5	3-7/8	1.92
435-578F	8x2	14-7/8	8-5/8	5-1/16	9-5/8	5.75
435-582F	8x4	15-3/16	9-1/4	5	9-7/16	5.99
435-628F	8x10	11	11-3/4	9-1/4	4-1/16	6.60

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

Socket x SR Fipt



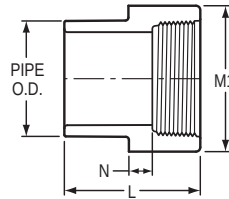
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-072SR	1/2x1/4	1-5/8	1-3/32	27/32	1/4	.04
435-073SR	1/2x3/8	1-17/32	1-3/32	31/32	3/16	.04
435-074SR	1/2x1/4	1-3/4	1-3/16	1-3/8	1/8	.07
435-101SR	3/4x1/2	1-7/8	1-3/8	1-3/16	1/4	.07
435-102SR	3/4x1	2-1/16	1-13/32	1-23/32	1/4	.12
435-130SR	1x1/2	2	1-11/16	1-3/16	5/32	.10
435-131SR	1x3/4	2-1/16	1-3/4	1-3/8	7/32	.12
435-247SR	2x1/2	2-13/16	2-23/32	1-3/16	21/32	.20

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



SPIGOT FEMALE ADAPTER

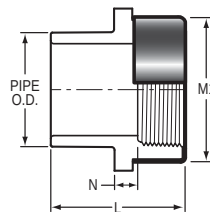
Spigot x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-005	1/2	1-19/32	1-3/32	3/16	.03
478-007	3/4	1-15/16	1-3/8	5/32	.06
478-010	1	2-7/16	1-23/32	5/32	.10
478-012	1-1/4	2-9/16	2-1/16	9/32	.14
478-015	1-1/2	2-5/8	2-5/16	7/32	.17
478-020	2	2-3/4	2-27/32	3/16	.27
478-030	3	3-7/8	4	9/32	.57
478-040	4	4	5	3/8	.83

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

Spigot x SR Fipt



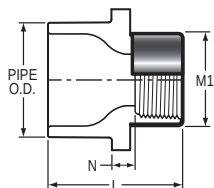
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-005SR	1/2	1-3/4	1-3/16	5/32	.05
478-007SR	3/4	1-15/16	1-3/8	11/32	.07
478-010SR	1	2-1/4	1-23/32	5/16	.12
478-012SR	1-1/4	2-7/16	2-1/16	3/8	.18
478-015SR	1-1/2	2-5/8	2-13/32	13/32	.25
478-020SR	2	2-13/16	3	3/8	.39
478-030SR	3	3-13/16	4-1/4	15/32	.91
478-040SR	4	4-3/8	5-7/32	9/16	1.44



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

SPECIAL REINFORCED SPIGOT REDUCING FEMALE ADAPTER

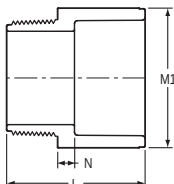
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-072SR	1/2x1/4	1-3/8	27/32	3/16	.03
478-098SR	3/4x1/4	2-1/16	27/32	1/2	.05
478-128SR	1x1/4	2-3/8	27/32	11/16	.08

MALE ADAPTER

Mipt x Socket

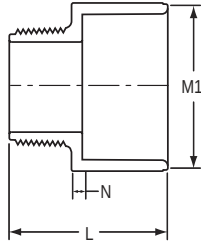


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
436-003	3/8	1-3/8	7/8	7/32	.02
436-005	1/2	1-17/32	1-1/8	5/32	.03
436-007	3/4	1-23/32	1-5/16	5/32	.04
436-010	1	2-1/16	1-5/8	5/32	.07
436-012	1-1/4	2-7/16	1-31/32	3/16	.11
436-015	1-1/2	2-17/32	2-1/4	3/16	.15
436-020	2	2-21/32	2-3/4	7/32	.20
436-025	2-1/2	3-13/16	3-13/32	9/32	.43
436-030	3	3-29/32	4-3/32	9/32	.57
436-040	4	4-1/32	5-1/8	9/32	.82
436-050	5	5-5/32	6-1/4	5/16	1.42
436-060	6	5-11/16	7-9/32	11/16	2.36
436-080	8	6-15/16	9-3/8	13/32	4.04
436-100F	10	10-3/8	11-15/16	3-3/16	11.17
436-120F	12	11-1/8	14-1/8	2-3/4	16.44



REDUCING MALE ADAPTER

Mipt x Socket



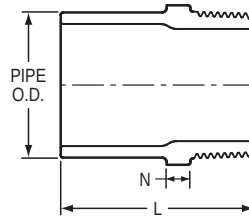
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
436-053	3/8x1/2	1-11/16	1-3/16	1/4	.04
436-073	1/2x3/8	1-17/32	15/16	1/8	.02
436-074	1/2x3/4	1-25/32	1-5/16	5/32	.04
436-075	1/2x1	2-9/32	1-5/8	17/32	.07
436-101	3/4x1/2	1-17/32	1-1/8	3/32	.03
436-102	3/4x1	1-15/16	1-21/32	3/16	.07
436-131	1x3/4	1-29/32	1-3/16	3/16	.05
436-132	1x1-1/4	2-1/4	1-31/32	7/32	.10
436-133	1x1-1/2	2-3/8	2-1/4	1/4	.12
436-168	1-1/4x1	2-1/4	1-5/8	3/16	.09
436-169	1-1/4x1-1/2	2-17/32	2-7/32	3/16	.14
436-212	1-1/2x1-1/4	2-15/32	2	7/32	.12
436-213	1-1/2x2	2-5/8	2-3/4	15/32	.22
436-251	2x1-1/2	2-9/16	2-7/32	3/16	.18
436-252	2x2-1/2	3-3/32	3-5/16	1/4	.36
436-253	2x3	3-13/16	4	1	.52
436-294	2-1/2x3	4-3/32	4-1/32	5/8	.57
436-296	2-1/2x4	3-29/32	5-3/16	5/16	.80
436-342	3x4	4-5/8	5-1/16	7/8	.97
436-537F	6x10	15-1/2	11-3/8	7-15/16	8.50



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

MALE ADAPTER

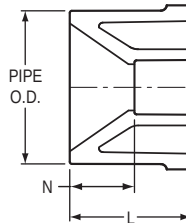
Spigot x Mipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
461-005	1/2	1-11/16	11/32	.03
461-007	3/4	2	13/32	.04
461-010	1	2-1/4	11/32	.06
461-131	1x3/4	1-15/16	1/4	.06
461-012	1-1/4	2-9/32	9/32	.09
461-015	1-1/2	2-7/16	5/16	.12
461-020	2	2-9/16	3/8	.17

REDUCER BUSHING (Flush Style)

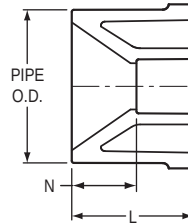
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-052	3/8x1/4	31/32	5/16	.01
437-072	1/2x1/4	1-3/32	13/32	.02
437-073	1/2x3/8	7/8	3/8	.02
437-101	3/4x1/2	1-1/16	9/32	.02
437-130	1x1/2	1-1/4	15/32	.05
437-131	1x3/4	1-1/4	5/16	.03
437-166	1-1/4x1/2	1-13/32	21/32	.08
437-167	1-1/4x3/4	1-1/2	19/32	.09
437-168	1-1/4x1	1-1/2	7/16	.06
437-209	1-1/2x1/2	1-15/32	23/32	.11
437-210	1-1/2x3/4	1-7/16	7/16	.12
437-211	1-1/2x1	1-17/32	1/2	.12
437-212	1-1/2x1-1/4	1-17/32	9/32	.06
437-247	2x1/2	1-5/8	7/8	.17
437-248	2x3/4	1-9/16	9/16	.16
437-249	2x1	1-9/16	17/32	.17
437-250	2x1-1/4	1-19/32	11/32	.18
437-251	2x1-1/2	1-9/16	1/4	.13
437-287	2-1/2x1/2	2-5/16	1-1/2	.32

REDUCER BUSHING (Flush Style) (continued)

Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-288	2-1/2x3/4	2-3/8	1-3/8	.33
437-289	2-1/2x1	2-1/32	29/32	.37
437-290	2-1/2x1-1/4	2-3/16	1-1/8	.37
437-291	2-1/2x1-1/2	2-5/32	1-3/16	.34
437-292	2-1/2x2	2-1/16	11/16	.23
437-333 ¹	3x1/2	2-13/32	1-5/8	.53
437-334	3x3/4	2-5/16	1-5/16	.49
437-335	3x1	2-7/32	1-1/4	.48
437-336	3x1-1/4	2-9/32	1-1/32	.49
437-337	3x1-1/2	2-9/32	31/32	.48
437-338	3x2	2-7/32	9/16	.47
437-339	3x2-1/2	2-7/32	7/16	.37
437-417 ¹	4x1	2-19/32	1-9/16	1.03
437-418 ¹	4x1-1/4	2-19/32	1-7/16	1.04
437-419 ¹	4x1-1/2	2-19/32	1-1/4	.99
437-420	4x2	2-13/32	1-1/32	.86
437-421	4x2-1/2	2-5/16	9/16	.75
437-422	4x3	2-11/32	15/32	.78
437-486	5x2	3-13/32	2-1/32	1.54
437-488	5x3	3-7/16	1-15/32	1.40
437-490	5x4	2-31/32	23/32	1.31
437-528	6x2	3-17/32	2-5/32	2.15
437-530	6x3	3-17/32	1-5/8	2.21
437-532	6x4	3-9/16	1-1/2	2.12
437-534	6x5	3-17/32	7/8	1.93
437-578 ¹	8x2	5	3-5/8	4.92
437-580	8x3	5-1/4	3-1/4	4.92
437-582	8x4	4-17/32	2-1/2	3.96
437-583 ¹	8x5	4-3/4	1-3/4	5.61
437-585	8x6	4-13/32	1-3/8	4.04
437-621 ¹	10x2	6	4	9.88
437-623 ¹	10x3	6	3-17/32	9.32
437-624	10x4	6	3-3/4	9.57
437-626	10x6	5-1/2	2-3/8	5.77
437-628	10x8	5-5/16	1-5/16	6.88
437-666 ¹	12x6	6-11/16	3-3/4	13.96
437-666F	12x6	6-7/16	3-3/8	18.74

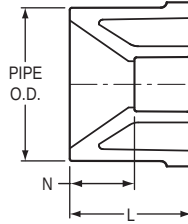
¹Outlet sized with bushing



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCER BUSHING (Flush Style) (continued)

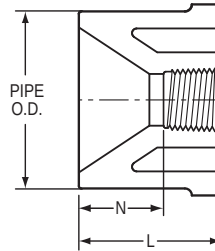
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-668	12x8	6-1/2	2-7/16	9.60
437-670	12x10	6-1/2	1-1/2	12.67
437-670F	12x10	6	1	11.32
437-696F	14x6	7-11/16	4-11/16	23.05
437-698F	14x8	7-5/16	3-5/16	19.00
437-700F	14x10	7-1/2	2-1/2	22.00
437-702F	14x12	7	1	9.18
437-756F	16x6	8-11/16	5-11/16	42.60
437-758F	16x8	8-5/16	4-5/16	37.86
437-760F	16x10	8-1/2	3-1/2	40.97
437-762F	16x12	8	2	27.95
437-764F	16x14	8	1	18.68
437-786F	18x6	9-11/16	6-11/16	66.03
437-788F	18x8	9-5/16	5-5/16	59.63
437-790F	18x10	9-1/2	4-1/2	64.56
437-792F	18x12	9	3	52.44
437-794F	18x14	9	2	43.08
437-796F	18x16	9	1	20.03
437-816F	20x6	10-11/16	7-11/16	122.62
437-818F	20x8	10-5/16	6-5/16	112.44
437-820F	20x10	10-1/2	5-1/2	95.06
437-822F	20x12	10	4	82.84
437-824F	20x14	10	3	73.74
437-826F	20x16	10	2	54.05
437-828F	20x18	10	1	30.35
437-906F	24x6	12-11/16	9-11/16	208.00
437-908F	24x8	12-5/16	8-5/16	172.22
437-910F	24x10	12-1/2	7-1/2	177.27
437-912F	24x12	12	6	164.19
437-914F	24x14	12	5	153.83
437-916F	24x16	12	4	136.15
437-918F	24x18	13	3	109.14
437-920F	24x20	12	2	80.40

REDUCER BUSHING (Flush Style)

Spigot x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-052	3/8x1/4	31/32	3/8	.01
438-071	1/2x1/8	1	9/16	.02
438-072	1/2x1/4	1-1/32	7/16	.02
438-073	1/2x3/8	1	7/16	.02
438-098	3/4x1/4	1-7/32	5/8	.04
438-101	3/4x1/2	1-1/4	1/2	.03
438-127	1x1/8	1-3/8	13/16	.06
438-128	1x1/4	1-13/32	25/32	.07
438-129	1x3/8	1-13/32	19/32	.07
438-130	1x1/2	1-3/8	21/32	.05
438-131	1x3/4	1-1/16	3/8	.04
438-166	1-1/4x1/2	1-15/32	23/32	.10
438-167	1-1/4x3/4	1-15/32	23/32	.09
438-168	1-1/4x1	1-7/16	1/2	.07
438-206	1-1/2x1/8	1-11/16	1-1/4	.14
438-207	1-1/2x1/4	1-19/32	15/16	.11
438-209	1-1/2x1/2	1-11/16	1	.16
438-210	1-1/2x3/4	1-9/16	27/32	.13
438-211	1-1/2x1	1-23/32	13/16	.15
438-212	1-1/2x1-1/4	1-9/16	11/16	.07
438-245	2x1/4	1-3/4	1-5/32	.18
438-247	2x1/2	1-29/32	1-5/32	.26
438-248	2x3/4	1-7/8	1-5/32	.26
438-249	2x1	1-7/8	1	.26
438-250	2x1-1/4	1-5/8	13/16	.18
438-251	2x1-1/2	1-19/32	5/8	.14
438-287	2-1/2x1/2	2-3/8	1-5/8	.41
438-288	2-1/2x3/4	2-3/8	1-9/16	.44
438-289	2-1/2x1	2-11/32	1-13/32	.44
438-290	2-1/2x1-1/4	2-3/8	1-3/8	.43
438-291	2-1/2x1-1/2	2-3/8	1-3/8	.33
438-292	2-1/2x2	2-1/16	1-1/16	.26
438-334	3x3/4	2-9/32	1-9/16	.58
438-335	3x1	2-1/4	1-11/32	.58
438-336	3x1-1/4	2-1/4	1-5/16	.62
438-337	3x1-1/2	2-1/4	1-1/4	.58
438-338	3x2	2-3/16	1-7/32	.56
438-339	3x2-1/2	2-3/8	3/4	.46

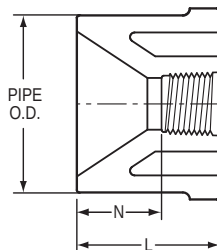


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCER BUSHING (Flush Style)

Spigot x Fipt

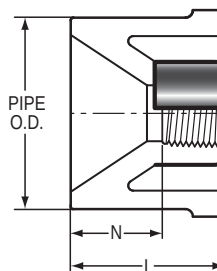
(continued)



Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-420	4x2	2-13/32	1-13/32	.90
438-421	4x2-1/2	2-21/32	1-3/32	1.09
438-422	4x3	2-13/32	1	.77
438-488	5x3	3-7/16	1-13/16	1.57
438-490	5x4	2-15/16	1-11/32	1.19
438-528	6x2	3-17/32	2-17/32	2.92
438-530	6x3	3-17/32	2-1/8	2.31
438-532	6x4	3-17/32	2-1/32	2.54
438-534	6x5	3-31/32	2-3/16	1.91

SPECIAL REINFORCED REDUCER BUSHING (Flush Style)

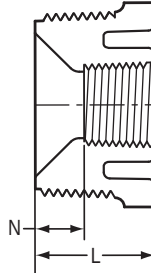
Spigot x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-128SR	1x1/4	1-13/32	25/32	.07
438-207SR	1-1/2x1/4	1-19/32	15/16	.13
438-209SR	1-1/2x1/2	1-11/16	15/16	.17
438-210SR	1-1/2x3/4	1-9/16	7/8	.13
438-247SR	2x1/2	1-29/32	1-5/32	.26
438-248SR	2x3/4	1-7/8	1-1/8	.26
438-249SR	2x1	1-29/32	31/32	.27
438-334SR	3x3/4	2-1/4	1-1/2	.58
438-335SR	3x1	2-1/4	1-11/32	.59
438-336SR	3x1-1/4	2-1/4	1-5/16	.59
438-337SR	3x1-1/2	2-1/4	1-3/8	.68
438-420SR	4x2	2-13/32	1-13/32	.85
438-528SR	6x2	3-5/16	2-9/32	2.63
438-530SR	6x3	3-9/32	1-7/8	2.70
438-532SR	6x4	3-1/2	2-1/32	2.60

REDUCER (T.T.) BUSHING (Flush Style)

Mipt x Fipt



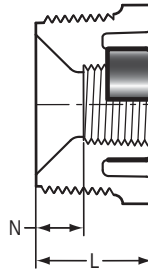
Part Number	Size	L	N	Approx. Wt. (Lbs.)
439-052	3/8x1/4	13/16	1/4	.01
439-071	1/2x1/8	27/32	13/32	.02
439-072	1/2x1/4	29/32	3/8	.02
439-073	1/2x3/8	15/16	3/8	.01
439-098	3/4x1/4	1-1/32	15/32	.03
439-099	3/4x3/8	1-1/32	7/16	.03
439-101	3/4x1/2	15/16	3/16	.02
439-128	1x1/4	1-1/8	17/32	.05
439-130	1x1/2	1-7/32	1/2	.06
439-131	1x3/4	1-1/8	13/32	.03
439-166	1-1/4x1/2	1-5/16	9/16	.09
439-167	1-1/4x3/4	1-9/32	9/16	.08
439-168	1-1/4x1	1-3/16	9/32	.06
439-209	1-1/2x1/2	1-11/32	19/32	.11
439-210	1-1/2x3/4	1-11/32	19/32	.11
439-211	1-1/2x1	1-11/32	7/16	.10
439-212	1-1/2x1-1/4	1-11/32	13/32	.06
439-247	2x1/2	1-3/8	21/32	.16
439-248	2x3/4	1-3/8	5/8	.16
439-249	2x1	1-3/8	15/32	.17
439-250	2x1-1/4	1-3/8	7/16	.16
439-251	2x1-1/2	1-3/8	13/32	.12
439-292	2-1/2x2	1-29/32	7/8	.22
439-337	3x1-1/2	1-15/16	29/32	.50
439-338	3x2	1-15/16	15/16	.45
439-339	3x2-1/2	1-15/16	5/8	.37
439-422	4x3	2-1/8	1/2	.72



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

SPECIAL REINFORCED REDUCER (T.T.) BUSHING (Flush Style)

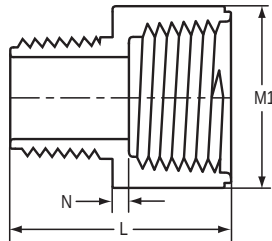
Mipt x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
439-209SR	1-1/2x1/2	1-11/32	19/32	.13
439-210SR	1-1/2x3/4	1-11/32	19/32	.12
439-247SR	2x1/2	1-3/8	21/32	.18
439-248SR	2x3/4	1-3/8	5/8	.18
439-249SR	2x1	1-3/8	15/32	.19

IPT ADAPTER

Mipt x Fipt

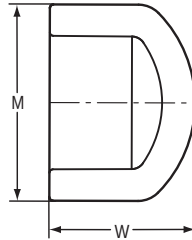


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
446-003	3/8	1-13/32	29/32	5/32	.02
446-012	1-1/4	2-3/16	2	5/32	.11
446-053	3/8x1/2	1-1/2	1-1/16	3/16	.03
446-074	1/2x3/4	1-17/32	1-5/16	5/32	.04

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



CAP
Socket

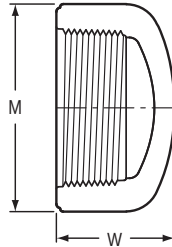


Part Number	Size	M	W	Approx. Wt. (Lbs.)
447-003	3/8	7/8	1	.01
447-005	1/2	1-3/32	1-1/16	.02
447-007	3/4	1-5/16	1-5/16	.04
447-010	1	1-9/16	1-9/16	.06
447-012	1-1/4	1-31/32	1-3/4	.09
447-015	1-1/2	2-1/4	1-29/32	.12
447-020	2	2-23/32	2-1/32	.17
447-025	2-1/2	3-5/16	2-9/16	.33
447-030	3	4	2-29/32	.49
447-040	4	5-1/16	3-1/8	.79
447-045F	4-1/2	5-7/16	3-5/8	.31
447-050	5	6-1/8	4-13/32	1.43
447-060	6	7-1/4	5	2.34
447-080	8	9-9/16	6-3/8	4.26
447-100F	10	11-13/16	5-1/4	5.22
447-120F	12	13-7/8	6-7/8	8.22
447-140F	14	15	7-3/8	8.75
447-160F	16	17-1/16	8-1/2	12.15
447-180F	18	19-1/8	9	17.58
447-200F	20	21-3/16	12-1/4	26.48
447-240F	24	25-5/16	14-1/8	40.26



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

CAP
Fipt



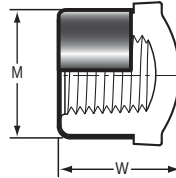
Part Number	Size	M	W	Approx. Wt. (Lbs.)
448-003	3/8	15/16	25/32	.01
448-005	1/2	1-1/16	1-1/16	.03
448-007	3/4	1-11/32	1-1/16	.03
448-010	1	1-5/8	1-5/16	.06
448-012	1-1/4	2-1/16	1-1/2	.09
448-015	1-1/2	2-1/4	1-9/16	.11
448-020	2	2-3/4	1-23/32	.16
448-025	2-1/2	3-9/32	2-5/16	.35
448-030	3	4	2-13/32	.49
448-040	4	5-5/32	2-25/32	.76
448-050	5	6-11/32	3-3/32	1.39
448-060	6	7-5/16	3-5/32	1.59
448-080F	8	9-3/8	4-3/8	3.83
448-100F	10	11-7/8	5-3/4	7.44
448-120F	12	13-13/16	6-3/16	37.94

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



SPECIAL REINFORCED CAP

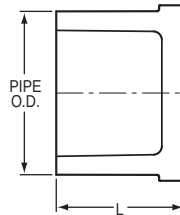
SR Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
448-012SR	1-1/4	2-1/16	1-3/8	.09

PLUG

Spigot



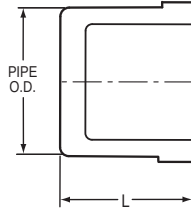
Part Number	Size	L	Approx. Wt. (Lbs.)
449-003	3/8	31/32	.01
449-005	1/2	7/8	.02
449-007	3/4	1-1/8	.02
449-010	1	1-3/8	.05
449-012	1-1/4	1-17/32	.09
449-015	1-1/2	1-5/8	.11
449-020	2	1-3/4	.17
449-025	2-1/2	2-3/8	.35
449-030	3	2-3/32	.39
449-040	4	2-5/8	.76
449-060	6	3-1/2	1.74
449-060F	6	9-1/2	4.53
449-080F	8	10-15/16	8.55
449-100F	10	11-1/4	11.98
449-120F	12	13-7/8	18.15
449-140F	14	15-3/8	19.10
449-160F	16	17-1/2	32.07
449-180F	18	19	42.58
449-200F	20	23-1/4	63.91
449-240F	24	27-1/8	105.13



PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

COUNTER SUNK PLUG

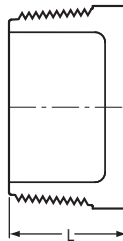
Spigot



Part Number	Size	L	Approx. Wt. (Lbs.)
449-007CS	3/4	1-1/4	.03
449-010CS	1	1-5/32	.04

PLUG

Mipt



Part Number	Size	L	Approx. Wt. (Lbs.)
450-003	3/8	25/32	.01
450-005	1/2	13/16	.02
450-007	3/4	7/8	.02
450-010	1	1-7/32	.06
450-012	1-1/4	1-9/32	.07
450-015	1-1/2	1-11/32	.10
450-020	2	1-3/8	.15
450-025	2-1/2	1-31/32	.27
450-030	3	1-7/8	.39
450-040	4	2-1/8	.77
450-060	6	2-1/16	1.71
450-080F	8	9	8.33
450-100F	10	8-1/2	12.68
450-120F	12	10-7/8	19.62

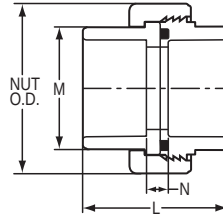
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



UNION

Socket x Socket w/O-ring Seal

Pressure Rating 150 psi @ 73°F



Part Number		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
w/O-ring Seal							
BUNA-N	EPDM						
457-005	497-005	1/2	1-27/32	1-3/32	11/32	1-23/32	.08
457-007	497-007	3/4	2-3/16	1-5/16	11/32	1-31/32	.12
457-010	497-010	1	2-7/16	1-5/8	11/32	2-3/8	.18
457-012	497-012	1-1/4	2-29/32	1-31/32	13/32	2-11/16	.24
457-015	497-015	1-1/2	3-1/32	2-1/4	3/8	3-3/32	.32
457-020	497-020	2	3-9/32	2-23/32	17/32	3-5/8	.54
457-025	497-025	2-1/2	4-1/16	3-11/32	9/16	4-3/8	.85
457-030	497-030	3	4-11/32	4	11/16	5-3/32	1.26
457-040	497-040	4	4-5/8	5-1/32	19/32	6-3/16	1.78
457-060	497-060	6	6-7/8	7-9/32	13/16	8-7/8	5.22

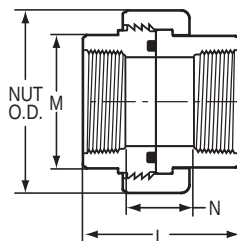


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

UNION

Fipt x Fipt w/O-ring Seal

Pressure Rating 150 psi @ 73°F

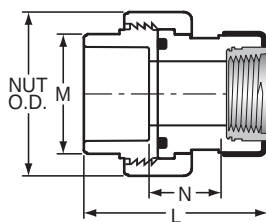


Part Number		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
w/O-ring Seal							
BUNA-N	EPDM						
458-005	498-005	1/2	1-25/32	1-3/32	5/16	1-23/32	.09
458-007	498-007	3/4	1-25/32	1-5/16	11/32	1-31/32	.12
458-010	498-010	1	2-1/8	1-5/8	11/32	2-3/8	.19
458-012	498-012	1-1/4	2-1/4	1-31/32	13/32	2-11/16	.24
458-015	498-015	1-1/2	2-9/32	2-1/4	3/8	3-3/32	.31
458-020	498-020	2	2-1/2	2-23/32	1/2	3-5/8	.47
458-025	498-025	2-1/2	3-5/32	3-11/32	9/16	4-3/8	.86
458-030	498-030	3	3-13/32	4	5/8	5-3/32	1.26
458-040	498-040	4	3-9/16	5-1/32	5/8	6-3/16	1.74
458-060	498-060	6	4-27/32	7-1/4	1-1/2	8-7/8	4.83

TRANSITION UNION

Socket x Fipt w/Metal Thread Insert and O-ring Seal

Pressure Rating 235 psi @ 73°F



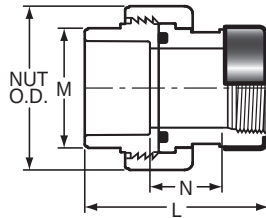
Part Number		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
w/O-ring Seal							
BUNA-N	EPDM						
459-010BR	499-010BR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52
459-012BR	499-012BR	1-1/4	3-9/32	2-7/32	1-1/16	3-5/16	.68
459-015BR	499-015BR	1-1/2	3-1/2	2-9/16	1-3/32	3-17/32	.89
459-020BR	499-020BR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.59

Not intended to convey or dispense water for human consumption through drinking or cooking

SPECIAL REINFORCED UNION

Socket x SR Fipt w/O-ring Seal

Pressure Rating 235 psi @ 73°F



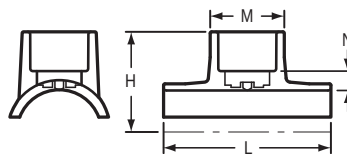
Part Number		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
w/O-ring Seal							
BUNA-N	EPDM						
459-002SR	499-002SR	1/4	2-1/8	7/8	29/32	1-11/16	.10
459-003SR	499-003SR	3/8	2-5/16	1	1	1-13/16	.06
459-005SR	499-005SR	1/2	2-9/32	1-9/32	21/32	1-31/32	.17
459-007SR	499-007SR	3/4	2-19/32	1-17/32	27/32	2-1/2	.28
459-010SR	499-010SR	1	2-15/16	1-11/16	7/8	2-7/8	.42
459-012SR	499-012SR	1-1/4	3-7/32	2-1/16	31/32	3-5/16	.55
459-015SR	499-015SR	1-1/2	3-7/16	2-9/16	1-1/16	3-9/16	.68
459-020SR	499-020SR	2	4-1/8	3	1-9/16	4-5/32	1.11
459-030SR	499-030SR	3	5-9/32	4-5/16	1-31/32	5-13/16	2.55
459-040SR	499-040SR	4	5-15/16	5-1/4	2-1/8	5-3/4	4.04

SADDLE

(IPS O.D. x Socket)

Non-Pressure Rated. Contact Spears®

Technical Services for additional information



Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-288	2-1/2x3/4	2-9/16	5-5/16	1-11/32	1/16	.24
463-333 ¹	3x1/2	3-19/32	6-11/32	2-3/8	1-5/16	.65
463-335 ¹	3x1	3-5/8	6-11/32	2-3/8	7/8	.67
463-336	3x1-1/4	3-21/32	6-5/16	2-3/8	21/32	.59
463-337	3x1-1/2	3-5/16	6-3/8	2-3/8	5/16	.52
463-338	3x2	5	6-5/16	2-3/4	1-7/8	.71
463-415	4x1/2	4-1/8	6-5/16	2-3/8	1-1/8	.65
463-417	4x1	4-7/32	6-5/16	2-3/8	13/16	.67
463-418	4x1-1/4	4-3/16	6-1/4	2-3/8	11/16	.60



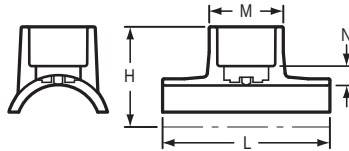
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

SADDLE (continued)

(IPS O.D. x Socket)

Non-Pressure Rated. Contact Spears®

Technical Services for additional information



Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-419	4x1-1/2	3-3/4	6-1/4	2-13/32	1/4	.57
463-420	4x2	5-1/2	6-1/4	2-3/4	1-13/16	.73
463-485	5x1-1/2	5-3/8	7-1/8	2-25/32	1-5/32	1.05
463-486	5x2	5	7-1/8	2-3/4	9/32	.89
463-523 ¹	6x1-1/2	4-5/16	6-15/32	2-3/8	1-1/4	.84
463-525	6x1	5-11/32	6-3/8	2-7/8	7/8	.86
463-526	6x1-1/4	5-3/8	6-5/16	2-3/8	3/4	.80
463-527	6x1-1/2	4-15/16	6-5/16	2-13/32	5/16	.69
463-528	6x2	6-9/16	6-5/16	2-3/4	1-7/8	.92
463-530 ¹	6x3	5-15/16	11-15/16	5-1/16	5/8	2.79
463-532	6x4	5-1/2	11-15/16	5	1/4	1.95
463-573 ¹	8x1-1/2	6-9/16	6-11/32	2-3/8	1-1/2	.93
463-575 ¹	8x1	3-3/8	6-11/32	2-3/8	1-7/32	.95
463-576 ¹	8x1-1/4	3-21/32	6-11/32	2-3/8	1	.84
463-577	8x1-1/2	6-7/32	6-5/16	2-3/8	19/32	.83
463-578	8x2	7-11/16	6-5/16	2-3/4	2	.96
463-580 ¹	8x3	6	11-7/8	5	3/4	2.96
463-582	8x4	5-9/16	11-15/16	5-1/32	7/32	2.11
463-624	10x4	7-5/8	11-7/8	5	5/16	2.19

¹Outlet sized with bushing

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

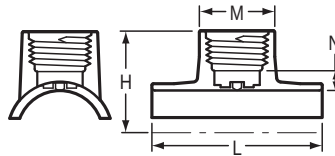


SADDLE

(IPS O.D. x Fipt)

Non-Pressure Rated. Contact Spears®

Technical Services for additional information



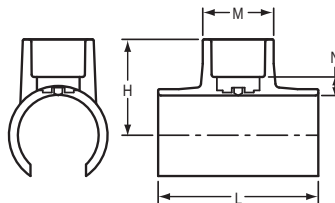
Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
464-071	1/2x1/8	1	2-1/8	9/16	1/8	.03
464-097	3/4x1/8	1-1/8	2-1/8	9/16	5/32	.04
464-288	2-1/2x3/4	2-9/16	5-9/32	1-11/32	5/16	.24
464-337	3x1-1/2	3-9/32	6-5/16	2-3/8	13/32	.53
464-419	4x1-1/2	3-3/4	6-1/4	2-3/8	7/16	.56
464-486	5x2	4-15/16	7-1/16	2-3/4	1-3/32	1.00
464-527	6x1-1/2	4-15/16	6-5/16	2-3/8	3/8	.70
464-532	6x4	5-9/32	11-15/16	5	9/32	1.92
464-577	8x1-1/2	6-7/32	6-5/16	2-3/8	19/32	.79
464-582	8x4	6-1/4	11-7/8	5	1/4	2.16
464-624	10x4	7-5/16	11-7/8	5	1/4	2.04

SNAP-ON SADDLE

(IPS O.D. x Socket)

Non-Pressure Rated. Contact Spears®

Technical Services for additional information



Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-005	1/2x1/2	1-11/32	2-1/2	1-3/32	5/32	.05
463-007	3/4x3/4	1-3/4	3-1/8	1-5/16	7/32	.08
463-010	1x1	1-29/32	3-5/8	1-5/8	1/8	.14
463-012	1-1/4x1-1/4	2-1/4	4-1/4	2	11/32	.20
463-015	1-1/2x1-1/2	2-13/32	4-7/16	2-7/32	3/16	.25
463-020	2x2	2-23/32	5-1/4	2-11/16	7/32	.40
463-101	3/4x1/2	1-11/32	2-3/4	1-3/32	7/32	.06
463-130	1x1/2	1-13/32	3-1/2	1-3/32	1-3/16	.09



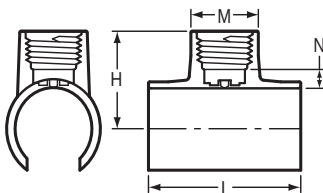
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

SNAP-ON SADDLE

(IPS O.D. x Fipt)

Non-Pressure Rated. Contact Spears®

Technical Services for additional information.



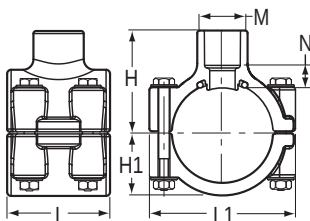
Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
464-005	1/2x1/2	1-3/8	2-1/2	1-1/16	3/16	.05
464-007	3/4x3/4	1-3/4	3-5/32	1-5/16	13/32	.09
464-010	1x1	1-15/16	3-5/8	1-5/8	1/4	.15
464-001	3/4x1/2	1-7/16	2-3/8	1-3/32	3/16	.06
464-030	1x1/2	1-19/32	3-1/2	1-1/16	5/32	.08
464-031	1x3/4	1-7/16	3	1-1/4	3/16	.09
464-210	1-1/2x3/4	1-15/16	3-17/32	1-5/16	5/32	.15

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET

Dimensions Also Applicable to

466S-XXX 466E-XXX 466SE-XXX

Pressure Rating
 2" - 4" 235 psi @ 73°F
 6" 200 psi @ 73°F
 8" - 12" 150 psi @ 73°F

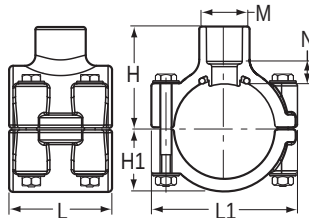


Part Number	Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)
466-247	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	.60
466-248	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/16	.61
466-249	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	5/16	.63
466-250	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	5/16	.71
466-251	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/8	.71
466-291	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	3/8	1.02
466-333	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	13/16	.88
466-334	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/32	.86
466-335	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	5/16	.87

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
466S-XXX 466E-XXX 466SE-XXX

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)
466-336	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-1/32	1.47
466-337	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	29/32	1.41
466-338	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	3/8	1.25
466-415	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	31/32	1.31
466-416	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	27/32	1.28
466-417	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	7/16	1.24
466-418	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	29/32	1.70
466-419	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	1/2	1.63
466-420	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	7/16	1.70
466-421	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	3/4	2.82
466-422	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	1/2	2.41
466-523	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-7/32	2.35
466-524	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-1/8	2.33
466-525	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	11/16	2.29
466-526	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/8	3.26
466-527 ¹	6x1-1/2	5-23/32	3-7/8	4-1/8	7-31/32	3	1-1/32	3.20
466-528	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	11/16	3.04
466-529	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-1/8	4.75
466-530	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	25/32	4.33
466-532	6x4	6	3-29/32	6	7-15/16	5-3/16	5/8	5.12
466-573	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/16	9.35
466-574	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	9.36
466-575	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-5/8	9.37
466-576	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	9.39
466-577	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	9.32
466-578	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/8	9.17
466-579	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	1-11/16	9.24
466-580	8x3	7-1/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/16	9.15

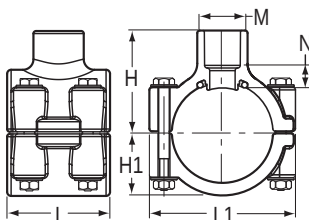


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
466S-XXX 466E-XXX 466SE-XXX

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



¹Outlet sized with bushing

Part Number	Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)
466-582	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	11/16	8.35
466-585	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	11/16	9.47
466-620 ¹	10x1-1/2	8-7/8	6-1/8	8-1/2	11-7/8	5-1/4	3-1/4	12.78
466-624	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	13/16	11.79
466-626	10x6	9-1/8	6	8-7/16	12	7-5/8	1-1/8	12.86
466-664	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	7/8	15.48
466-666	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	7/8	16.30

¹Outlet sized with bushing

- 1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 466-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.
- 2) Clamp-On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g.) Part Number 466S-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.
- 3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter "E" Before The Dash.
e.g.) Part Number 466E-247 = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter "SE" Before The Dash.
e.g.) Part Number 466SE-247 = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolts.

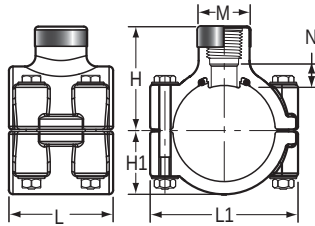
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



CLAMP-ON SADDLE x SR FIPT SINGLE OUTLET

Dimensions Also Applicable to
467S-XXXSR 467E-XXXSR 467SE-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)
467-247SR	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	.62
467-248SR	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/8	.63
467-249SR	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	9/16	.65
467-250SR	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	11/16	.57
467-251SR	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/4	.76
467-291SR	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	13/16	1.09
467-333SR	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	15/16	.89
467-334SR	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/16	.88
467-335SR	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	9/16	.90
467-336SR	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-5/16	1.52
467-337SR	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	2-11/16	1.48
467-338SR	3X2	3-5/8	2-1/16	4-3/32	4-5/8	3	7/8	1.34
467-415SR	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1.32
467-416SR	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1.31
467-417SR	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	11/16	1.28
467-418SR	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	1-7/32	1.75
467-419SR	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	15/16	1.70
467-420SR	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	15/16	1.80
467-421SR	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	1-7/32	2.92
467-422SR	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	31/32	2.59
467-523SR	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-3/8	2.37
467-524SR	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-3/8	2.35
467-525SR	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	15/16	2.32
467-526SR	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-11/16	3.32
467-527SR	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/4	3.27
467-528SR	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	1-7/32	3.14
467-529SR	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-9/16	4.85
467-530SR	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	1-1/4	4.50



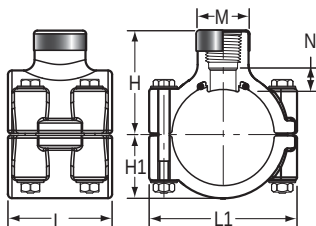
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

CLAMP-ON SADDLE x SR FIPT SINGLE OUTLET

(continued)

Dimensions Also Applicable to
467S-XXXSR 467E-XXXSR 467SE-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)
467-532SR	6x4	6	3-29/32	6	7-15/16	5-3/16	1-3/8	5.48
467-573SR	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	9.42
467-574SR	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	9.43
467-575SR	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-13/16	9.43
467-576SR	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	9.56
467-577SR	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	9.39
467-578SR	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	9.21
467-579SR	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	9.15
467-580SR	8x3	7-1/16	4-7/8	8-1/2	10-1/8	5-1/4	1-15/16	10.06
467-582SR	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	1-1/2	8.51
467-585SR	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	2-3/32	10.20
467-624SR	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	2-3/16	12.09
467-626SR	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	3-3/16	13.45
467-664SR	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	1-5/8	15.69
467-666SR	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	2-1/4	16.92

- 1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 467-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.
- 2) Clamp-On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g.) Part Number 467S-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.
- 3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter "E" Before The Dash.
e.g.) Part Number 467E-247SR = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter "SE" Before The Dash.
e.g.) Part Number 467SE-247SR = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolts.

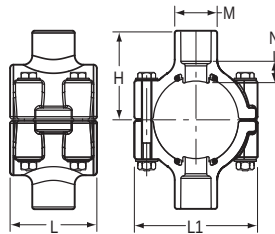
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



CLAMP-ON SADDLE x SOCKET DOUBLE OUTLET

Dimensions Also Applicable to
468S-Xxx 468E-Xxx 468SE-Xxx

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Approx. Wt. (Lbs.)
468-247	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	.63
468-248	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	.65
468-249	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	.68
468-250	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	.73
468-251	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/8	.85
468-291	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1.15
468-333	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	.93
468-334	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	.89
468-335	3x1	3-3/16	3	4-5/8	1-11/16	5/16	.91
468-336	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	1.93
468-337	3x1-1/2	4-1/32	4-3/32	4-5/8	3	29/32	1.80
468-338	3x2	3-5/8	4-3/32	4-5/8	3	3/8	1.48
468-415	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1.43
468-416	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1.37
468-417	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1.30
468-418	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1.91
468-419	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1.76
468-420	4x2	4-3/16	4-1/8	5-5/8	3	7/16	1.91
468-421	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3.77
468-422	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	2.95
468-523	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	2.48
468-524	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	2.44
468-525	6x1	5-1/8	3	7-15/16	1-11/16	11/16	2.35
468-526	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	3.70
468-527	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	3.57
468-528	6x2	5-1/2	4-1/8	7-3/4	3	11/16	3.26
468-529	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	5.61
468-530	6x3	5-15/16	6	7-15/16	4-1/4	25/32	4.78

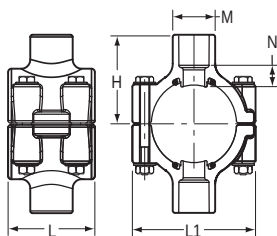


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

CLAMP-ON SADDLE x SOCKET DOUBLE OUTLET (continued)

Dimensions Also Applicable to
468S-Xxx 468E-Xxx 468SE-Xxx

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



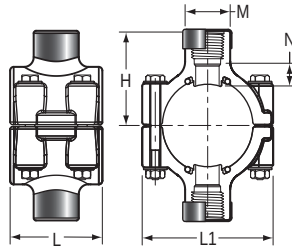
Part Number	Size	H	L	L1	M	N	Approx. Wt. (Lbs.)
468-532	6x4	6	6	7-15/16	5-3/16	5/8	5.63
468-573	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	11.07
468-574	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	11.04
468-575	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	11.06
468-576	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	11.08
468-577	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	10.96
468-578	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	10.64
468-579	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	10.78
468-580	8x3	7-1/16	8-1/2	10-1/8	5-1/4	1-7/16	10.62
468-582	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	9.02
468-585	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	11.25
468-624	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	12.37
468-626	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	14.51
468-664	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	16.06
468-666	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	17.70

- 1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 468-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.
- 2) Clamp-On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g.) Part Number 468S-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.
- 3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter "E" Before The Dash.
e.g.) Part Number 468E-247 = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter "SE" Before The Dash.
e.g.) Part Number 468SE-247 = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolt

CLAMP-ON SADDLE x SR FIPT DOUBLE OUTLET

Dimensions Also Applicable to
469S-XXXSR 469E-XXXSR 469SE-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Approx. Wt. (Lbs.)
469-247SR	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	.66
469-248SR	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	.67
469-249SR	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	.73
469-250SR	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	.79
469-251SR	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/8	.93
469-291SR	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1.30
469-333SR	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	.96
469-334SR	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	.93
469-335SR	3x1	3-3/16	3	4-5/8	1-11/16	5/16	.98
469-336SR	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2.04
469-337SR	3x1-1/2	4-1/32	4-3/32	4-5/8	3	2-11/16	1.94
469-338SR	3x2	3-5/8	4-3/32	4-5/8	3	3/8	1.67
469-415SR	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1.46
469-416SR	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1.44
469-417SR	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1.37
469-418SR	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	2.00
469-419SR	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1.89
469-420SR	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2.10
469-421SR	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3.98
469-422SR	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3.31
469-523SR	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	2.51
469-524SR	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	2.48
469-525SR	6x1	5-1/8	3	7-15/16	1-11/16	11/16	2.42
469-526SR	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	3.81
469-527SR	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	3.71
469-528SR	6x2	5-1/2	4-1/8	7-3/4	3	11/16	3.45
469-529SR	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	5.82
469-530SR	6x3	5-15/16	6	7-15/16	4-1/4	25/32	5.12

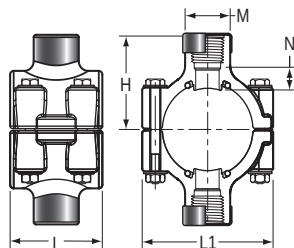


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

CLAMP-ON SADDLE x SR FIPT DOUBLE OUTLET (continued)

Dimensions Also Applicable to
469S-XXXSR 469E-XXXSR 469SE-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Approx. Wt. (Lbs.)
469-532SR	6x4	6	6	7-15/16	5-3/16	5/8	6.35
469-573SR	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	11.07
469-574SR	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	11.18
469-575SR	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	11.09
469-576SR	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	11.44
469-577SR	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	11.46
469-578SR	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	10.73
469-579SR	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	10.62
469-580SR	8x3	7-1/16	8-1/2	10-1/8	5-1/4	1-7/16	10.76
469-582SR	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	9.33
469-585SR	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	12.70
469-624SR	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	12.97
469-626SR	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	15.69
469-664SR	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	16.45
469-666SR	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	18.95

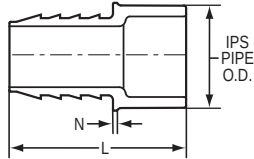
- 1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 469-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.
- 2) Clamp-On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g.) Part Number 469S-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.
- 3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter "E" Before The Dash.
e.g.) Part Number 469E-247SR = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter "SE" Before The Dash.
e.g.) Part Number 469SE-247SR = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolt

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



INSERT ADAPTER (PVC White)

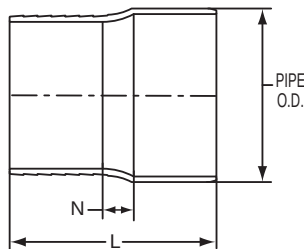
Insert x I.P.S. Spigot Adapter
ASTM D 2609



Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-005	1/2	2-7/16	7/32	.03
460-007	3/4	2-23/32	7/32	.04
460-010	1	2-9/16	1/16	.07
460-012	1-1/4	3-1/32	1/4	.11
460-015	1-1/2	3-5/16	5/16	.12
460-020	2	3-1/2	3/8	.20
460-030	3	4-11/16	7/16	.58
460-040	4	5-11/32	5/16	.73

INSERT ADAPTER (PVC White)

Insert x I.P.S. Spigot

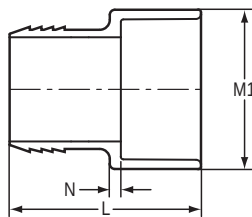


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1432-060	6	7-27/32	1	1.69
1432-080*	8	9-7/8	5/8	5.23

*Fabricated

INSERT ADAPTER

Insert x Socket
ASTM D 2609



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
474-005	1/2	2-3/8	1-1/16	1/8	.03
474-007	3/4	2-7/16	1-5/16	5/32	.05
474-010	1	2-5/8	1-5/8	1/8	.07
474-012	1-1/4	2-11/16	2	3/16	.10
474-015	1-1/2	3-1/16	2-1/4	3/16	.14
474-020	2	3	2-11/16	3/16	.17
474-030	3	4-3/4	4	5/16	.51
474-040	4	5-5/8	5	3/8	.81

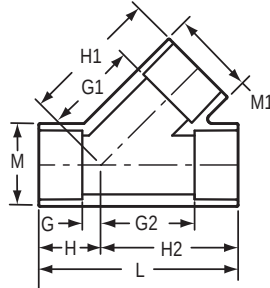


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

WYE

Socket x Socket x Socket

Pressure Rating
 1/2" -2" 235 psi @ 73°F
 2-1/2" -6" 150 psi @ 73°F
 8" & Up 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-005	1/2	1/4	1-3/16	1-3/16	1-1/8	2-1/16	2-1/16	3-3/16	1-5/32	1-5/32	.12
475-007	3/4	5/16	1-3/8	1-3/8	1-5/16	2-3/8	2-3/8	3-23/32	1-3/8	1-3/8	.18
475-010	1	9/32	1-13/16	1-13/16	1-13/32	2-15/16	2-15/16	4-11/32	1-23/32	1-23/32	.31
475-012	1-1/4	3/8	2-1/4	2-1/4	1-5/8	3-1/2	3-1/2	5-1/8	2-1/16	2-1/16	.50
475-015	1-1/2	1/2	2-19/32	2-9/16	1-7/8	3-31/32	3-15/16	5-13/16	2-11/32	2-11/32	.69
475-020	2	19/32	3-7/32	3-7/32	2-1/8	4-3/4	4-3/4	6-7/8	2-7/8	2-7/8	1.20
475-025 ¹	2-1/2	1-3/16	5-1/8	4-23/32	2-15/16	6-7/8	6-15/32	9-13/32	4-3/16	4-3/16	3.77
475-030	3	11/16	4-23/32	4-1/4	2-9/16	6-5/8	6-1/8	8-23/32	4-3/16	4-3/16	2.63
475-040	4	1-7/32	5-23/32	5	3-1/2	7-31/32	7-1/4	10-3/4	5-1/4	5-1/4	4.87
475-050F	5	3-3/4	9-3/8	9-3/8	6-3/4	12-3/8	12-3/8	19-1/8	6-1/16	6-1/16	13.26
475-060	6	1-5/32	8-25/32	8-3/16	4-3/16	11-25/32	11-3/16	15-3/8	7-9/16	7-9/16	12.01
475-080	8	1-15/16	11-11/32	11-11/32	5-31/32	15-11/32	15-11/32	21-5/16	9-3/4	9-3/4	25.44
475-080F	8	5-5/8	14-5/16	14-5/16	9-7/8	18-9/16	18-9/16	28-7/16	9-1/4	9-1/4	25.46
475-100	10	2-1/2	16-7/8	13-31/32	7-1/2	22-1/8	18-31/32	26-15/32	11-9/16	11-9/16	26.92
475-100F	10	6-9/16	17-1/4	17-1/4	11-13/16	22-1/2	22-1/2	34-5/16	11-1/2	11-1/2	45.11
475-120	12	2-11/16	16-1/8	16-7/32	8-3/4	22-7/32	22-9/32	31-1/32	13-21/32	13-21/32	41.85
475-120F	12	7-5/16	20-1/16	20-1/16	13-9/16	26-5/16	26-5/16	39-7/8	13-9/16	13-9/16	63.02
475-140F	14	7-3/16	21-3/16	21-3/16	14-3/16	28-3/16	28-3/16	42-3/8	14-7/8	14-7/8	90.24
475-160F	16	8-3/4	24-3/4	24-3/4	16-3/4	32-3/4	32-3/4	49-1/2	17	17	93.06
475-180F	18	9-7/16	27-7/16	27-7/16	18-7/16	36-7/16	36-7/16	54-7/8	19-1/8	19-1/8	151.20
475-200F	20	11-7/16	30-5/16	30-5/16	21-7/16	40-5/16	40-5/16	61-3/4	21-3/16	21-3/16	191.78
475-240F	24	11	35	35	23	47	47	70	25-3/8	25-3/8	420.00

¹ Outlet sized with bushing

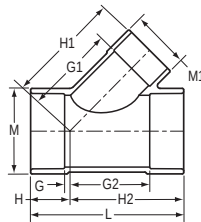
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES



REDUCING WYE

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-101 ¹	3/4x3/4x1/2	5/16	2-5/32	1-3/8	1-5/16	2-15/16	2-3/8	3-11/16	1-3/8	1-3/8	.21
475-131 ¹	1x1x3/4	11/32	2	1-3/4	1-15/32	3-9/32	2-7/8	4-11/32	1-23/32	1-23/32	.36
475-167 ¹	1-1/4x1-1/4x3/4	3/8	2-3/4	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.63
475-168 ¹	1-1/4x1-1/4x1	3/8	2-5/8	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.58
475-210 ¹	1-1/2x1-1/2x3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.82
475-211 ¹	1-1/2x1-1/2x1	1/2	3	2-9/16	1-7/8	4-5/32	3-15/16	5-13/16	2-11/32	2-11/32	.84
475-212 ¹	1-1/2x1-1/2x1-1/4	1/2	3-1/4	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.77
475-248 ¹	2x2x3/4	5/8	4-1/4	3-1/4	2-1/8	5-1/8	4-3/4	6-7/8	2-7/8	2-7/8	1.41
475-249 ¹	2x2x1	15/32	4-3/32	3-11/32	2	5-1/8	4-7/8	6-7/8	2-7/8	2-7/8	1.38
475-251 ¹	2x2x1-1/2	19/32	3-7/16	3-7/32	2-1/8	4-7/8	4-3/4	6-7/8	2-7/8	2-7/8	1.35
475-292 ¹	2-1/2x2-1/2x2	1	5-9/16	4-1/2	3	6-15/16	6-1/2	9-9/16	4-3/16	4-3/16	4.00
475-335 ¹	3x3x1	11/16	5-7/8	4-7/32	2-9/16	6-15/16	6-1/8	8-23/32	4-3/16	4-3/16	3.14
475-336 ¹	3x3x1-1/4	7/8	5-3/4	4-1/8	2-3/4	7	6	8-3/4	4-3/16	4-3/16	3.06
475-337 ¹	3x3x1-1/2	13/16	5-5/8	4-1/8	2-11/16	6-15/16	6	8-11/16	4-3/16	4-3/16	3.19
475-338 ¹	3x3x2	3/4	5-9/16	4-1/4	2-5/8	6-15/16	6-1/8	8-3/4	4-3/16	4-3/16	3.19
475-339 ¹	3x3x2-1/2	7/8	4-1/8	4-21/32	2-3/4	6-3/4	6	8-3/4	4-3/16	4-3/16	2.59
475-420	4x4x2	-5/16	4-11/16	4	2	6-7/32	6-5/16	8-5/16	5-9/32	2-29/32	2.78
475-422 ¹	4x4x3	5/8	6-7/8	5-5/8	2-7/8	8-7/8	7-7/8	10-3/4	5-1/4	5-1/4	6.00
475-528 ¹	6x6x2	1/16	8-5/8	6-5/8	3	10	6-11/16	12-11/16	7-9/16	4-3/4	9.30
475-530 ¹	6x6x3	1/32	8-1/4	6-21/32	3-1/32	10-1/4	9-21/32	12-11/16	7-9/16	5-7/16	9.29
475-532	6x6x4	31/32	6-9/16	5-11/16	3-15/16	8-27/32	8-23/32	21-21/32	7-9/16	5-7/16	8.61
475-532F	6x6x4	2-9/16	10-9/16	9-3/16	5-13/16	12-3/16	12-7/16	18-1/4	7-3/16	5	6.71
475-578F	8x8x2	9/16	9-3/4	9-3/16	4-13/16	11-1/2	13-7/16	18-1/4	9-1/4	2-11/16	12.62
475-580F	8x8x3	1-5/16	10-7/8	9-15/16	5-9/16	13-1/8	14-3/16	19-3/4	9-1/4	3-15/16	14.36
475-582F	8x8x4	2-1/16	11-7/8	10-11/16	6-5/16	14-1/8	14-15/16	21-1/4	9-1/4	5	16.32
475-585F	8x8x6	3-1/2	12-13/16	12-1/8	7-3/4	16-1/16	16-3/8	24-1/8	9-1/4	7-3/16	19.47
475-621F	10x10x2	1/2	11-3/16	10-1/4	4-3/4	12-15/16	15-1/2	20-1/4	11-1/2	2-11/16	17.95
475-623F	10x10x3	1/2	12-5/16	11-1/4	5-3/4	14-9/16	16-1/2	22-1/4	11-1/2	3-15/16	18.96
475-624F	10x10x4	1-7/16	13-5/16	12-3/16	6-11/16	15-9/16	17-7/16	24-1/8	11-1/2	5	22.97
475-626	10x10x6	-9/32	12-27/32	11-1/32	4-23/32	15-7/8	16-1/32	20-3/4	12-1/32	7-19/32	28.18

¹ Outlet sized with bushing



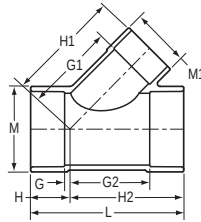
PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING WYE

Socket x Socket x Socket

(continued)

Pressure Rating
1/2" - 2" 235 psi @ 73°F
2-1/2" - 6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-626F	10x10x6	3-1/2	14-1/4	14-1/4	8-3/4	17-1/2	19-1/2	28-1/4	11-1/2	7-3/16	21.45
475-628	10x10x8	1-7/32	12-3/4	12-1/4	6-7/32	16-25/32	17-9/32	23-1/2	12-1/32	9-23/32	35.50
475-628F	10x10x8	5-1/8	15-11/16	15-7/8	10-3/8	19-15/16	21-1/8	31-1/2	11-1/2	9-1/4	28.02
475-661F	12x12x2	1-1/8	12-9/16	11-5/8	5-1/8	14-5/16	17-7/8	23	13-9/16	2-11/16	40.46
475-663F	12x12x3	3/8	13-11/16	12-3/8	5-7/8	15-15/16	18-5/8	24-1/2	13-9/16	3-15/16	28.74
475-664F	12x12x4	3/8	14-11/16	13-1/8	6-5/8	16-15/16	19-3/8	26	13-9/16	5	23.93
475-666F	12x12x6	2-3/8	15-5/8	15-1/8	8-5/8	18-7/8	21-3/8	30	13-9/16	7-3/16	28.92
475-668F	12x12x8	3-7/8	17-1/16	16-5/8	10-1/8	21-5/16	22-7/8	33	13-9/16	9-1/4	45.53
475-670F	12x12x10	5-3/8	18-1/8	18-1/8	11-5/8	23-3/8	24-3/8	36	13-9/16	11-1/2	40.69
475-691F	14x14x2	2	13-7/16	12	5	15-3/16	19	24	14-7/8	2-11/16	29.36
475-693F	14x14x3	3/4	14-9/16	13-1/4	6-1/4	16-13/16	20-1/4	26-1/2	14-7/8	3-15/16	33.06
475-694F	14x14x4	0	15-9/16	14	7	17-13/16	21	28	14-7/8	5	37.45
475-696F	14x14x6	1-1/2	16-1/2	15-1/2	8-1/2	19-3/4	22-1/2	31	14-7/8	7-3/16	48.96
475-698F	14x14x8	3	17-15/16	17	10	22-3/16	24	34	14-7/8	9-1/8	48.96
475-700F	14x14x10	4-1/2	19	18-1/2	11-1/2	24-1/4	25-1/2	37	14-7/8	11-1/2	60.73
475-702F	14x14x12	7	20-15/16	21	14	27-3/16	28	42	14-7/8	13-9/16	69.34
475-751F	16x16x2	2	14-3/4	14	6	16-1/2	22	28	17	2-11/16	37.81
475-753F	16x16x3	1-1/8	15-7/8	14-7/8	6-7/8	18-1/8	22-7/8	29-3/4	17	3-15/16	40.93
475-754F	16x16x4	1/2	16-7/8	15-1/2	7-1/2	19-1/8	23-1/2	31	17	5	50.95
475-756F	16x16x6	1-7/8	17-13/16	17-7/8	9-7/8	21-1/16	25-7/8	35-3/4	17	7-3/16	60.24
475-758F	16x16x8	2-1/2	19-1/4	18-1/2	10-1/2	23-1/2	26-1/2	37	17	9-1/4	70.40
475-760F	16x16x10	4	20-5/16	20	12	25-9/16	28	40	17	11-1/2	73.02
475-762F	16x16x12	5-1/2	22-1/4	21-1/2	13-1/2	28-1/2	29-1/2	43	17	13-9/16	90.59
475-764F	16x16x14	6-3/8	22-1/2	22-3/8	14-3/8	29-1/2	30-3/8	44-3/4	17	14-7/8	100.41
475-786F	18x18x6	7/8	19-1/8	18-7/8	9-7/8	22-3/8	27-7/8	37-3/4	19-1/8	7-3/16	81.78
475-788F	18x18x8	2-3/8	20-9/16	20-3/8	11-3/8	24-13/16	29-3/8	40-3/4	19-1/8	9-1/4	101.85
475-790F	18x18x10	3-3/8	21-5/8	21-3/8	12-3/8	26-7/8	30-3/8	42-3/4	19-1/8	11-1/2	83.99
475-792F	18x18x12	4-7/8	23-9/16	22-7/8	13-7/8	29-13/16	31-7/8	45-3/4	19-1/8	13-9/16	92.98
475-794F	18x18x14	5-3/8	23-13/16	23-3/8	14-3/8	30-13/16	32-3/8	46-3/4	19-1/8	14-7/8	116.88
475-796F	18x18x16	7-7/8	26-1/16	25-7/8	16-7/8	34-1/16	34-7/8	51-3/4	19-1/8	17	121.63
475-816F	20x20x6	1/8	20-1/2	19-7/8	9-7/8	23-3/4	29-7/8	39-3/4	21-3/16	7-3/16	101.52
475-818F	20x20x8	1-3/8	21-15/16	21-3/8	11-3/8	26-3/16	31-3/8	42-3/4	21-3/16	9-1/4	109.36
475-820F	20x20x10	2-3/8	23	22-3/8	12-3/8	28-1/4	32-3/8	44-3/4	21-3/16	11-1/2	120.53
475-822F	20x20x12	4-3/8	24-15/16	24-3/8	14-3/8	31-3/16	34-3/8	48-3/4	21-3/16	13-9/16	135.66
475-824F	20x20x14	4-7/8	25-3/16	24-7/8	14-7/8	32-3/16	34-7/8	49-3/4	21-3/16	14-7/8	129.00

PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

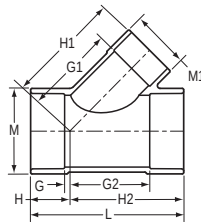


REDUCING WYE

Socket x Socket x Socket

(continued)

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F

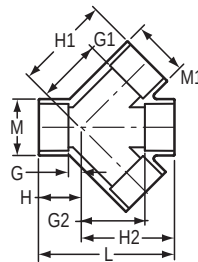


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-826F	20x20x16	6-3/8	27-7/16	26-3/8	16-3/8	35-7/16	36-3/8	52-3/4	21-3/16	17	161.54
475-828F	20x20x18	7-7/8	28-13/16	27-7/8	17-7/8	37-13/16	37-7/8	55-3/4	21-3/16	19-1/8	158.46
475-906F	24x24x6	1-1/4	23-3/16	22-3/4	10-3/4	26-7/16	34-3/4	45-1/2	25-3/8	7-3/16	135.24
475-908F	24x24x8	1/4	24-5/8	24-1/4	12-1/4	28-7/8	36-1/4	48-1/2	25-3/8	9-1/4	145.74
475-910F	24x24x10	1-3/8	25-11/16	25-3/8	13-3/8	30-15/16	37-3/8	50-3/4	25-3/8	11-1/2	176.10
475-912F	24x24x12	3-1/4	27-5/8	27-1/4	15-1/4	33-7/8	39-1/4	54-1/2	25-3/8	13-9/16	153.58
475-914F	24x24x14	4	27-7/8	28	16	34-7/8	40	56	25-3/8	14-7/8	184.50
475-916F	24x24x16	6-3/8	30-1/8	30-3/8	18-3/8	38-1/8	42-3/8	60-3/4	25-3/8	17	185.70
475-918F	24x24x18	7-7/8	31-1/2	31-7/8	19-7/8	40-1/2	43-7/8	63-3/4	25-3/8	19-1/8	185.70
475-920F	24x24x20	9-1/8	33	33-1/8	21-1/8	43	45-1/8	66-1/4	25-3/8	21-3/16	232.49

DOUBLE WYE

Socket x Socket x Socket x Socket

Pressure Rating
150 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
476-020F	2	3-5/16	5-11/16	5-11/16	4-11/16	7-1/16	7-1/16	11-3/4	2-3/4	2-3/4	1.25
476-030F	3	4-7/8	8-3/8	8-3/8	6-3/4	10-1/14	10-1/4	17	4	4	5.42
476-040F	4	4-5/8	9-1/8	9-1/8	6-7/8	11-3/8	11-3/8	18-5/16	5	5	10.09
476-060F	6	4-7/8	11-1/2	11-1/2	8-1/8	14-3/4	14-3/4	22-7/8	7-3/16	7-3/16	20.91
476-080F	8	5-5/8	14-5/16	14-5/16	9-7/8	18-9/16	18-9/16	28-7/16	9-1/4	9-1/4	25.02
476-100F	10	6-9/16	17-1/4	17-1/4	11-13/16	22-1/2	22-1/2	34-5/16	11-1/2	11-1/2	37.91
476-120F	12	7-5/16	20-1/16	20-1/16	13-9/16	26-5/16	26-5/16	39-7/8	13-9/16	13-9/16	63.02
476-140F	14	7-3/16	21-3/16	21-3/16	14-3/16	28-3/16	28-3/16	42-3/8	14-7/8	14-7/8	96.09

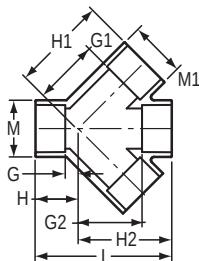


PVC WHITE SCHEDULE 40 FITTINGS UNIONS & SADDLES

REDUCING DOUBLE WYE

Socket x Socket x Socket x Socket

Pressure Rating
150 psi @ 73°F

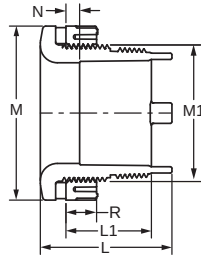


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
476-338	3x2	7/32	4-1/4	4-1/32	2-3/32	5-3/4	5-29/32	8	4-3/16	2-7/8	2.27
476-528F	6x2	7/8	8-7/16	7-1/2	4-1/8	10-3/16	10-3/4	14-7/8	7-3/16	2-11/16	5.87
476-530F	6x3	1-13/16	9-9/16	8-7/16	5-1/16	11-13/16	11-11/16	16-3/4	7-3/16	3-15/16	10.29
476-532F	6x4	2-9/16	10-9/16	9-3/16	5-13/16	12-13/16	12-7/16	18-1/4	7-3/16	5	9.52
476-578F	8x2	9/16	9-3/4	9-3/16	4-13/16	11-1/2	13-7/16	18-1/4	9-1/4	2-11/16	12.49
476-580F	8x3	1-5/16	10-7/8	9-15/16	5-9/16	13-1/8	14-3/16	19-3/4	9-1/4	3-15/16	15.79
476-582F	8x4	2-1/16	11-7/8	10-11/16	6-5/16	14-1/8	14-15/16	21-1/4	9-1/4	5	12.73
476-585F	8x6	3-1/2	12-13/16	12-1/8	7-3/4	16-1/16	16-3/8	24-1/8	9-1/4	7-3/16	24.52
476-621F	10x2	1/2	11-3/16	10-1/4	4-3/4	12-15/16	15-1/2	20-1/4	11-1/2	2-11/16	13.93
476-623F	10x3	1/2	12-5/16	11-1/4	5-3/4	14-9/16	16-1/2	22-1/4	11-1/2	3-15/16	16.31
476-624F	10x4	1-7/16	13-5/16	12-3/16	6-11/16	15-9/16	17-7/16	24-1/8	11-1/2	5	18.71
476-626F	10x6	3-1/2	14-1/4	14-1/4	8-3/4	17-1/2	19-1/2	28-1/4	11-1/2	7-3/16	24.65
476-628F	10x8	5-1/8	15-11/16	15-7/8	10-3/8	19-15/16	21-1/8	31-1/2	11-1/2	9-1/4	31.59
476-661F	12x2	1-1/8	12-9/16	11-5/8	5-1/8	14-5/16	17-7/8	23	13-9/16	2-11/16	32.18
476-663F	12x3	3/8	13-11/16	12-3/8	5-7/8	15-15/16	18-5/8	24-1/2	13-9/16	3-15/16	35.93
476-664F	12x4	3/8	14-11/16	13-1/8	6-5/8	16-15/16	19-3/8	26	13-9/16	5	25.49
476-666F	12x6	2-3/8	15-5/8	15-1/8	8-5/8	18-7/8	21-3/8	30	13-9/16	7-3/16	42.56
476-668F	12x8	3-7/8	17-1/16	16-5/8	10-1/8	21-5/16	22-7/8	33	13-9/16	9-1/4	37.86
476-670F	12x10	5-3/8	18-1/8	18-1/8	11-5/8	23-3/8	24-3/8	36	13-9/16	11-1/2	67.89
476-756F	16x6	1-7/8	17-13/16	17-7/8	9-7/8	21-1/16	25-7/8	35-3/4	17	7-3/16	64.27
476-786F	18x6	7/8	19-1/8	18-7/8	9-7/8	22-3/8	27-7/8	37-3/4	19-1/8	7-3/16	91.45

TANK ADAPTER WITH EPDM GASKET

Socket (Male Pipe Thread)

Pressure Rating
150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R
4170E-005	1/2	2-5/16	1-1/2	2-3/16	1-7/16	3/4	9/16
4170E-007	3/4	2-3/8	1-1/2	2-1/2	1-13/16	9/16	9/16
4170E-010	1	2-3/8	1-1/2	2-3/4	2-1/16	1/2	9/16
4170E--012	1-1/4	2-3/8	1-9/16	3-3/16	2-1/2	5/16	9/16
4170E--015	1-1/2	2-3/8	1-9/16	3-3/16	2-1/2	1/4	9/16
4170E--020	2	3-1/4	2-3/8	3-13/16	3-1/16	1	5/8
4170E--025	2-1/2	3-1/2	2-9/16	4-1/2	3-11/16	13/16	5/8

Tank Adapter Hole Size Requirements

Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/2	1-1/2	5.50	.44
3/4	1-7/8	7.50	.44
1	2-1/8	9.00	.44
1-1/4	2-1/2	12.00	.44
1-1/2	2-1/2	12.00	.44
2	3-1/8	17.50	.75
2-1/2	3-3/4	24.50	.88



EverTUFF® TURF™ FITTINGS



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



Visit our web site
www.spearsmfg.com



Spears® **EverTUFF® TURF™** Fittings are specifically engineered to meet the demanding system requirements of today's golf course and sports turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

Design Tested

EverTUFF® TURF™ Fittings have been computer engineered through Finite Element Analysis (FEA) studies for optimum material placement, strength and performance. Spears® Research & Development testing has shown the resulting design to best handle proper solvent cementing and correctly applied cyclic conditions of modern sports turf irrigation systems.

Full Class 315 Pressure Rating

Unlike the varying pressure ratings assigned to PVC Schedule piping, the **EverTUFF® TURF™** Class 315 designation maintains a uniform 315 psi pressure rating for all fittings sizes.

Full Selection of Basic Configurations

EverTUFF® TURF™ Fittings are produced in the basic configurations including Tees, Reducing Tees, 90° and 90° Sweep Elbows, 45° Elbows, Couplings, Reducer Bushings, Male Adapters and Special Reinforced (SR) Female Adapters – in sizes 1" through 4", plus Mechanical Clamp-on Transition Saddles sizes 4", 6" and 8".

Optional CPVC for Higher Temperatures

Where heat and excess temperature can be a major concern, **EverTUFF® TURF™** Fittings are available in higher temperature CPVC gray material.



EverTUFF® TURF™ FITTINGS

NSF® Certified

EverTUFF® TURF™ Fittings are NSF® Certified for use in potable water systems and are naturally lead-free.

The Performance Difference – Patented Design

Spears® EverTUFF® TURF™ Fittings form a class of their own by merging different design parameters for conventional fittings with special PVC material selection to collectively produce a unique, highly surge resistant line of fittings that has been awarded a U.S. Patent.

EverTUFF® TURF™ Proven 2X Stronger Than Competitor Special “surge” Fittings

Independent 3rd party high-stress failure testing was conducted by the Center for Irrigation Technology (CIT) at California State University, Fresno. **Identical test is designed to force fittings to failure demonstrated that Spears® EverTUFF® TURF™ Fittings are over 2X stronger than competitor’s special “surge” fittings.**

Product Test	Average Cycles To Failure
Competitor Special “surge” Tees	6,107.6
Spears® EverTUFF® TURF™ Tees	14,234.4

Performance that is a direct result of Spears® engineering and unparalleled processing capability!

Lifetime Warranty*

We are so confident in this fitting that it carries a Lifetime Warranty!

Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI												
Application Temperature	73°F (23°C)	90°F (32°C)	100°F (38°C)	110°F (43°C)	120°F (49°C)	130°F (54°C)	140°F (60°C)	150°F (66°C)	160°F (71°C)	170°F (77°C)	180°F (82°C)	200°F (99°C)
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

Maximum Service Temperature: PVC = 140°F; CPVC = 200°F

*See Spears® Limited Lifetime Warranty for additional warranty details.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

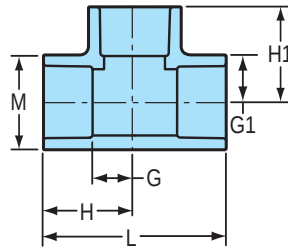
“Lead Free” low lead certification – unless otherwise specified, all Spears® EverTUFF® TURF fittings specified here-in are certified by NSF International to ANSI/ NSF® Standard 61, Annex G and is in compliance with California’s Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

EverTUFF® TURF™ FITTINGS



PVC & CPVC TEE

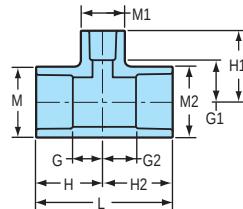
Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	M
PVC	CPVC							
401-010T	401-010TC	1	13/16	13/16	1-31/32	1-31/32	3-15/16	1-11/16
401-012T	401-012TC	1-1/4	1	1	2-9/32	2-9/32	4-17/32	2-1/32
401-015T	401-015TC	1-1/2	1-1/8	1-1/8	2-17/32	2-17/32	5-1/32	2-9/32
401-020T	401-020TC	2	1-3/8	1-3/8	2-7/8	2-7/8	5-25/32	2-25/32
401-025T	401-025TC	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	3-3/8
401-030T	401-030TC	3	2-1/32	2-1/32	3-29/32	3-29/32	7-13/16	4-1/16
401-040T	401-040TC	4	2-19/32	2-19/32	4-7/8	4-7/8	9-25/32	5-7/32

PVC & CPVC REDUCING TEE

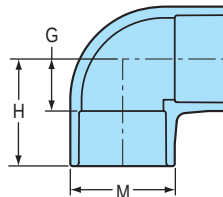
Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2
PVC	CPVC											
401-168T	401-168TC	1-1/4x1-1/4x1	13/16	1	13/16	2-3/32	2-5/32	2-3/32	4-5/32	2-1/32	1-11/16	2-1/32
401-212T	401-212TC	1-1/2x1-1/2x1-1/4	1	1-1/8	1	2-13/32	2-3/8	2-13/32	4-25/32	2-9/32	2-1/32	2-9/32
401-251T	401-251TC	2x2x1-1/2	1-3/8	1-3/8	1-3/8	2-21/32	2-3/4	2-21/32	5-5/16	2-25/32	2-5/16	2-25/32
401-292T	401-292TC	2-1/2x2-1/2x2	1-3/8	1-11/16	1-3/8	3-1/8	3-3/16	3-1/8	6-9/32	3-11/32	2-25/32	3-13/32
401-338T	401-338TC	3x3x2	1-3/8	2-1/32	1-3/8	3-1/4	3-17/32	3-1/4	6-17/32	4-1/16	2-25/32	4-1/16
401-422T	401-422TC	4x4x3	2-1/32	2-19/32	2-1/32	4-9/32	4-15/32	4-9/32	8-9/16	5-7/32	4-3/32	5-7/32

PVC & CPVC 90° ELBOW

Socket x Socket



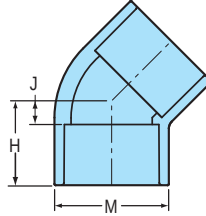
Part Number		Size	G	H	M
PVC	CPVC				
406-010T	406-010TC	1	29/32	2-1/32	1-21/32
406-012T	406-012TC	1-1/4	1-1/32	2-9/32	2-1/32
406-015T	406-015TC	1-1/2	1-5/32	2-17/32	2-9/32
406-020T	406-020TC	2	1-3/8	2-7/8	2-25/32
406-025T	406-025TC	2-1/2	1-23/32	3-15/32	3-3/8
406-030T	406-030TC	3	2	3-7/8	4-1/16
406-040T	406-040TC	4	2-11/16	4-15/16	5-7/32



EverTUFF® TURF™ FITTINGS

PVC & CPVC 45° ELBOW

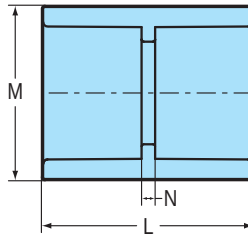
Socket x Socket



Part Number		Size	H	J	M
PVC	CPVC				
417-010T	417-010TC	1	1-5/8	15/32	1-11/16
417-012T	417-012TC	1-1/4	1-13/16	9/16	2-1/32
417-015T	417-015TC	1-1/2	1-31/32	19/32	2-9/32
417-020T	417-020TC	2	2-7/32	23/32	2-25/32
417-025T	417-025TC	2-1/2	2-5/8	7/8	3-3/8
417-030T	417-030TC	3	2-7/8	1	4-1/16
417-040T	417-040TC	4	3-9/16	1-5/16	5-7/32

PVC & CPVC COUPLING

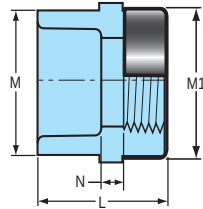
Socket x Socket



Part Number		Size	L	M	N
PVC	CPVC				
429-010T	429-010TC	1	2-11/32	1-21/32	3/32
429-012T	429-012TC	1-1/4	2-19/32	2-1/32	3/32
429-015T	429-015TC	1-1/2	2-7/8	2-9/32	3/32
429-020T	429-020TC	2	3-1/8	2-25/32	3/32
429-025T	429-025TC	2-1/2	3-11/16	3-3/8	3/16
429-030T	429-030TC	3	3-31/32	4-1/16	3/16
429-040T	429-040TC	4	4-25/32	5-1/4	1/4

PVC & CPVC SPECIAL REINFORCED FEMALE ADAPTER

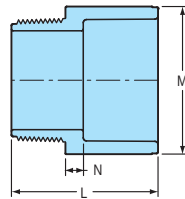
Socket x SR Fipt



Part Number		Size	L	M	M1	N
PVC	CPVC					
435-010SRT	435-010SRTC	1	2-5/32	1-3/16	1-25/32	3/32
435-012SRT	435-012SRTC	1-1/4	2-5/16	2-3/32	2-1/16	3/32
435-015SRT	435-015SRTC	1-1/2	2-7/16	2-13/32	2-7/16	3/16
435-020SRT	435-020SRTC	2	2-11/16	3	3-1/32	9/32
435-025SRT	435-025SRTC	2-1/2	3-9/32	3-9/16	3-19/32	7/32
435-030SRT	435-030SRTC	3	3-1/2	4-1/4	4-9/32	3/16
435-040SRT	435-040SRTC	4	3-31/32	5-7/32	5-7/32	7/32

PVC & CPVC MALE ADAPTER

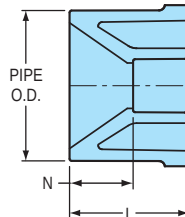
Mipt x Socket



Part Number		Size	L	M	N
PVC	CPVC				
436-010T	436-010TC	1	1-1/8	1-11/16	7/32
436-012T	436-012TC	1-1/4	2-1/2	2-1/16	7/32
436-015T	436-015TC	1-1/2	2-5/8	2-5/16	7/32
436-020T	436-020TC	2	2-25/32	2-25/32	7/32
436-025T	436-025TC	2-1/2	3-19/32	3-3/8	9/32
436-030T	436-030TC	3	3-13/16	4-3/32	5/32
436-040T	436-040TC	4	4-13/32	5-1/4	13/32

PVC & CPVC REDUCER BUSHING (Flush Style)

Spigot x Socket



Part Number		Size	L	N
PVC	CPVC			
437-292	437-292C	2-1/2x2	2-1/16	17/32
437-338	437-338C	3x2	2-7/32	9/16
437-422	437-422C	4x3	2-19/32	11/16



PVC & PP INSERT FITTINGS

FOR USE WITH POLYETHYLENE PIPE



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



Visit our web site
www.spearsmfg.com

The PVC Barbed-Insert Fitting of Choice



Engineered to provide positive grip and ease of installation. High quality and reliability have made Spears® insert fittings the preferred choice for irrigation and O.E.M. applications. A wide variety of PVC insert configurations and adapters are available for use with polyethylene pipe sizes 1/2" through 4", plus 6" & 8" Couplings and Adapters for lay-flat type irrigation hose. Special 3/8" barbed configurations in PVC and PP allow clamp-free connection to 1/2" I.D. polyethylene irrigation hose.

Superior Choice for Use with Polyethylene Pipe

Spears® PVC Insert Fittings are designed for use with either ASTM D 2104 Schedule 40 or D 2239 SDR pressure rated polyethylene pipe. Chemical and corrosion resistant, rigid PVC barbed inserts provide excellent grip with polyethylene materials.

Conform to ASTM D 2609

Spears® Insert Fittings are manufactured from high quality PVC materials to meet or exceed the applicable requirements of ASTM D 2609, Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.

Full Assortment of Configurations and Adapters

Spears® broad line of gray PVC Insert Fittings includes popular configurations of elbows, tees, couplings and crosses. Numerous male and female NPT threaded adapters, elbows and tees plus white PVC Schedule 40 solvent-cement socket and spigot adapters allow easy connection of insert fittings to supply or distribution systems.

Twist Lock Insert Adapter with Built-in Clamping

Special Insert Fittings design uses built-in lock ring for easy connection without clamps to Polyethylene (PE) Plastic Pipe used with standard Insert Fittings.

Clamp-Free Spiral Barb Irrigation Hose Insert Adapters

Specially designed nominal 3/8" barb configurations allow connection of pipe Insert Fittings to conventional 1/2" polyethylene irrigation hose. Special spiral barb allows "twist-on" connection of hose without need for clamping in open end irrigation applications.

NSF® Certified for Use with Potable Water

Spears® Insert Fittings are tested and Certified by the NSF International for use in potable water systems.



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Installation Information

RECOMMENDATIONS FOR INSTALLERS AND USERS:

Plastic piping systems should be ENGINEERED, INSTALLED, and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

SOLVENT WELD CONNECTIONS — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

THREADED CONNECTIONS — Use a quality grade thread sealant. **WARNING:** SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/ installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVER TIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

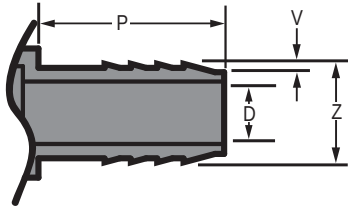
INSERT FITTING INSTALLATION — Pipe is cut to length with handsaw or knife. When installing flexible lines, (a) snake line one foot or more per 100 lineal feet, (b) cold water should be run through lines prior to backfilling to permit pipe to contract, (c) care should be taken to prevent large and sharp-edged rocks from being in position to crush pipe. Insert fittings are used to join lengths of flexible pipe. Stainless steel clamps are first slipped over ends of pipe, fitting is inserted and steel clamps are tightened securely over barbs on fittings. **DO NOT** use oil or detergent on any fittings. Use plain water or soapy water as lubricant on fitting. For attachment to previously installed metallic systems or threaded fixtures, the insert adapter is utilized. Apply thread sealant to the threaded end of adapter and tighten into female connection. Steel clamp is then slipped over pipe end and pipe slipped over serrated end of insert adapter. Steel clamp is then positioned over serrations on insert adapter and securely tightened with a screwdriver.

TWIST LOCK INSERT INSTALLATION — Twist Lock Fittings with built in lock ring are installed the same as regular Insert Fittings, but do not require steel clamps. Check that lock ring component is fully threaded onto fitting. Slip pipe over serrated end of insert adapter. Twist lock ring back over pipe and barb to seal.

SPIRAL BARB FITTING INSTALLATION — Spiral Barb fittings are designed for use with 1/2" (.490) polyethylene irrigation hose and do not require steel clamps. Install with a twisting motion to fully engage barbs.

"Lead Free" low lead certification — unless otherwise specified, all Spears® PVC & PP Insert Fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



Dimensions of Insert Ends ASTM D 2609

Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z"		Barb Depth "V" min.	Inside Diameter "D" min.
		max.	min.		
1/2	1-1/4	.665	.635	.015	.406
3/4	1-1/4	.865	.835	.015	.562
1	1-1/4	1.095	1.065	.020	.750
1-1/4	1-1/4	1.425	1.395	.025	.995
1-1/2	1-1/2	1.665	1.630	.030	1.125
2	1-1/2	2.125	2.085	.030	1.656
2-1/2	2	2.520	2.487	.030	2.062
3	2-1/8	3.125	3.086	.030	2.600
4	3	4.090	4.044	.030	3.525

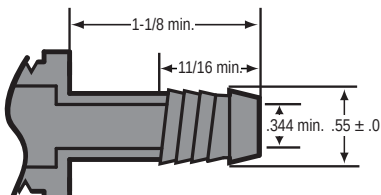
Dimensions of Polyethylene Pipe ASTM D 2104 and D 2239

Nominal Size in.	Average I.D. in.	Tolerance in.
1/2	.622	+.010 - .010
3/4	.824	+.010 - .015
1	1.049	+.010 - .020
1-1/4	1.380	+.010 - .020
1-1/2	1.610	+.015 - .020
2	2.067	+.015 - .020
2-1/2	2.469	+.015 - .025
3	3.068	+.015 - .030
4	4.026	+.015 - .035

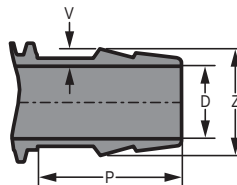
Insert Fittings Dimensions

- G** = (LAYING LENGTH) Intersection of center lines to insert bottom or thread bottom; 90° elbows, tees & crosses; $\pm 1/32$ inch.
- H** = Intersection of center lines to end of insert or face of fitting; 90° elbows, tees & crosses; $\pm 1/32$ inch.
- L** = Overall length of fittings; $\pm 1/16$ inch.
- N** = (LAYING LENGTH) Insert bottom to insert bottom or thread bottom; couplings & straight adapters; $\pm 1/16$ inch.

Dimensions of Spiral Barb Ends



Dimensions of Twist Lock Coupling



Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z" max.	Barb Depth "V" min.	Inside Diameter "D" min.
1/2	.90	.675	.055	.460
3/4	.90	.875	.055	.600
1	.96	1.105	.055	.775

STANDARDS & SPECIFICATIONS

• ASTM D 2609

Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.



National Sanitation Foundation (NSF®)
Standard 14 Plastic Fittings for Potable Water.

• Material

Spears® Insert Fittings are produced from PVC Type 1, Minimum Cell Classification 12454. CPVC Minimum Cell Classification 23447.

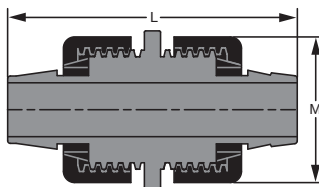
It is the users responsibility to determine the suitability for the intended service application.



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC TWIST LOCK COUPLING

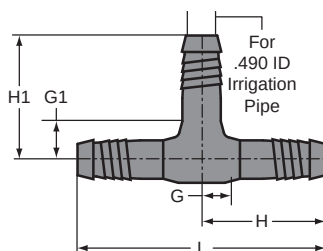
Loc Insert x Loc Insert



Part Number	Size	L	M	Approx. Wt. (Lbs.)
1429TL-005	1/2	3-3/16	1-1/16	.05
1429TL-007	3/4	3-3/16	1-5/16	.08
1429TL-010	1	3-3/16	1-5/8	.11

PVC SPIRAL BARB TEE

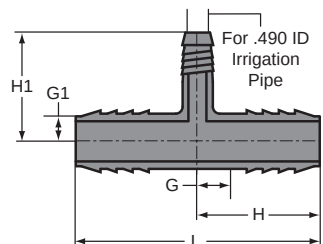
3/8" Spiral Barb x 3/8" Spiral Barb x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-003	3/8	9/16	19/32	1-25/32	1-13/16	3-9/16	.04

PVC SPIRAL BARB TEE

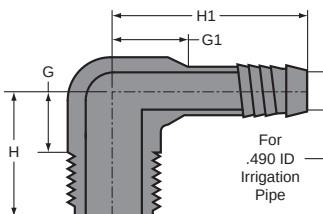
Insert x Insert x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-099	3/4x3/8	17/32	9/16	2-1/32	1-27/32	4-1/32	.05
1401-129	1x3/8	11/16	7/16	2-3/16	1-31/32	4-1/8	.08

PP SPIRAL BARB 90° ELBOW

Mipt x 3/8" Spiral Barb



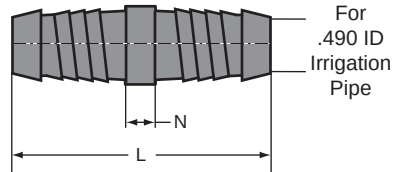
Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-073	1/2x3/8	7/16	5/8	1-1/8	1-13/16	.02
1413-099	3/4x3/8	1/2	23/32	1-3/16	1-29/32	.03

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC SPIRAL BARB COUPLING

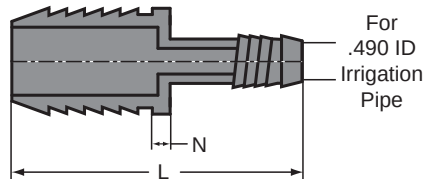
Spiral Barb x Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-003	3/8	2-7/8	5/16	.02

PVC SPIRAL BARB COUPLING

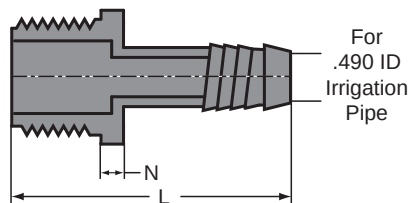
Insert x 3/8" Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-099	3/4x3/8	3	1/16	.02
1429-129	1x3/8	3-3/32	3/16	.04

PP SPIRAL BARB MALE ADAPTER

Mipt x 3/8" Spiral Barb



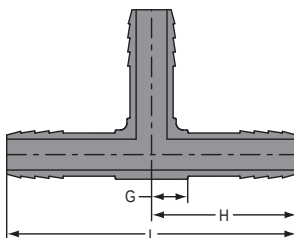
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-073	1/2x3/8	2-11/32	1/4	.02
1436-099	3/4x3/8	2-11/32	1/4	.02



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC TEE

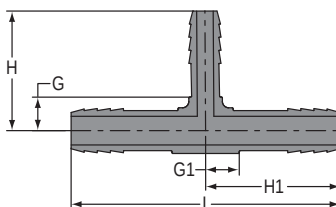
Insert x Insert x Insert



Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1401-005	1/2	7/16	1-15/16	3-13/16	.05
1401-007	3/4	17/32	2-1/32	4-1/16	.06
1401-010	1	11/16	2-3/16	4-15/32	.10
1401-012	1-1/4	31/32	2-15/32	4-15/16	.16
1401-015	1-1/2	15/16	2-11/16	5-3/8	.22
1401-020	2	1-9/32	3-11/32	6-11/16	.43

PVC REDUCING TEE

Insert x Insert x Insert



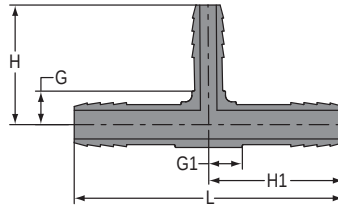
Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-074	1/2x1/2x3/4	21/32	9/16	2-5/32	2-1/16	4-5/16	.05
1401-094	3/4x1/2x1/2	9/16	9/16	2-1/16	2-1/16	4-7/16	.06
1401-101	3/4x3/4x1/2	17/32	17/32	2-1/32	2-1/32	4-1/16	.06
1401-102	3/4x3/4x1	11/16	5/8	2-3/16	2-1/8	4-1/4	.07
1401-124	1x3/4x1/2	9/16	9/16	2-1/16	2-1/16	4-5/32	.07
1401-125	1x3/4x3/4	21/32	9/16	2-1/8	2-1/32	4-3/32	.07
1401-130	1x1x1/2	5/8	13/32	2-1/8	1-29/32	3-27/32	.07
1401-131	1x1x3/4	21/32	21/32	2-5/32	2-5/32	4-5/16	.09
1401-132	1x1x1-1/4	21/32	13/16	2-5/16	2-5/16	4-21/32	.12
1401-156	1-1/4x1x1/2	9/16	21/32	2-1/16	2-5/32	4-7/16	.10
1401-157	1-1/4x1x3/4	21/32	21/32	2-5/32	2-5/32	4-3/8	.11
1401-158	1-1/4x1x1	3/4	23/32	2-1/4	2-7/32	4-1/2	.14
1401-166	1-1/4x1-1/4x1/2	9/16	23/32	2-1/16	2-7/32	4-1/8	.09
1401-167	1-1/4x1-1/4x3/4	27/32	29/32	2-11/32	2-13/32	4-11/16	.13
1401-168	1-1/4x1-1/4x1	13/16	11/16	2-5/16	2-3/16	4-5/8	.14
1401-201	1-1/2x1-1/4x3/4	21/32	1-1/16	2-13/32	2-9/16	4-9/16	.15

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC REDUCING TEE (continued)

Insert x Insert x Insert

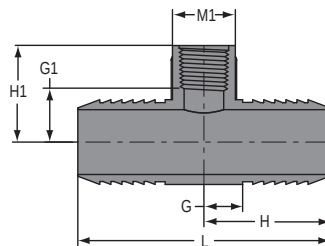


Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-202	1-1/2x1-1/4x1	3/4	1-3/32	2-1/2	2-19/32	4-3/4	.16
1401-203	1-1/2x1-1/4x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-1/8	.18
1401-209	1-1/2x1-1/2x1/2	11/16	9/16	2-5/16	2-5/16	4-5/8	.14
1401-210	1-1/2x1-1/2x3/4	21/32	1-1/16	2-13/32	2-9/16	4-13/16	.17
1401-211	1-1/2x1-1/2x1	3/4	1-1/16	2-1/2	2-9/16	5	.17
1401-212	1-1/2x1-1/2x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-3/8	.20
1401-241	2x1-1/2x1-1/2	1-1/16	1-1/2	2-13/16	3	5-5/8	.27
1401-247	2x2x1/2	1/2	1-5/16	2-1/4	2-7/8	4-9/16	.20
1401-248	2x2x3/4	21/32	1-11/32	2-13/32	2-25/32	4-25/32	.21
1401-249	2x2x1	3/4	1-9/32	2-1/2	2-25/32	5	.22
1401-250	2x2x1-1/4	15/16	1-9/32	2-11/16	2-25/32	5-3/8	.25
1401-251	2x2x1-1/2	1-1/16	13/16	2-13/16	3	5-5/8	.28
1401-338*	3x3x2	3-5/8	3-3/4	5-3/8	6-1/32	12-1/16	2.44

*Assembled

PVC TEE

Insert x Insert x Fipt



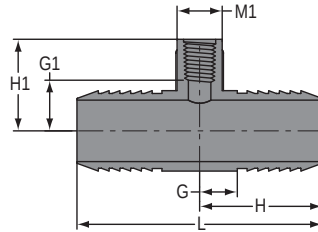
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-005	1/2	17/32	5/16	2-1/32	1-1/32	4-1/16	1	.05
1402-007	3/4	21/32	13/32	2-5/32	1-1/8	4-5/16	1-1/4	.07
1402-010	1	13/16	17/32	2-9/32	1-7/16	4-19/32	1-1/2	.12
1402-012	1-1/4	1-1/8	11/16	2-5/8	1-11/16	5-1/4	2	.21
1402-015	1-1/2	1-1/4	27/32	3	1-27/32	6	2-1/4	.28
1402-020	2	1-3/8	1-1/16	3-1/8	2-1/8	6-1/4	2-3/4	.42



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC REDUCING TEE

Insert x Insert x Fipt



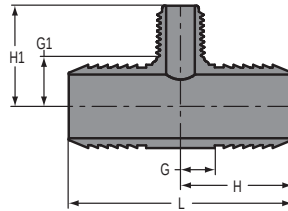
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-094	3/4x1/2x1/2	5/8	13/32	2-1/8	1-5/32	4-5/16	1-3/32	.07
1402-101	3/4x3/4x1/2	3/4	7/16	2-3/16	1-1/4	4-1/8	1-1/16	.06
1402-124	1x3/4x1/2	23/32	17/32	2-7/32	1-9/32	4-7/16	1-3/32	.10
1402-125	1x3/4x3/4	27/32	15/32	2-11/32	1-9/32	4-11/16	1-5/16	.12
1402-130	1x1x1/2	17/32	1/2	2-1/32	1-7/32	4-1/16	1	.08
1402-131	1x1x3/4	21/32	1/2	2-5/32	1-1/4	4-9/32	1-7/32	.09
1402-156	1-1/4x1x1/2	11/16	11/16	2-3/16	1-7/16	4-3/8	1-1/16	.14
1402-157	1-1/4x1x3/4	25/32	21/32	2-9/32	1-15/32	4-17/32	1-5/16	.16
1402-166	1-1/4x1-1/4x1/2	21/32	21/32	2-5/32	1-7/16	4-5/16	1-1/8	.14
1402-167	1-1/4x1-1/4x3/4	25/32	21/32	2-9/32	1-15/32	4-9/16	1-13/32	.15
1402-168	1-1/4x1-1/4x1	15/16	3/4	2-7/16	1-5/8	4-7/8	1-5/8	.17
1402-199	1-1/2x1-1/4x1/2	21/32	3/4	2-9/32	1-1/2	4-9/16	1-3/16	.17
1402-201	1-1/2x1-1/4x3/4	13/16	11/16	2-9/16	1-1/2	4-13/16	1-5/16	.19
1402-202	1-1/2x1-1/4x1	1	25/32	2-3/4	1-25/32	5-3/32	1-5/8	.22
1402-209	1-1/2x1-1/2x1/2	21/32	25/32	2-13/32	1-17/32	4-13/16	1-3/16	.17
1402-210	1-1/2x1-1/2x3/4	13/16	25/32	2-9/16	1-9/16	5-1/8	1-3/8	.19
1402-211	1-1/2x1-1/2x1	15/16	25/32	2-11/16	1-3/4	5-3/8	1-21/32	.22
1402-212	1-1/2x1-1/2x1-1/4	29/32	5/8	2-21/32	1-5/8	5-23/32	2	.26
1402-247	2x2x1/2	13/16	1-3/16	2-5/16	2-1/16	4-7/8	1-1/16	.24
1402-248	2x2x3/4	11/16	1	2-7/16	1-7/8	5-1/16	1-5/16	.26
1402-249	2x2x1	15/16	31/32	2-11/16	2	5-11/32	1-23/32	.30
1402-251	2x2x1-1/2	1-1/4	31/32	3	2	6	2-1/4	.38

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC TEE

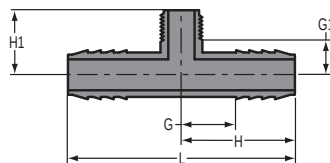
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-005	1/2	9/16	21/32	2-1/16	1-9/32	4-1/8	.04
1403-007	3/4	5/8	13/16	2-5/32	1-7/16	4-5/16	.06
1403-010	1	11/16	11/16	2-3/16	1-5/8	4-3/8	.10
1403-012	1-1/4	15/16	1-1/16	2-7/16	2-1/16	4-7/8	.17
1403-015	1-1/2	1	1-3/16	2-13/16	2-3/16	5-5/8	.22
1403-020	2	1-5/16	1-7/16	3-1/16	2-15/32	6-3/32	.32

PVC REDUCING TEE

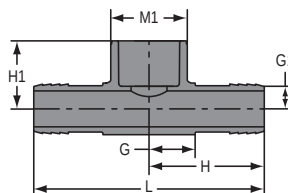
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-130	1x1x1/2	11/16	23/32	2-3/16	1-3/8	4-3/8	.08
1403-131	1x1x3/4	11/16	11/16	2-3/16	1-13/32	4-3/8	.09

PVC TEE

Insert x Insert x Socket



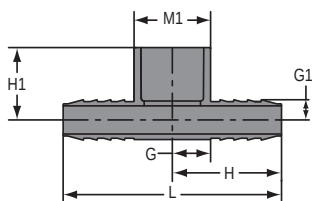
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-010	1	1	15/32	2-1/2	1-15/32	5	1-5/8	.15



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC REDUCING TEE

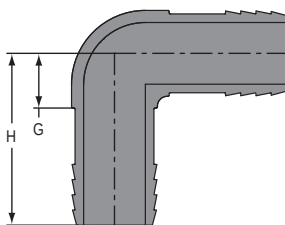
Insert x Insert x Socket



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-102	3/4x3/4x1	27/32	11/32	2-11/32	1-15/32	4-21/32	1-5/8	.09

PVC 90° ELBOW

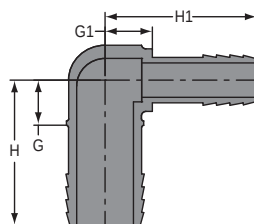
Insert x Insert



Part Number	Size	G	H	Approx. Wt. (Lbs.)
1406-005	1/2	7/16	1-15/16	.03
1406-007	3/4	17/32	2-1/32	.04
1406-010	1	11/16	2-3/16	.07
1406-012	1-1/4	7/8	2-7/16	.12
1406-015	1-1/2	1	2-3/4	.17
1406-020	2	1-11/32	3-19/32	.36
1406-025	2-1/2	1-9/16	3-3/4	.43

PVC 90° REDUCING ELBOW

Insert x Insert



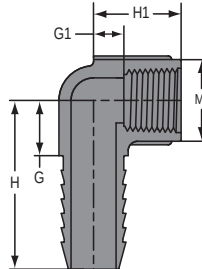
Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1406-101	3/4x1/2	21/32	9/16	2-5/32	2-1/16	.04
1406-131	1x3/4	3/4	5/8	2-1/4	2-1/8	.06
1406-168	1-1/4x1	23/32	21/32	2-1/4	2-1/4	.10
1406-212	1-1/2x1-1/4	15/16	3/4	2-11/16	2-9/32	.14
1406-251	2x1-1/2	1-1/4	31/32	3	2-23/32	.22

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC 90° ELBOW

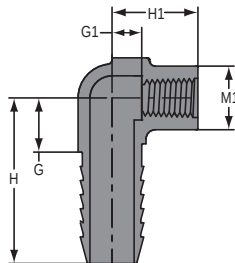
Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-005	1/2	11/16	5/16	2-1/8	1	1-1/16	.04
1407-007	3/4	27/32	13/32	2-1/4	1-3/32	1-9/32	.06
1407-010	1	15/16	3/8	2-3/8	1-3/8	1-19/32	.11
1407-012	1-1/4	1-3/32	3/4	2-19/32	1-3/4	2	.18
1407-015	1-1/2	1-1/4	7/8	3	1-7/8	2-1/4	.24
1407-020	2	1-15/32	1-1/16	3-7/32	2-1/8	2-27/32	.35

PVC 90° REDUCING ELBOW

Insert x Fipt



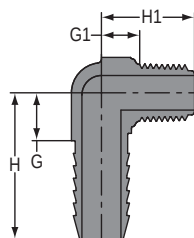
Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-074	1/2x3/4	13/16	3/8	2-5/16	1-1/8	1-11/32	.06
1407-101	3/4x1/2	23/32	15/32	2-7/32	1-5/32	1-3/32	.06
1407-130	1x1/2	11/16	17/32	2-3/16	1-1/4	1-1/8	.07
1407-131	1x3/4	27/32	9/16	2-11/32	1-5/16	1-5/16	.09
1407-166	1-1/4x1/2	21/32	3/4	2-5/32	1-3/8	1-3/32	.10
1407-167	1-1/4x3/4	25/32	3/4	2-9/32	1-1/2	1-5/16	.11
1407-168	1-1/4x1	15/16	11/16	2-7/16	1-21/32	1-11/16	.14
1407-211	1-1/2x1	15/16	3/4	2-11/16	1-3/4	1-5/8	.18
1407-212	1-1/2x1-1/4	1-1/8	13/16	2-7/8	1-13/16	2	.20
1407-251	2x1-1/2	1-7/32	1	2-31/32	2-1/32	2-5/16	.29



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC 90° ELBOW

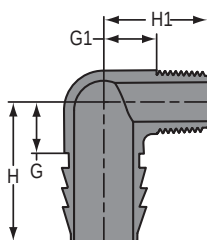
Insert x Mipt



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-005	1/2	1/2	5/8	2	1-1/4	.03
1413-007	3/4	1/2	11/16	2	1-5/16	.05
1413-010	1	11/16	23/32	2-3/16	1-19/32	.07
1413-012	1-1/4	27/32	31/32	2-11/32	1-27/32	.12
1413-015	1-1/2	15/16	1-3/32	2-23/32	2-1/8	.17
1413-020	2	1-1/4	1-3/8	3	2-7/16	.24

PVC 90° REDUCING ELBOW

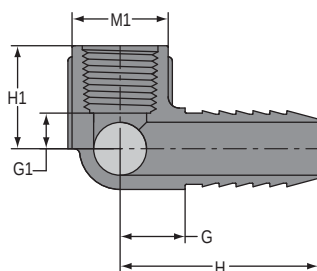
Insert x Mipt



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-055	3/8x3/4	7/16	3/4	1-1/4	1-1/2	.03
1413-101	3/4x1/2	1/2	1/2	2-1/16	1-7/32	.04
1413-130	1x1/2	23/32	3/4	2-3/16	1-11/32	.06
1413-131	1x3/4	11/16	23/32	2-5/32	1-13/32	.06

PVC SIDE OUTLET ELBOW

Insert x Insert x Fipt



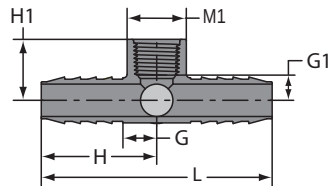
Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1414-101	3/4x3/4x1/2	5/8	13/32	2-1/8	1-1/8	1-3/32	.07
1414-130	1x1x1/2	11/16	9/16	2-3/16	1-1/4	1-5/16	.10
1414-131	1x3/4	15/16	15/32	2-9/32	1-3/16	1-5/16	.11

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC SIDE OUTLET TEE

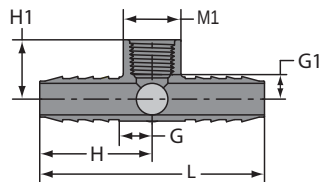
Insert x Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-007	3/4x3/4	23/32	27/32	2-7/32	1-1/8	4-7/16	1-3/32	.08

PVC REDUCING SIDE OUTLET TEE

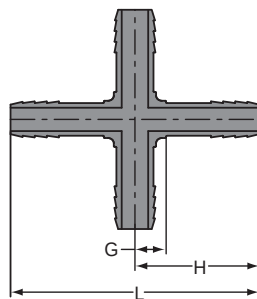
Insert x Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-101	3/4x1/2	5/8	23/32	2-1/8	2-7/32	4-1/4	1-3/32	.08
1416-130	1x1/2	1/2	1/2	1-1/4	1-1/4	2-1/2	1-5/16	.11
1416-131	1x3/4	23/32	27/32	2-7/32	2-11/32	4-7/16	1-5/16	.12

PVC CROSS

Insert



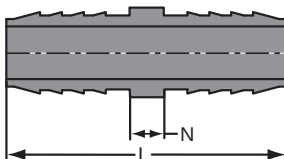
Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1420-005	1/2	13/32	1-29/32	3-13/16	.05
1420-007	3/4	1/2	2-7/16	4-27/32	.09
1420-010	1	11/16	2-3/16	4-3/8	.12



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC COUPLING

Insert x Insert

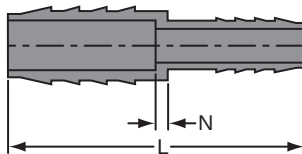


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-005	1/2	3-1/8	1/8	.02
1429-007	3/4	3-1/8	1/4	.03
1429-010	1	3-3/16	3/16	.05
1429-012	1-1/4	3-3/16	3/16	.08
1429-015	1-1/2	3-19/32	3/32	.11
1429-020	2	3-17/32	1/16	.13
1429-025	2-1/2	4-19/32	7/32	.23
1429-030	3	4-13/16	5/16	.34
1429-040	4	6-13/32	3/8	.62
1429-060	6	7-27/32	13/32	1.65
1429-080*	8	9-7/8	3/16	3.55

*Fabricated PVC White

PVC REDUCER COUPLING

Insert x Insert



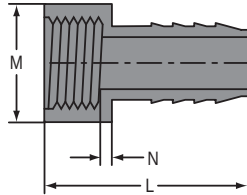
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-101	3/4x1/2	3-1/8	1/8	.03
1429-130	1x1/2	3-1/8	1/8	.04
1429-131	1x3/4	3-3/16	3/16	.04
1429-1315	1x7/8	3-1/4	1/4	.05
1429-167	1-1/4x3/4	3-1/8	1/8	.06
1429-168	1-1/4x1	3-1/16	1/16	.06
1429-210	1-1/2x3/4	3-3/8	1/8	.09
1429-211	1-1/2x1	3-3/8	1/8	.09
1429-212	1-1/2x1-1/4	3-3/8	1/8	.09
1429-249	2x1	3-3/8	1/8	.12
1429-250	2x1-1/4	3-3/8	1/8	.13
1429-251	2x1-1/2	3-5/8	1/8	.14
1429-291	2-1/2x1-1/2	4	1/8	.17
1429-422	4x3	5-9/16	5/16	.50
1429-532	6x4	8-15/32	2-3/16	1.52

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC & CPVC FEMALE ADAPTER

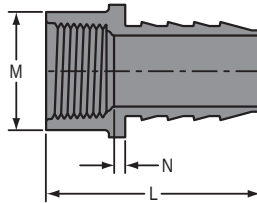
Fipt x Insert



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
1435-005	1435-005C	1/2	2-13/32	1-3/16	3/16	.04	.04
1435-007	1435-007C	3/4	2-7/16	1-13/32	1/4	.05	.05
1435-010	1435-010C	1	2-9/16	1-21/32	3/16	.08	.08
1435-012	1435-012C	1-1/4	2-11/16	2-1/8	5/32	.11	.12
1435-015	1435-015C	1-1/2	3-1/16	2-5/16	3/16	.15	.17
1435-020	1435-020C	2	3	2-13/16	3/16	.19	.22

PVC REDUCING FEMALE ADAPTER

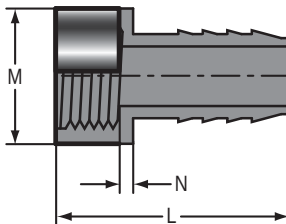
Fipt x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-074	1/2x3/4	2-3/8	1-1/8	5/32	.04
1435-101	3/4x1/2	2-3/8	1-11/32	5/32	.04
1435-102	3/4x1	2-3/8	1-5/16	5/32	.05

PVC SPECIAL REINFORCED FEMALE ADAPTER

SR Fipt x Insert



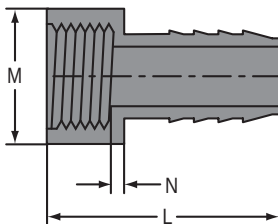
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-005SR	1/2	2-7/16	1-3/32	9/32	.03
1435-007SR	3/4	2-7/16	1-13/32	1/4	.05
1435-010SR	1	2-5/8	1-23/32	1/4	.08



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC FEMALE HOSE ADAPTER

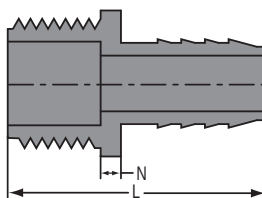
Female Hose Thread x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-007FHT	3/4	2-7/16	1-13/32	7/16	.05

PVC & CPVC MALE ADAPTER

Mipt x Insert



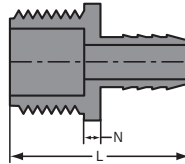
Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
1436-002	---	1/4	1-19/32	5/32	.01	---
1436-005	1436-005C	1/2	2-13/32	1/4	.02	.03
1436-007	1436-007C	3/4	2-7/16	1/4	.04	.05
1436-010	1436-010C	1	2-5/8	1/4	.06	.07
1436-012	1436-012C	1-1/4	2-9/16	3/16	.04	.06
1436-015	1436-015C	1-1/2	2-31/32	5/16	.12	.14
1436-020	1436-020C	2	2-13/16	1/8	.16	.18
1436-025	---	2-1/2	4-3/16	7/16	.33	---
1436-030	1436-030C	3	4-9/32	13/32	.47	.48
1436-040	1436-040C	4	5-1/4	3/8	.76	.84

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



PVC & CPVC REDUCING MALE ADAPTER

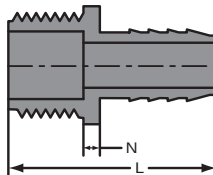
Mipt x Insert



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
1436-074	1436-074C	1/2x3/4	2-5/16	1/8	.03	.03
1436-075	---	1/2x1	2-5/8	7/16	.05	---
1436-101	1436-101C	3/4x1/2	2-5/16	1/8	.03	.04
1436-102	---	3/4x1	2-9/16	1/4	.04	---
1436-131	---	1x3/4	2-9/16	3/16	.06	---
1436-132	---	1x1-1/4	2-5/8	1/4	.07	---
1436-133	---	1x1-1/2	3-1/16	5/16	.11	---
1436-167	---	1-1/4x3/4	2-25/32	9/32	.08	---
1436-168	---	1-1/4x1	2-25/32	9/32	.09	---
1436-169	---	1-1/4x1-1/2	3-1/16	5/16	.11	---
1436-211	---	1-1/2x1	2-13/16	5/16	.11	---
1436-212	1436-212C	1-1/2x1-1/4	2-27/32	11/32	.12	.13
1436-213	---	1-1/2x2	3-3/32	5/16	.14	---
1436-251	---	2x1-1/2	3-7/32	13/32	.18	---

PVC HOSE ADAPTER

Male Hose Thread x Insert



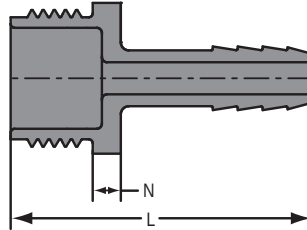
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-007MHT	3/4	2-3/8	7/32	.03



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

PVC REDUCING HOSE ADAPTER

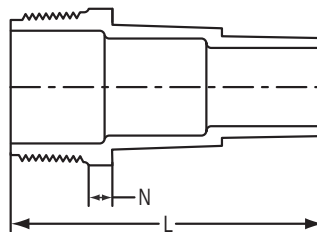
Male Hose Thread x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-101MHT	3/4x1/2	2-3/8	7/32	.03
1436-102MHT	3/4x1	2-3/8	7/32	.04

PVC POOL ADAPTER (PVC White)

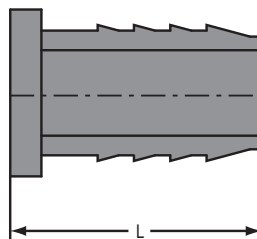
Mipt x Hose ID



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-204	1-1/2x1-1/2x1-1/4	4	1/8	.09

PVC PLUG

Insert



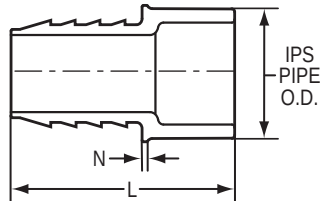
Part Number	Size	L	Approx. Wt. (Lbs.)
1449-005	1/2	1-5/8	.01
1449-007	3/4	1-19/32	.02
1449-010	1	1-11/16	.03
1449-012	1-1/4	1-5/8	.05
1449-015	1-1/2	1-7/8	.07
1449-020	2	1-7/8	.10

PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE



SPIGOT ADAPTER (PVC WHITE)

Insert x I.P.S. Spigot

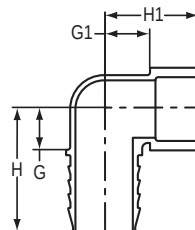


Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-005	1/2	2-7/16	7/32	.03
460-007	3/4	2-23/32	7/32	.04
460-010	1	2-9/16	1/16	.07
460-012	1-1/4	3-1/32	1/4	.11
460-012N	1-1/4	3	9/32	.11
460-015	1-1/2	3-5/16	5/16	.14
460-020	2	3-1/2	3/8	.20
460-030	3	4-11/16	7/16	.58
460-040	4	5-11/32	5/16	.73

N = Nested

INSERT ADAPTER 90° ELBOW (PVC WHITE)

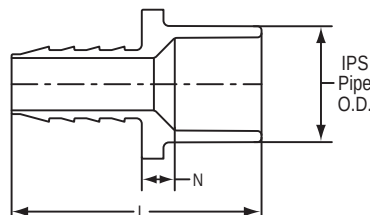
Insert x Spigot



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
460A-015	1-1/2	1	1	2-5/32	2-3/16	.18

REDUCING SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot (Socket)



Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-131N	3/4x1x3/4	2-7/8	5/8	.07
460-132N	1x1-1/4x1	3	5/16	.10

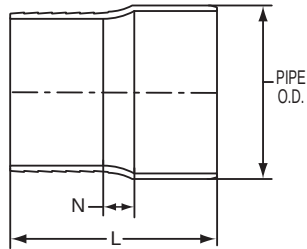
N = Nested



PVC & PP INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE

SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot

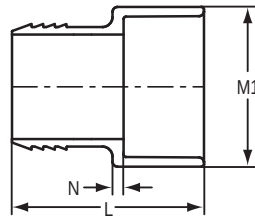


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1432-060	6	7-27/32	1	1.69
1432-080*	8	9-7/8	5/8	5.23

*Fabricated

SOCKET ADAPTER (PVC WHITE)

Insert x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
474-005	1/2	2-3/8	1-1/16	1/8	.03
474-007	3/4	2-7/16	1-5/16	5/32	.05
474-010	1	2-5/8	1-5/8	1/8	.07
474-012	1-1/4	2-11/16	2	3/16	.10
474-015	1-1/2	3-1/16	2-1/4	3/16	.14
474-020	2	3	2-11/16	3/16	.17
474-030	3	4-3/4	4	5/16	.51
474-040	4	5-5/8	5	3/8	.81



PVC & CPVC
Schedule 80 Fittings,
Unions, Tank Adapters,
Expansion Joints
& Saddles



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



Visit our web site
www.spearsmfg.com



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

PVC Performance Engineered & Tested



SPEARS® Schedule 80 PVC product designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure obtaining the very best PVC fittings available.

1/4" Through 12" Availability

Spears® comprehensive line of PVC injection molded fittings and extruded pipe offers a variety of configurations in sizes 1/4" through 12". Schedule 80 fittings are manufactured to ASTM D 2467 and pipe is produced to ASTM D 1785. Spears® exclusive CL150 Flanges are produced in sizes 1/2" - 18" with ANSI B16.5 bolt patterns, plus numerous Unions, Saddles, Transition and Specialty fittings in a variety of sizes.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings and pipe never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF® Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity.

1/8" Through 24" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 80 sizes 1/8" through 24". Schedule 40 CPVC pipe is also available.

PVC Sample Engineering Specifications

All PVC Schedule 80 pipe and fittings shall be produced by Spears® Manufacturing Company from PVC Type I, cell classification 12454, conforming to ASTM Standard D 1784. All PVC injection molded Schedule 80 fittings and extruded pipe shall be Certified for potable water service by NSF International. All Schedule 80 fittings shall be manufactured in strict compliance to ASTM D 2467 and Schedule 80 pipe shall be manufactured in strict compliance to ASTM D 1785. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings. All PVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5 and rated for a maximum internal pressure of 150 psi, non-shock at 73°F.

CPVC Performance Engineered and Tested



SPEARS® Schedule 80 CPVC pipe and fitting designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure the very best CPVC piping products available.

1/4" Through 24" Availability

Spears® comprehensive line of CPVC fittings offers a variety of configurations in Schedule 80 sizes 1/4" through 24".

Exceptional Chemical & Corrosion Resistance

Unlike metal, CPVC fittings never rust, scale or pit, and will provide many years of maintenance-free service and extended system life.

Higher Temperature Ratings

High Temperature CPVC Thermoplastics can handle fluids at service temperatures up to 200°F, allowing a wide range of process applications, including hot corrosive liquids.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

SPEARS® Schedule 80 14" Through 24" Fittings & Flanges

Schedule 80 CPVC 14" through 24" fittings are a special engineered product by Spears® Manufacturing Company, where no applicable ASTM specifications exist. Available in a variety of injection molded and fabricated configurations including Flanges, Couplings, Elbows, Bushings and Tees, plus custom fabrication to virtually any configuration.

1/8" Through 24" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 80 sizes 1/8" through 24". Schedule 40 CPVC pipe is also available.

American Bureau of Shipping (ABS) Type Approval

Spears® Schedule 40 and Schedule 80 CPVC pipe and fittings are ABS Type Approved for marine and offshore applications in nominal pipe sizes through 12". Type Approval details and restrictions are specified in ABS Certificate # 10-HS539421-1-PDA available on the ABS website at www.eagle.org.

CPVC Sample Engineering Specifications

All CPVC Schedule 80 fittings shall be produced by Spears® Manufacturing Company from CPVC materials, cell classification 23447 conforming to ASTM Standard D 1784. All injection molded fittings through 12" shall be manufactured in compliance to ASTM F 439 and all pipe through 16" shall be manufactured in compliance to ASTM F 441. Pipe and fittings shall be Certified by NSF International for use with potable water service. All 14" through 24" and fabricated fittings shall be produced in accordance with Spears® Specifications. All CPVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5.



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be ENGINEERED, INSTALLED and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING:** SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing company recommends the use of Spears® BLUE 75™ Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVERTIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

Standards and Specifications

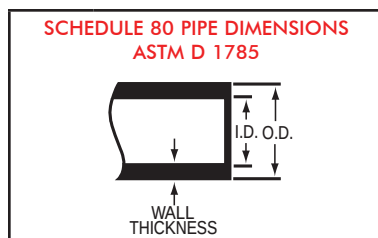
Molded Schedule 80 PVC products are manufactured to ASTM D 2467 for use with pipe manufactured to ASTM D 1785. Molded Schedule 80 CPVC products are manufactured to ASTM F 439 for use with pipe manufactured to ASTM F 441. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

Fabricated Schedule 80 PVC pressure fittings (part numbers ending with "F") are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. Schedule 80 CPVC fabricated fittings for use with pipe manufactured to ASTM F 441. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

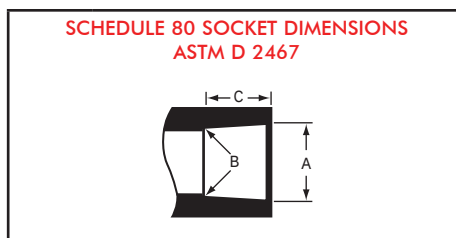
All specified Schedule 80 PVC and CPVC products are manufactured from materials certified by NSF® for use in potable water service.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 80 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content $\leq 0.25\%$. Spears® PVC and CPVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.

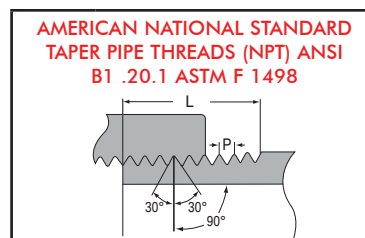
ASTM STANDARD DIMENSIONS



Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	0.405	± 0.004	0.095
1/4	0.540	± 0.004	0.119
3/8	0.675	± 0.004	0.126
1/2	0.840	± 0.004	0.147
3/4	1.050	± 0.004	0.154
1	1.315	± 0.005	0.179
1-1/4	1.660	± 0.005	0.191
1-1/2	1.900	± 0.006	0.200
2	2.375	± 0.006	0.218
2-1/2	2.875	± 0.007	0.276
3	3.500	± 0.008	0.300
4	4.500	± 0.009	0.337
5	5.563	± 0.010	0.375
6	6.625	± 0.011	0.432
8	8.625	± 0.015	0.500
10	10.750	± 0.015	0.593
12	12.750	± 0.015	0.687



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	0.417	0.401	± 0.004	0.500
1/4	0.552	0.536	± 0.004	0.625
3/8	0.687	0.671	± 0.004	0.750
1/2	0.848	0.836	± 0.004	0.875
3/4	1.058	1.046	± 0.004	1.000
1	1.325	1.310	± 0.005	1.125
1-1/4	1.670	1.655	± 0.005	1.250
1-1/2	1.912	1.894	± 0.006	1.375
2	2.387	2.369	± 0.006	1.500
2-1/2	2.889	2.868	± 0.007	1.750
3	3.516	3.492	± 0.008	1.875
4	4.518	4.491	± 0.009	2.250
5	5.583	5.553	± 0.010	2.625
6	6.647	6.614	± 0.011	3.000
8	8.655	8.610	± 0.015	4.000
10	10.780	10.735	± 0.015	5.000
12	12.780	12.735	± 0.015	6.000



Nominal Size In.	Threads Per Inch	Effective Thread Length L	Pitch Of Thread P
1/8	27	0.2639	0.03704
1/4	18	0.4018	0.05556
3/8	18	0.4078	0.05556
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500
5	8	1.4063	0.12500
6	8	1.5125	0.12500
8	8	1.7125	0.12500

STANDARD COMPARISONS

SPEARS® IPS-to-Metric transition unions are listed by nominal size. The chart below compares nominal and actual* pipe O.D. for each size according to the designated standard.

JIS K6741 (mm)		DIN 8062 (mm)		ASTM D1785 (in.)		NPT—ANSI B1.20.1** Tapered Thread		BSP—BS21, DIN 2999, ISO 7/1 Thread	
Nominal	Actual*	O.D.	Actual*	Nominal	Actual*	Designation	Threads/in.	Designation	Threads/25.4mm
16	22	15	20	1/2	.840	1/2	14	1/2	14
20	26	20	25	3/4	1.050	3/4	14	3/4	14
25	32	25	32	1	1.315	1	11.5	1	11
30	38	38	40	1-1/4	1.660	1-1/4	11.5	1-1/4	11
40	48	40	50	1-1/2	1.900	1-1/2	11.5	1-1/2	11
50	60	50	63	2	2.375	2	11.5	2	11
75	89	80	90	3	3.500	3	8	3	11
100	114	100	110	4	4.500	4	8	4	11

*Specified dimension, certain tolerances apply

**NPT and BSP have different thread angles and not compatible.



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

Injection Molded Dimensions References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; $\pm 1/32$ inch.
H = Intersection of center lines to face of fitting; 90° elbow tees, crosses; $\pm 1/32$ inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; $\pm 1/32$ inch

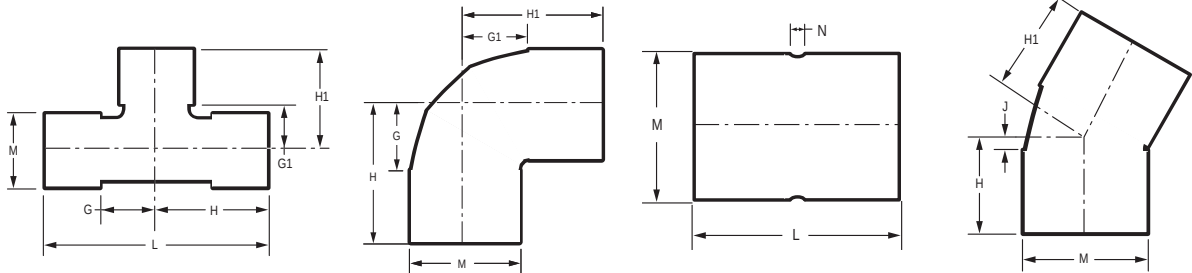
L = Overall length of fittings; $\pm 1/16$ inch.
H = Outside diameter of socket/thread hub; $\pm 1/16$ inch.
N = Socket bottom to socket bottom; couplings; $\pm 1/16$ inch
W = Height of cap; $\pm 1/16$ inch.

Fabricated Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses $\pm 1/4$ inch; 14" & larger $\pm 1/2$ inch.
H = Intersection of center lines to face of fitting; 90° elbows $\pm 1/4$ inch, 14" & larger $\pm 3/4$ inch; wyes $\pm 1/2$ inch; tees, crosses $\pm 1/4$ inch; 14" & larger $\pm 1/2$ inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; $\pm 1/4$ inch; 14" & larger $\pm 1/2$ inch.

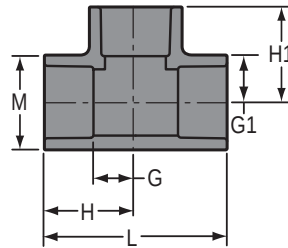
L = Overall length of fittings; $\pm 1/2$ inch; 14" & larger ± 1 inch; wyes ± 1 inch.
M = Outside diameter of socket/thread hub; $\pm 1/4$ inch.
N = Socket bottom to socket bottom; couplings; $\pm 1/2$
W = Height of cap; $\pm 1/4$ inch.

Typical Fabricated Dimension References



TEE

Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
801-002	801-002C	1/4	5/16	5/16	31/32	31/32	1-15/16	27/32	.04	.04
801-003	801-003C	3/8	15/32	15/32	1-1/4	1-1/4	2-1/2	31/32	.06	.06
801-005	801-005C	1/2	17/32	17/32	1-15/32	1-15/32	2-15/16	1-3/16	.11	.11
801-007	801-007C	3/4	21/32	21/32	1-11/16	1-11/16	3-13/32	1-13/32	.16	.18
801-010	---	1	7/8	7/8	2	2	4	1-3/4	.27	---
---	801-010C	1	27/32	27/32	2	2	3-31/32	1-23/32	---	.29
801-012	801-012C	1-1/4	1-1/32	1-1/32	2-9/32	2-9/32	4-19/32	2-3/32	.39	.40
801-015	801-015C	1-1/2	1-3/16	1-3/16	2-9/32	2-9/32	5-1/8	2-3/8	.52	.57
801-020	801-020C	2	1-11/32	1-11/32	2-15/16	2-15/16	5-27/32	2-7/8	.80	.85
801-025	---	2-1/2	1-3/4	1-3/4	3-1/2	3-1/2	7-1/32	3-15/32	1.46	---
---	801-025C	2-1/2	1-23/32	1-23/32	3-1/2	3-1/2	7	3-15/32	---	1.62
801-030	801-030C	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	4-3/16	2.16	2.43
801-040	801-040C	4	2-1/2	2-1/2	4-3/4	4-3/4	9-1/2	5-1/4	3.52	3.72

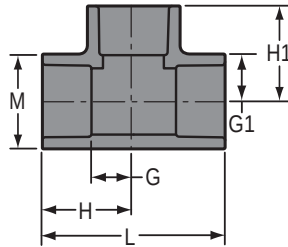
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



TEE

(continued)

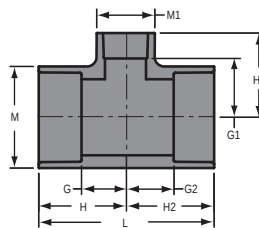
Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
801-050	801-050C	5	3-1/8	3-1/8	5-25/32	5-25/32	11-5/8	6-13/32	6.03	6.47
801-050F	801-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	6-5/16	13.26	18.38
801-060	---	6	3-25/32	3-25/32	6-13/16	6-13/16	13-5/8	7-5/8	10.78	---
---	801-060C	6	4-1/32	4-1/32	7-3/32	7-3/32	14-5/32	7-19/32	---	12.19
801-080	801-080C	8	4-13/16	4-13/16	8-7/8	8-7/8	17-3/4	9-23/32	21.21	21.53
801-080F	801-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	9-5/8	22.84	30.91
801-100	801-100C	10	5-3/4	5-3/4	10-13/16	10-13/16	21-5/8	11-19/32	37.89	40.50
801-100F	801-100CF	10	9	9	14-1/4	14-1/4	28-1/2	11-15/16	39.82	51.41
801-120	801-120C	12	6-15/16	6-15/16	12-15/16	12-15/16	25-7/8	14-1/4	54.45	62.00
801-120F	801-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	14-1/8	67.13	83.37
801-140F	801-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	15-1/2	103.37	108.34
801-160F	801-160CF	16	13	13	21	21	42	17-11/16	144.87	144.86
801-180F	801-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	19-7/8	182.75	198.00
801-200F	801-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	22-1/16	284.24	249.75
801-240F	801-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	26-7/16	335.00	460.00

REDUCING TEE

Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-101	801-101C	3/4x3/4x1/2	19/32	23/32	19/32	1-19/32	1-19/32	1-19/32	3-3/16	1-13/32	1-3/16	.14	.15
801-130	801-130C	1x1x1/2	19/32	7/8	19/32	1-23/32	1-3/4	1-23/32	3-7/16	1-3/4	1-3/16	.20	.21
801-131	801-131C	1x1x3/4	11/16	27/32	11/16	1-27/32	1-27/32	1-27/32	3-21/32	1-3/4	1-13/32	.23	.24
801-157	---	1-1/4x1x3/4	11/16	1-1/16	5/8	1-15/16	2-1/16	1-7/8	3-13/16	2-1/8	1-7/16	.30	---
801-158	801-158C	1-1/4x1x1	13/32	15/16	13/32	2-1/8	1-31/32	1-15/16	4	2-1/16	1-11/16	.33	.34
801-159	801-159C	1-1/4x1x1-1/4	15/16	1-1/32	7/8	2-3/16	2-5/32	2-1/8	4-5/16	2-1/16	2-1/16	.39	.41
801-166 ¹	801-166C ¹	1-1/4x1-1/4x1/2	7/8	1-13/32	7/8	2-3/32	2-3/8	2-3/32	4-7/32	2-1/8	1-3/4	.42	.43
801-167	801-167C	1-1/4x1-1/4x3/4	5/8	31/32	5/8	1-15/16	1-31/32	1-15/16	3-7/8	2-1/8	1-13/32	.28	.30
801-168	801-168C	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	2-5/32	2-3/32	4-7/32	2-3/32	1-3/4	.34	.36

¹ Outlet sized with bushing

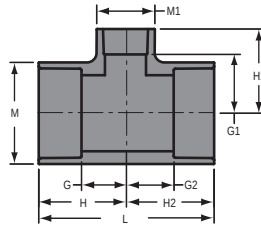


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCING TEE

(continued)

Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-202	801-202C	1-1/2x1-1/4x1	7/8	1-7/32	7/8	2-1/4	2-11/32	2-1/4	4-1/2	2-7/16	1-13/16	.40	.42
801-209	801-209C	1-1/2x1-1/2x1/2	9/16	1-1/16	9/16	1-31/32	1-15/16	1-31/32	3-15/16	2-3/8	1-3/16	.32	.36
801-210	801-210C	1-1/2x1-1/2x3/4	11/16	1-1/32	11/16	2-1/16	2-1/32	2-1/16	4-5/32	2-11/32	1-13/32	.37	.38
801-211	801-211C	1-1/2x1-1/2x1	27/32	1-5/32	27/32	2-15/32	2-5/16	2-15/32	4-15/16	2-11/32	1-3/4	.42	.49
801-212	801-212C	1-1/2x1-1/2x1-1/4	1-3/16	1-3/16	1-3/16	2-9/16	2-7/16	2-9/16	5-1/8	2-3/8	2-1/8	.54	.57
801-247	801-247C	2x2x1/2	9/16	1-13/32	9/16	2-3/32	2-9/32	2-3/32	4-3/16	2-7/8	1-5/32	.44	.46
801-248	801-248C	2x2x3/4	11/16	1-7/16	11/16	2-3/16	2-7/16	2-3/16	4-3/8	2-27/32	1-13/32	.50	.52
801-249	801-249C	2x2x1	27/32	1-7/16	27/32	2-3/8	2-9/16	2-3/8	4-3/4	2-7/8	1-3/4	.58	.59
801-250	801-250C	2x2x1-1/4	31/32	1-11/32	31/32	2-17/32	2-19/32	2-17/32	5-3/32	2-7/8	2-1/8	.60	.64
801-251	801-251C	2x2x1-1/2	1-5/32	1-13/32	1-5/32	2-11/16	2-13/16	2-11/16	5-3/8	2-15/16	2-15/32	.77	.80
801-287	801-287C	2-1/2x2-1/2x1/2	19/32	1-19/32	19/32	2-3/8	2-15/32	2-3/8	4-23/32	3-1/2	1-3/16	.78	.78
801-288	801-288C	2-1/2x2-1/2x3/4	21/32	1-1/2	21/32	2-7/16	2-17/32	2-7/16	4-27/32	3-17/32	1-13/32	.83	.83
801-289	801-289C	2-1/2x2-1/2x1	27/32	1-3/4	27/32	2-21/32	2-7/8	2-21/32	5-5/16	3-9/16	1-13/16	.99	1.04
801-290	801-290C	2-1/2x2-1/2x1-1/4	1-3/32	1-3/4	1-3/32	2-27/32	3	2-27/32	5-5/8	3-9/16	2-5/32	1.11	1.16
801-291	801-291C	2-1/2x2-1/2x1-1/2	1-3/16	1-3/4	1-3/16	2-31/32	3-1/8	2-31/32	5-15/16	3-7/8	2-13/32	1.21	1.24
801-292	801-292C	2-1/2x2-1/2x2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-11/32	3-1/2	2-7/8	1.27	1.35
801-333 ¹	801-333C ¹	3x3x1/2	1-7/16	2-7/8	1-7/16	3-5/16	3-3/4	3-5/16	6-5/8	4-3/16	2-7/8	1.94	2.07
801-334 ¹	801-334C ¹	3x3x3/4	1-7/16	2-11/16	1-7/16	3-5/16	3-11/16	3-5/16	6-5/8	4-3/16	2-7/8	1.92	2.05
801-335	801-335C	3x3x1	7/8	1-15/16	7/8	2-3/4	3-1/16	2-3/4	5-15/32	4-3/16	1-23/32	1.21	1.27
801-336 ¹	801-336C ¹	3x3x1-1/4	1-5/8	1-15/16	1-5/8	3-5/16	3-5/8	3-5/16	6-5/8	4-3/16	2-7/8	1.89	1.97
801-337	801-337C	3x3x1-1/2	1-5/32	2-1/16	1-5/32	3-1/16	3-7/16	3-1/16	6-3/32	4-3/16	2-3/8	1.44	1.45
801-338	801-338C	3x3x2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-5/8	4-7/32	2-7/8	1.65	1.69
801-339	801-339C	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-11/16	3-5/8	7-1/4	4-3/16	3-17/32	1.88	2.11
801-415 ¹	801-415C ¹	4x4x1/2	1-7/16	3-17/32	1-7/16	3-11/16	4-13/32	3-11/16	7-11/32	5-1/4	2-7/8	2.62	2.72
801-417 ¹	801-417C ¹	4x4x1	1-15/32	3-9/32	1-15/32	3-11/16	4-3/8	3-11/16	7-3/8	5-7/32	2-7/8	2.55	2.87
801-418 ¹	801-418C ¹	4x4x1-1/4	1-7/16	2-29/32	1-7/16	3-11/16	4-3/16	3-11/16	7-11/32	5-1/4	2-7/8	2.09	2.63
801-419	801-419C	4x4x1-1/2	1-1/8	2-9/16	1-1/8	3-3/8	3-15/16	3-3/8	6-3/4	5-1/4	2-3/8	2.09	2.17
801-420	801-420C	4x4x2	1-7/16	2-1/2	1-7/16	3-11/16	4	3-11/16	7-3/8	5-1/4	2-7/8	2.35	2.42
801-421 ¹	801-421C ¹	4x4x2-1/2	2-1/16	2-11/16	2-1/16	4-5/16	4-3/4	4-5/16	8-5/8	5-1/4	4-1/8	3.48	3.68
801-422	801-422C	4x4x3	2-1/8	2-23/32	2-1/8	4-3/8	4-19/32	4-3/8	8-25/32	5-1/4	4-3/16	3.11	3.17
801-482F	---	5x5x1-1/4	4	4-11/16	4	7	6-3/16	7	14	6-5/16	2-1/16	5.99	---
801-484 ¹	---	5x5x1-1/2	3-5/32	5-17/32	3-5/32	5-13/16	6-29/32	5-13/16	11-5/8	6-13/32	6-13/32	8.86	---
801-484F	---	5x5x1-1/2	4-1/8	5	4-1/8	7-1/8	6-1/2	7-1/8	14-1/4	6-5/16	2-5/16	9.10	---
801-486 ¹	801-486C ¹	5x5x2	3-5/32	5-3/32	3-5/32	5-13/16	6-19/32	5-13/16	11-19/32	6-13/32	6-13/32	8.39	8.85
801-486F	801-486CF	5x5x2	4-5/16	4-3/4	4-5/16	7-5/16	6-1/2	7-5/16	14-5/8	6-5/16	2-13/16	6.87	10.83
801-487 ¹	---	5x5x2-1/2	3-5/32	4-23/32	3-5/32	5-13/16	6-15/32	5-13/16	11-5/8	6-13/32	6-13/32	8.28	---
801-488 ¹	801-488C ¹	5x5x3	3-5/32	4-5/8	3-5/32	5-13/16	6-1/2	5-13/16	11-19/32	6-13/32	6-13/32	8.21	8.61
801-490 ¹	801-490C ¹	5x5x4	3-5/32	3-29/32	3-5/32	5-13/16	6-5/32	5-13/16	11-5/8	6-13/32	6-13/32	7.40	7.75

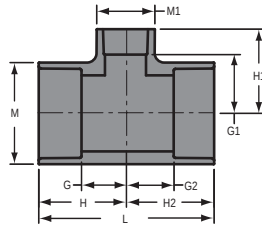
¹ Outlet sized with bushing

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCING TEE (continued)

Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-523 ¹	---	6x6x1/2	1-7/16	4-13/16	1-7/16	4-7/16	5-11/16	4-7/16	8-7/8	7-19/32	2-7/8	.54	---
801-524 ¹	801-524C ¹	6x6x3/4	1	4	1	3-7/8	5	3-7/8	7-3/4	7-9/16	1-3/4	4.39	4.48
801-525	801-525C	6x6x1	27/32	3-23/32	27/32	3-7/8	4-27/32	3-7/8	7-3/4	7-9/16	1-3/4	4.34	4.43
801-526 ¹	801-526C ¹	6x6x1-1/4	1-7/16	4-3/16	1-7/16	4-7/16	5-15/32	4-7/16	8-7/8	7-19/32	2-7/8	5.23	5.46
801-527 ¹	801-527C	6x6x1-1/2	1-7/16	4-3/32	1-7/16	4-7/16	5-1/2	4-7/16	8-7/8	7-19/32	2-7/8	5.25	7.16
801-528	801-528C	6x6x2	1-7/16	3-23/32	1-7/16	4-7/16	5-1/4	4-7/16	8-7/8	7-19/32	2-7/8	5.11	5.29
801-529 ¹	801-529C ¹	6x6x2-1/2	2-1/16	3-13/16	2-1/16	5-1/16	5-7/8	5-1/16	10-1/8	7-9/16	4-1/4	6.80	8.99
801-530	---	6x6x3	2-1/16	3-3/4	2-1/16	5-1/16	5-5/8	5-1/16	10-5/32	7-9/16	4-7/32	6.37	---
---	801-530C ¹	6x6x3	2-5/8	4-3/4	2-5/8	5-5/8	6-1/2	5-5/8	11-1/4	7-9/16	5-1/4	---	9.16
801-530F	801-530CF	6x6x3	4-3/4	5-3/4	4-3/4	8	8	8	16	7-1/2	4-1/8	12.33	11.74
801-532	---	6x6x4	2-11/16	3-23/32	2-11/16	5-11/16	5-31/32	5-11/16	11-13/32	7-19/32	5-1/4	7.69	---
---	801-532C	6x6x4	2-11/16	3-13/16	2-11/16	5-11/16	6-3/32	5-11/16	11-3/8	7-19/32	5-1/4	---	8.21
801-533F	801-533CF	6x6x5	5-3/4	6-1/2	5-3/4	9	9-1/2	9	18	7-1/2	6-5/16	10.35	11.90
801-575 ¹	801-575C ¹	8x8x1	3-25/32	7-25/32	3-25/32	7-25/32	8-13/16	7-25/32	15-9/16	9-5/8	7-1/2	17.85	18.76
801-578 ¹	801-578C ¹	8x8x2	3-13/16	6-5/8	3-13/16	7-13/16	8-1/8	7-13/16	15-5/8	9-11/16	7-9/16	17.56	18.19
801-578F	801-578CF	8x8x2	4-11/16	6-1/8	4-11/16	8-15/16	7-7/8	8-15/16	17-7/8	9-5/8	2-13/16	12.89	14.76
801-579F	801-579CF	8x8x2-1/2	4-7/8	6-15/16	4-7/8	9-1/8	8-5/16	9-1/8	18-1/4	9-5/8	3-7/16	17.97	14.85
801-580 ¹	801-580C ¹	8x8x3	3-23/32	6-1/2	3-23/32	7-3/4	8-3/8	7-3/4	15-1/2	9-11/16	7-1/2	17.03	18.44
801-580F	801-580CF	8x8x3	5-3/16	6-11/16	5-3/16	9-7/16	8-15/16	9-7/16	18-7/8	9-5/8	4-1/8	17.42	20.04
801-582 ¹	801-582C ¹	8x8x4	4-1/16	6-15/32	4-1/16	7-15/16	8-23/32	7-15/16	15-7/8	9-23/32	7-9/16	18.40	18.60
801-582F	801-582CF	8x8x4	5-3/4	7-11/16	5-3/4	10	9-15/16	10	20	9-5/8	5-3/16	15.77	17.51
801-585	---	8x8x6	3-27/32	4-13/16	3-27/32	7-29/32	7-27/32	7-29/32	15-27/32	9-23/32	7-9/16	15.52	---
---	801-585C	8x8x6	3-7/8	4-15/16	3-7/8	7-29/32	7-31/32	7-29/32	15-25/32	9-11/16	7-17/32	---	16.17
801-621F	801-621CF	10x10x2	4-3/8	7-1/8	4-3/8	9-5/8	8-7/8	9-5/8	19-1/4	11-15/16	2-13/16	21.56	27.33
801-622F	801-622CF	10x10x2-1/2	5-1/4	7-5/16	5-1/4	10-1/2	9-5/16	10-1/2	21	11-15/16	3-7/16	20.44	22.50
801-623 ¹	801-623C ¹	10x10x3	3-25/32	7-17/32	3-25/32	9-3/8	9-3/8	9-3/8	18-25/32	12-1/16	7-9/16	26.67	28.69
801-623F	801-623CF	10x10x3	4-7/8	7-11/16	4-7/8	10-1/8	9-15/16	10-1/8	20-1/4	11-15/16	4-1/8	20.67	24.27
801-624	801-624C	10x10x4	3-7/8	7-3/16	3-7/8	9-3/8	9-1/2	9-3/8	18-3/4	12-1/16	7-9/16	26.36	28.54
801-624F	801-624CF	10x10x4	5-3/8	8-11/16	5-3/8	10-5/8	10-15/16	10-5/8	21-1/4	11-15/16	5-3/16	23.04	26.65
801-626	801-626C	10x10x6	3-7/8	5-27/32	3-7/8	9-3/8	8-27/32	9-3/8	18-3/4	12-1/16	7-9/16	23.50	25.50
801-626F	801-626CF	10x10x6	5-7/8	9-1/16	5-7/8	11-1/8	12-5/16	11-1/8	22-1/4	11-15/16	7-1/2	34.74	29.89
801-628 ¹	801-628C ¹	10x10x8	5-15/16	7-3/4	5-15/16	11-7/16	11-3/4	11-7/16	22-7/8	12-1/16	12-1/16	43.06	48.52
801-628F	801-628CF	10x10x8	8-1/4	9-15/16	8-1/4	13-1/2	14-3/16	13-1/2	27	11-15/16	9-5/8	34.59	38.11
801-661F	801-661CF	12x12x2	4-3/4	8	4-3/4	11	9-3/4	11	22	14-1/8	2-13/16	29.04	36.76
801-662F	---	12x12x2-1/2	5-7/16	8-3/16	5-7/16	11-11/16	10-3/16	11-11/16	23-3/8	14-1/8	3-7/16	37.84	---
801-663F	801-663CF	12x12x3	5-1/4	8-9/16	5-1/4	11-1/2	10-13/16	11-1/2	23	14-1/8	4-1/8	32.26	34.63
801-664 ¹	801-664C ¹	12x12x4	4-11/32	10-1/8	4-11/32	10-15/16	12-3/8	10-15/16	21-7/8	14-1/4	9-23/32	32.86	38.17
801-664F	801-664CF	12x12x4	5-3/4	9-9/16	5-3/4	12	11-13/16	12	24	14-1/8	5-3/16	32.86	38.17
801-665F	---	12x12x5	7-1/8	9-5/16	7-1/8	13-3/8	12-5/16	13-3/8	26-3/4	14-1/8	6-5/16	47.29	---
801-666F	801-666CF	12x12x6	7-1/4	9-15/16	7-1/4	13-1/4	13-3/16	13-1/4	26-1/2	14-1/8	7-1/2	45.37	55.70
801-668	801-668C	12x12x8	4-27/32	7-1/2	4-27/32	11-13/32	11-1/8	11-13/32	22-13/16	14-1/4	9-23/32	40.00	42.00
801-668F	801-668CF	12x12x8	8	10-13/16	8	14-1/4	15-1/16	14-1/4	28-1/2	14-1/8	9-5/8	57.91	66.12
801-670F	801-670CF	12x12x10	9-5/8	10-13/16	9-5/8	15-7/8	16-1/16	15-7/8	31-3/4	14-1/8	11-15/16	67.18	70.97
801-691F	801-691CF	14x14x2	5-3/16	8-9/16	5-3/16	12-3/16	10-5/16	12-3/16	24-3/8	15-1/2	2-13/16	38.66	44.73

¹ Outlet sized with bushing

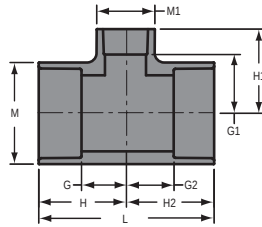
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCING TEE (continued)

Socket x Socket x Socket



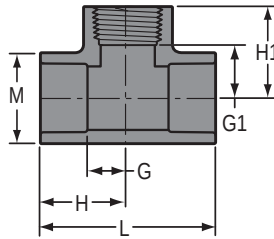
Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-692F	801-692CF	14x14x2-1/2	5-7/16	8-3/4	5-7/16	12-7/16	10-3/4	12-7/16	24-7/8	15-1/2	3-7/16	44.34	45.01
801-693F	801-693CF	14x14x3	5-3/4	9-1/8	5-3/4	12-3/4	11-3/8	12-3/4	25-1/2	15-1/2	4-1/8	40.35	56.80
801-694F	801-694CF	14x14x4	6-1/2	10-1/8	6-1/2	13-1/2	12-3/8	13-1/2	27	15-1/2	5-3/16	41.85	50.00
801-696F	801-696CF	14x14x6	8-1/4	10-1/2	8-1/4	15-1/4	13-3/4	15-1/4	30-1/2	15-1/2	7-1/2	63.15	63.15
801-698F	801-698CF	14x14x8	9-1/4	11-3/8	9-1/4	16-1/4	15-5/8	16-1/4	32-1/2	15-1/2	9-5/8	74.74	68.17
801-700F	801-700CF	14x14x10	10-1/8	11-3/8	10-1/8	17-1/8	16-5/8	17-1/8	34-1/4	15-1/2	11-15/16	79.05	89.80
801-702F	801-702CF	14x14x12	11	11-3/8	11	18	17-5/8	18	36	15-1/2	14-1/8	93.81	93.81
801-751F	801-751CF	16x16x2	5-7/8	9-1/2	5-7/8	13-7/8	11-1/4	13-7/8	27-3/4	17-11/16	2-13/16	62.38	71.71
801-752F	801-752CF	16x16x2-1/2	6	9-11/16	6	14	11-11/16	14	28	17-11/16	3-7/16	55.65	64.80
801-753F	801-753CF	16x16x3	6-5/16	10-1/16	6-5/16	14-5/16	12-5/16	14-5/16	28-5/8	17-11/16	4-1/8	56.70	67.39
801-754F	801-754CF	16x16x4	6-1/8	11-1/16	6-1/8	14-1/8	13-5/16	14-1/8	28-1/4	17-11/16	5-3/16	60.66	70.21
801-756F	801-756CF	16x16x6	8-5/8	11-7/16	8-5/8	16-5/8	14-11/16	16-5/8	33-1/4	17-11/16	7-1/2	85.07	90.09
801-758F	801-758CF	16x16x8	9-5/8	12-5/16	9-5/8	17-5/8	16-9/16	17-5/8	35-1/4	17-11/16	9-5/8	94.91	98.00
801-760F	801-760CF	16x16x10	10-5/8	12-5/16	10-5/8	18-5/8	17-9/16	18-5/8	37-1/4	17-11/16	11-15/16	103.85	119.71
801-762F	801-762CF	16x16x12	11-5/8	12-5/16	11-5/8	19-5/8	18-9/16	19-5/8	39-1/4	17-11/16	14-1/8	116.70	116.70
801-764F	801-764CF	16x16x14	12-3/4	12-11/16	12-3/4	20-3/4	19-11/16	20-3/4	41-1/2	17-11/16	15-1/2	129.51	129.51
801-784F	801-784CF	18x18x4	6-7/8	11-15/16	6-7/8	15-7/8	14-3/16	15-7/8	31-3/4	19-7/8	5-3/16	91.52	99.22
801-786F	801-786CF	18x18x6	8-1/2	12-5/16	8-1/2	17-1/2	15-9/16	17-1/2	35	19-7/8	7-1/2	115.09	117.69
801-788F	801-788CF	18x18x8	9-1/2	13-3/16	9-1/2	18-1/2	17-7/16	18-1/2	37	19-7/8	9-5/8	118.85	127.49
801-790F	801-790CF	18x18x10	10-1/2	13-3/16	10-1/2	19-1/2	18-7/16	19-1/2	39	19-7/8	11-15/16	128.48	138.59
801-792F	801-792CF	18x18x12	11-1/2	13-3/16	11-1/2	20-1/2	19-7/16	20-1/2	41	19-7/8	14-1/8	151.17	150.34
801-794F	801-794CF	18x18x14	12-3/4	13-9/16	12-3/4	21-3/4	20-9/16	21-3/4	43-1/2	19-11/16	15-1/2	151.23	165.78
801-796F	801-796CF	18x18x16	13-1/2	14-3/16	13-1/2	22-1/2	22-3/16	22-1/2	45	19-11/16	17-11/16	140.86	172.46
801-814F	801-814CF	20x20x4	7-11/16	12-7/8	7-11/16	17-11/16	15-1/8	17-11/16	35-3/8	22-1/16	5-3/16	114.37	116.55
801-816F	801-816CF	20x20x6	8-7/8	13-1/4	8-7/8	18-7/8	16-1/2	18-7/8	37-3/4	22-1/16	7-1/2	130.08	147.44
801-818F	801-818CF	20x20x8	9-7/8	14-1/8	9-7/8	19-7/8	18-3/8	19-7/8	39-3/4	22-1/16	9-5/8	137.63	151.48
801-820F	801-820CF	20x20x10	10-7/8	14-1/8	10-7/8	20-7/8	19-3/8	20-7/8	41-3/4	22-1/16	11-15/16	123.96	163.28
801-822F	801-822CF	20x20x12	11-7/8	14-1/8	11-7/8	21-7/8	20-3/8	21-7/8	43-3/4	22-1/16	14-1/8	164.33	176.50
801-824F	801-824CF	20x20x14	12-7/8	14-1/2	12-7/8	22-7/8	21-1/2	22-7/8	45-3/4	22-1/16	15-1/2	176.28	190.95
801-826F	801-826CF	20x20x16	14	15-1/8	14	24	23-1/8	24	48	22-1/16	17-11/16	191.64	210.27
801-828F	801-828CF	20x20x18	15	15	15	25	24	25	50	22-1/16	19-7/8	215.72	226.80
801-904F	801-904CF	24x24x4	9	14-11/16	9	21	16-15/16	21	42	26-7/16	5-3/16	191.09	195.97
801-906F	801-906CF	24x24x6	9-1/4	15-1/16	9-1/4	21-1/4	18-5/16	21-1/4	42-1/2	26-7/16	7-1/2	207.79	202.94
801-908F	801-908CF	24x24x8	10-1/4	15-15/16	10-1/4	22-1/4	20-3/16	22-1/4	44-1/2	26-7/16	9-5/8	215.05	236.29
801-910F	801-910CF	24x24x10	11-1/4	15-15/16	11-1/4	23-1/4	21-3/16	23-1/4	46-1/2	26-7/16	11-15/16	248.46	255.95
801-912F	801-912CF	24x24x12	12-1/4	15-15/16	12-1/4	24-1/4	22-3/16	24-1/4	48-1/2	26-7/16	14-1/8	290.75	295.00
801-914F	801-914CF	24x24x14	13-1/4	16-5/16	13-1/4	25-1/4	23-5/16	25-1/4	50-1/2	26-1/16	15-1/2	279.60	282.42
801-916F	801-916CF	24x24x16	14-3/4	16-15/16	14-3/4	26-3/4	24-15/16	26-3/4	53-1/2	26-7/16	17-11/16	297.80	306.44
801-918F	801-918CF	24x24x18	15-3/4	16-13/16	15-3/4	27-3/4	25-13/16	27-3/4	55-1/2	26-7/16	19-7/8	303.81	246.78
801-920F	801-920CF	24x24x20	16-3/4	18-3/16	16-3/4	28-3/4	28-3/16	28-3/4	57-1/2	26-7/16	22-1/16	341.61	351.60

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



TEE

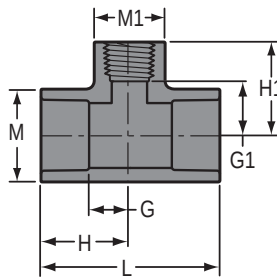
Socket x Socket x Fipt



Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
802-002	802-002C	1/4	5/16	3/8	5/16	15/16	1-29/32	27/32	.05	.05
802-005	802-005C	1/2	19/32	21/32	1-15/32	1-11/32	2-15/16	1-3/16	.14	.12
802-007	802-007C	3/4	5/8	5/8	1-19/32	1-13/32	3-3/16	1-13/32	.14	.15
802-010	802-010C	1	11/16	3/4	1-13/16	1-5/8	3-13/16	1-13/16	.23	.24
802-012	802-012C	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-5/32	2-3/32	.34	.37
802-015	802-015C	1-1/2	29/32	1-1/4	2-11/32	2-5/32	4-11/16	2-3/8	.49	.51
802-020	802-020C	2	1-9/32	1-15/32	2-13/16	2-13/32	5-21/32	2-7/8	.77	.80
802-030	802-030C	3	1-31/32	2-1/8	3-3/4	3-17/32	7-15/32	4-5/16	2.31	2.38
802-040	802-040C	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-9/32	3.37	3.44
802-060F	---	6	3-13/16	8-1/4	6-13/16	9-3/4	13-5/8	7-9/16	14.19	---
---	802-060CF	6	4	8-9/16	7-1/16	10	14-1/8	7-9/16	---	15.09
802-080F	802-080CF	8	4-13/16	10-13/16	8-13/16	12-9/16	17-11/16	9-11/16	25.92	27.08

REDUCING TEE

Socket x Socket x Fipt



Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-101	802-101C	3/4x3/4x1/2	19/32	25/32	1-19/32	1-7/16	3-7/32	1-13/32	1-3/16	.14	.15
802-130	802-130C	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-7/16	.18	.19
802-131	802-131C	1x1x3/4	21/32	13/16	1-13/16	1-17/32	3-5/8	1-23/32	1-3/8	.21	.22
802-166	802-166C	1-1/4x1-1/4x1/2	7/16	1-3/32	1-11/16	1-27/32	3-13/32	2-3/32	1-3/16	.25	.27
802-167 ¹	802-167C ¹	1-1/4x1-1/4x3/4	7/8	1-23/32	2-1/8	2-7/16	4-7/32	2-3/32	1-3/4	.40	.42
802-168	802-168C	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.33	.35
802-209 ¹	802-209C ¹	1-1/2x1-1/2x1/2	11/16	1-1/2	2-1/16	2-9/32	4-5/32	2-5/16	1-3/8	.39	.42
802-210 ¹	802-210C ¹	1-1/2x1-1/2x3/4	7/8	1-27/32	2-1/4	2-19/32	4-1/2	2-3/8	1-11/16	.51	.54
802-211	802-211C	1-1/2x1-1/2x1	27/32	1-9/32	2-1/4	2-3/32	4-15/32	2-3/8	1-11/16	.41	.43
802-212	802-212C	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.47	.49
802-247 ¹	802-247C ¹	2x2x1/2	1/2	1-1/2	2	2-7/32	4	2-7/8	1-3/16	.45	.46
802-248	802-248C	2x2x3/4	5/8	1-3/8	2-1/8	2-3/32	4-1/4	2-7/8	1-3/8	.47	.49

¹ Outlet sized with bushing

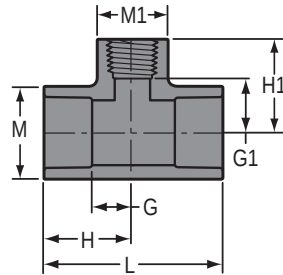


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCING TEE

(continued)

Socket x Socket x Fipt



Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-249 ¹	802-249C ¹	2x2x1	1-3/16	2-3/16	2-11/16	3-7/32	5-3/8	2-7/8	2-3/8	.94	1.28
802-250 ¹	802-250C ¹	2x2x1-1/4	1-3/16	2-1/16	2-11/16	3	5-3/8	2-7/8	2-13/32	.86	.90
802-251 ¹	802-251C ¹	2x2x1-1/2	1-7/16	2-5/16	2-15/16	3-11/32	5-7/8	2-7/8	2-7/8	1.20	1.21
802-287	802-287C	2-1/2x2-1/2x1/2	9/16	1-25/32	2-5/16	2-15/32	4-19/32	3-1/2	1-3/16	.76	.81
802-288 ¹	802-288C ¹	2-1/2x2-1/2x3/4	27/32	2-11/32	2-21/32	3-5/32	5-9/32	3-9/16	1-13/16	1.06	1.12
802-289 ¹	802-289C ¹	2-1/2x2-1/2x1	1-3/32	2-11/32	2-27/32	3-1/4	5-11/16	3-1/2	2-1/8	1.19	1.21
802-290 ¹	802-290C ¹	2-1/2x2-1/2x1-1/4	1-3/16	2-15/32	2-31/32	3-15/32	5-15/16	3-1/2	2-3/8	1.30	1.34
802-291 ¹	802-291C ¹	2-1/2x2-1/2x1-1/2	1-7/16	2-1/2	3-3/16	3-1/2	6-3/8	3-1/2	2-7/8	1.51	1.55
802-292 ¹	802-292C ¹	2-1/2x2-1/2x2	1-3/4	3-15/16	3-1/2	2-7/8	7	3-15/32	3-15/32	1.86	2.15
802-333 ¹	802-333C ¹	3x3x1/2	7/8	2-11/16	2-3/4	3-7/16	5-1/2	4-1/8	1-23/32	1.27	1.30
802-334 ¹	802-334C ¹	3x3x3/4	7/8	2-19/32	2-3/4	3-11/32	5-1/2	4-3/16	1-3/4	1.26	1.33
802-335 ¹	802-335C ¹	3x3x1	1-3/16	2-31/32	3-1/16	3-7/8	6-1/8	4-1/8	2-11/32	1.53	1.61
802-337 ¹	802-337C ¹	3x3x1-1/2	1-7/16	2-23/32	3-5/16	3-23/32	6-5/8	4-1/4	2-29/32	1.84	1.98
802-338 ¹	802-338C ¹	3x3x2	2-3/32	3-11/32	3-31/32	4-3/8	7-15/16	4-5/32	4-5/32	3.03	3.51
802-339 ¹	802-339C ¹	3x3x2-1/2	2-3/32	2-3/4	3-31/32	4-5/16	7-15/16	4-1/8	4-1/8	2.90	3.34
802-416 ¹	802-416C ¹	4x4x3/4	1-15/32	3-27/32	3-23/32	4-17/32	7-7/16	5-1/4	2-7/8	2.72	2.86
802-417 ¹	802-417C ¹	4x4x1	1-7/16	3-17/32	3-23/32	4-13/32	7-13/32	5-1/4	2-7/8	2.73	2.87
802-419 ¹	802-419C ¹	4x4x1-1/2	3-11/16	3-1/2	3-11/16	3-31/32	7-3/8	5-1/4	2-7/8	2.63	2.80
802-420 ¹	802-420C ¹	4x4x2	2-1/8	4-1/32	4-3/8	5-1/32	8-25/32	5-1/4	4-3/16	3.77	3.84
802-421 ¹	802-421C ¹	4x4x2-1/2	2-1/8	3-15/32	4-3/8	5	8-25/32	5-1/4	4-3/16	3.62	3.71
802-422 ¹	802-422C ¹	4x4x3	2-5/8	3-5/8	4-7/8	5-1/4	9-3/4	5-1/4	5-1/4	5.13	5.30
802-525 ¹	802-525C ¹	6x6x1	2-1/16	5-3/16	5-3/32	6-1/16	10-5/32	7-19/32	4-1/4	7.11	9.23
802-528F	---	6x6x2	4-5/8	5-1/8	7-7/8	6-9/16	15-3/4	7-1/2	3	11.01	---
802-530 ¹	802-530C ¹	6x6x3	2-11/16	4-3/4	5-9/16	6-3/8	11-1/8	7-1/2	5-1/4	13.79	8.33
802-532F	---	6x6x4	5-1/4	6-3/4	8-1/2	8-1/4	17	7-1/2	5-3/16	13.77	---
802-578F	---	8x8x2	4-11/16	6-1/16	8-15/16	7-1/2	17-7/8	9-5/8	3	15.46	---
802-580F	---	8x8x3	5-3/16	7	9-7/16	8-7/16	18-7/8	9-5/8	4-1/8	18.24	---
802-582F	---	8x8x4	5-3/4	7-11/16	10	9-1/8	20	9-5/8	5-3/16	17.71	---
802-621F	---	10x10x2	4-3/8	7-9/16	9-5/8	8-15/16	19-1/4	11-15/16	3	26.78	---
802-623F	---	10x10x3	4-7/8	8-3/16	10-1/8	9-5/8	20-1/4	11-15/16	4-1/8	31.67	---
802-624F	---	10x10x4	5-3/8	8-13/16	10-5/8	10-5/16	21-1/4	11-15/16	5-3/16	32.18	---
802-661F	---	12x12x2	4-3/4	8-7/16	11	9-13/16	22	14-1/8	3	37.80	---
802-663F	---	12x12x3	5-1/4	9-1/4	11-1/2	10-11/16	23	14-1/8	4-1/8	36.19	---
802-664F	---	12x12x4	5-3/4	9-15/16	12	11-7/16	24	14-1/8	5-3/16	47.80	---

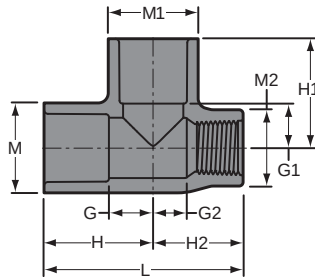
¹ Outlet sized with bushing

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCING TEE

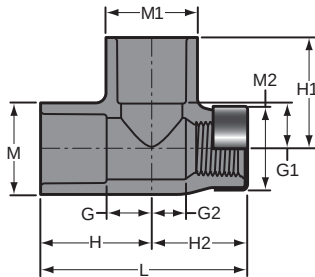
Socket x Fipt x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)	
PVC	CPVC												PVC	CPVC
803-095	803-095C	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-3/8	3-3/32	1-13/32	1-13/32	1-3/16	.15	.15

SPECIAL REINFORCED REDUCING TEE

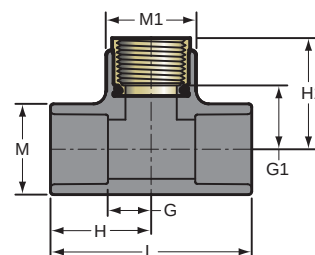
Socket x SR Fipt x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)	
PVC	CPVC												PVC	CPVC
803-095SR	803-095CSR	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-13/32	3-1/8	1-13/32	1-13/32	1-7/32	.15	.16

TEE

Socket x Socket x Brass Fipt



Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-005BR	802-005CBR	1/2	7/8	31/32	1-7/16	1-17/32	2-5/8	1-5/32	1-7/32	.16	.16
802-007BR	802-007CBR	3/4	17/32	1-3/32	1-13/32	1-13/16	3-1/32	1-13/32	1-3/8	.25	.38

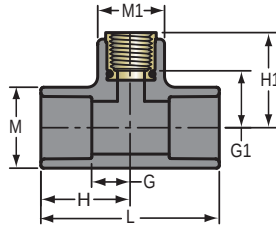
Not intended to convey or dispense water for human consumption through drinking or cooking



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCING TEE

Socket x Socket x Brass Fipt

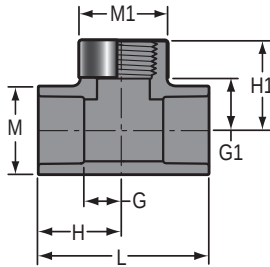


Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-072BR	---	1/2x1/2x1/4	7/16	7/8	1-5/16	1-17/32	2-5/8	1-5/32	1-7/32	.23	---
802-101BR	802-101CBR	3/4x3/4x1/2	7/16	1-1/32	1-7/16	1-5/8	2-29/32	1-13/32	1-3/16	.19	.20

Not intended to convey or dispense water for human consumption through drinking or cooking

SPECIAL REINFORCED TEE

Socket x Socket x SR Fipt



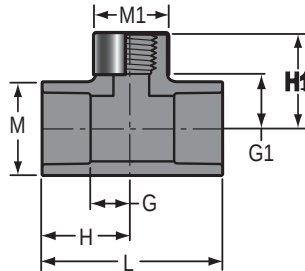
Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-005SR	802-005CSR	1/2	5/8	5/8	1-15/32	1-3/8	2-15/16	1-7/32	1-13/32	.13	.15
802-007SR	802-007CSR	3/4	19/32	11/16	1-19/32	1-13/32	3-3/16	1-13/32	1-13/32	.15	.15
802-010SR	802-010CSR	1	21/32	11/16	1-13/16	1-5/8	3-5/8	1-23/32	1-11/16	.25	.28
802-012SR	802-012CSR	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-3/16	2-3/32	2-1/16	.37	.38
802-015SR	802-015CSR	1-1/2	15/16	1-7/32	2-11/32	2-5/32	4-11/16	2-11/32	2-7/16	.51	.53
802-020SR	802-020CSR	2	1-5/16	1-1/2	2-13/16	2-13/32	5-21/32	2-7/8	3-1/32	.80	.83
802-030SR	802-030CSR	3	1-27/32	2-3/32	3-23/32	3-17/32	7-7/16	4-9/32	4-9/32	2.33	2.44
802-040SR	802-040CSR	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-1/4	5-1/4	3.40	3.52

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



SPECIAL REINFORCED REDUCING TEE

Socket x Socket x SR Fipt

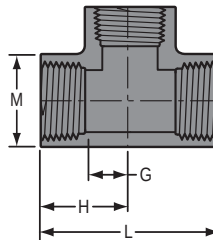


Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-072SR	802-072CSR	1/2x1/2x1/4	7/16	11/16	1-5/16	1-7/32	2-5/8	1-5/32	27/32	.09	.09
802-098SR	802-098CSR	3/4x3/4x1/4	7/16	13/16	1-7/16	1-5/16	2-7/8	1-3/8	27/32	.12	.12
802-101SR	802-101CSR	3/4x3/4x1/2	19/32	25/32	1-19/32	1-15/32	3-7/32	1-13/32	1-3/16	.15	.15
802-128SR ¹	802-128CSR ¹	1x1x1/4	7/8	2-5/8	2	2-11/16	4	2-3/32	27/32	.43	.38
802-130SR	802-130CSR	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-3/16	.19	.20
802-131SR	802-131CSR	1x1x3/4	21/32	7/8	1-13/16	1-19/32	3-19/32	1-23/32	1-3/8	.22	.23
802-164SR ¹	802-164CSR ¹	1-1/4x1-1/4x1/4	27/32	2-13/16	2-1/8	3-13/32	4-7/32	2-3/32	27/32	.43	.45
802-166SR	802-166CSR	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-27/32	3-13/32	2-3/32	1-3/16	.26	.27
802-168SR	802-168CSR	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.35	.36
802-207SR ¹	802-207CSR ¹	1-1/2x1-1/2x1/4	27/32	1-31/32	2-1/4	2-19/32	4-15/32	2-11/32	1-3/4	.49	.57
802-211SR	802-211CSR	1-1/2x1-1/2x1	27/32	1-7/32	2-1/4	2-1/8	4-15/32	2-3/8	1-11/16	.42	.44
802-212SR	802-212CSR	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.49	.51
802-247SR	802-247CSR	2x2x1/2	1/2	1-1/2	2	2-1/4	4	2-7/8	1-3/16	.45	.48
802-248SR	802-248CSR	2x2x3/4	19/32	1-13/32	2-1/8	2-1/8	4-1/4	2-7/8	1-3/8	.48	.50
802-287SR	802-287CSR	2-1/2x2-1/2x1/2	9/16	1-3/4	2-5/16	2-1/2	4-19/32	3-1/2	1-7/32	.75	.79
802-331SR ¹	802-331CSR ¹	3x3x1/4	1-13/32	4-1/2	3-5/16	5-1/32	6-9/16	4-3/16	27/32	1.90	3.62
802-413SR ¹	802-413CSR ¹	4x4x1/4	1-7/16	5-3/16	3-11/16	5-25/32	7-3/8	5-1/4	27/32	2.63	2.75

¹ Outlet sized with bushing

TEE

Fipt x Fipt x Fipt



Part Number		Size	G	H	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
805-002	805-002C	1/4	17/32	1-3/32	2-7/32	27/32	.06	.05
805-003	805-003C	3/8	9/16	1-5/32	2-5/16	15/16	.07	.07
805-005	805-005C	1/2	17/32	1-1/4	2-15/32	1-3/16	.11	.12
805-007	805-007C	3/4	21/32	1-15/32	2-15/16	1-1/2	.19	.20
805-010	---	1	3/4	1-23/32	3-7/16	1-27/32	.34	---
---	805-010C	1	23/32	1-3/4	3-1/2	1-11/16	---	.29
805-012	805-012C	1-1/4	15/16	1-31/32	3-29/32	2-1/4	.47	.50
805-015	805-015C	1-1/2	1-1/8	2-3/16	4-3/8	2-13/32	.60	.62
805-020	805-020C	2	1-5/8	2-5/8	5-1/4	3	1.08	1.15
805-025	805-025C	2-1/2	1-9/16	3-1/8	6-1/4	3-19/32	1.65	1.76
805-030	805-030C	3	1-15/16	3-9/16	7-3/32	4-11/32	2.82	3.01
805-040	805-040C	4	2-15/32	4-7/32	8-7/16	5-3/8	4.28	4.33
805-060F	805-060CF	6	8-1/4	9-3/4	19-1/2	7-3/16	20.11	24.79

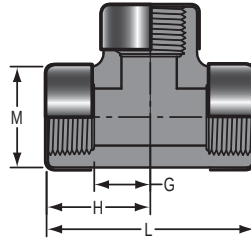
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

SPECIAL REINFORCED TEE

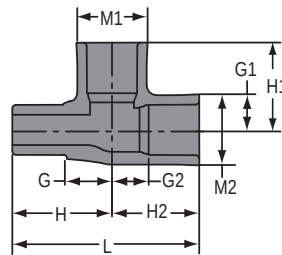
SR Fipt x SR Fipt x SR Fipt



Part Number		Size	G	H	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
805-002SR	805-002CSR	1/4	17/32	1-1/8	2-1/4	27/32	.08	.07
805-003SR	805-003CSR	3/8	19/32	1-3/16	2-11/32	31/32	.09	.09
805-005SR	805-005CSR	1/2	1/2	1-1/4	2-1/2	1-3/16	.14	.14
805-007SR	805-007CSR	3/4	19/32	1-11/32	2-11/16	1-3/8	.16	.17
805-010SR	805-010CSR	1	7/8	1-25/32	3-9/16	1-11/16	.32	.33
805-015SR	805-015CSR	1-1/2	1-1/4	2-3/16	4-13/32	2-13/32	.66	.70
805-020SR	805-020CSR	2	1-5/8	2-5/8	5-1/4	3	1.17	1.27

STREET TEE

Spigot x Socket x Socket



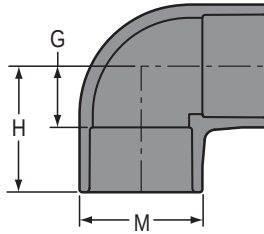
Part Number		Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
844-005	844-005C	1/2	23/32	23/32	1/2	1-19/32	1-21/32	1-19/32	3-5/32	1-3/16	1-3/16	.10	.11
844-007	844-007C	3/4	13/16	27/32	7/8	1-13/16	1-7/8	1-13/16	3-5/8	1-13/32	1-13/32	.15	.16
844-010	844-010C	1	1	1-31/32	1-31/32	2-1/8	2	2-1/8	4-7/32	1-3/4	1-3/4	.26	.27
844-012	844-012C	1-1/4	1-1/4	1-5/32	1-1/8	2-7/16	2-5/16	2-7/16	4-7/8	2-3/32	2-3/32	.39	.41
844-015	844-015C	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-11/32	2-11/32	2-11/32	.51	.54
844-020	844-020C	2	1-23/32	1-7/16	1-13/32	3-1/4	2-15/16	2-15/16	6-5/32	2-7/8	2-7/8	.80	.84

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



90° ELBOW

Socket x Socket



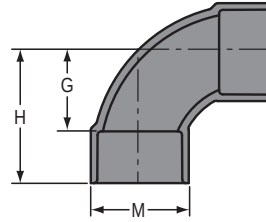
Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
806-002	806-002C	1/4	11/32	1	13/16	.03	.03
806-003	806-003C	3/8	15/32	1-1/4	31/32	.05	.05
806-005	806-005C	1/2	9/16	1-15/32	1-3/16	.08	.09
806-007	806-007C	3/4	5/8	1-11/16	1-7/16	.12	.12
806-010	806-010C	1	7/8	2	1-3/4	.20	.21
806-012	806-012C	1-1/4	1	2-9/32	1-31/32	.30	.31
806-015	806-015C	1-1/2	1-3/32	2-9/16	2-3/8	.39	.39
806-020	806-020C	2	1-13/32	2-15/16	2-7/8	.60	.62
806-025	806-025C	2-1/2	1-9/16	3-11/32	3-15/32	1.09	1.15
806-030	806-030C	3	2-1/32	3-31/32	4-3/16	1.57	1.67
806-040	806-040C	4	2-5/8	4-7/8	5-7/32	2.78	2.93
806-045F	---	4-1/2	6-1/2	9	5-5/8	4.58	---
806-050	806-050C	5	3	5-3/4	6-3/8	4.42	4.69
806-050F	---	5	5-1/2	8-1/2	6-5/16	6.23	---
---	806-050CF	5	6-9/16	9-9/16	6-5/16	---	12.04
806-060	---	6	3-3/4	6-3/4	7-19/32	7.47	---
---	806-060C	6	3-3/4	6-3/4	7-19/32	---	7.43
806-080	806-080C	8	4-3/4	8-3/4	9-3/4	14.31	15.83
806-080F	---	8	7-7/8	12-1/8	9-5/8	17.47	---
---	806-080CF	8	9-1/4	13-1/2	9-5/8	---	22.53
806-100	806-100C	10	5-25/32	11-11/32	12-1/16	28.19	28.74
806-100F	---	10	10	15-1/4	11-15/16	31.86	---
---	806-100CF	10	11-13/16	17-1/16	11-15/16	---	40.28
806-120	806-120C	12	6-7/8	13-7/16	14-5/16	43.94	47.93
806-120F	---	12	11-1/2	17-3/4	14-1/8	60.28	---
---	806-120CF	12	13-5/8	19-7/8	14-1/8	---	63.96
806-140F	---	14	13-1/2	20-1/2	15-1/2	82.49	---
---	806-140CF	14	16	23	15-1/2	---	86.72
806-160F	---	16	15-9/16	23-9/16	17-11/16	101.71	---
---	806-160CF	16	18-7/16	26-7/16	17-11/16	---	133.22
806-180F	---	18	17-11/16	26-11/16	19-7/8	167.49	---
---	806-180CF	18	20-7/8	29-7/8	19-7/8	---	175.62
806-200F	---	20	19-13/16	29-13/16	22-1/16	193.41	---
---	806-200CF	20	23-5/16	33-5/16	22-1/16	---	250.00
806-240F	---	24	24	36	26-7/16	403.66	---
---	806-240CF	24	28-1/4	40-1/4	26-7/16	---	---



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

90° SWEEP ELBOW

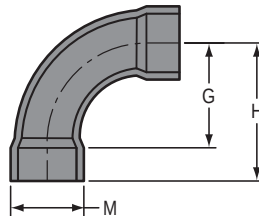
Socket x Socket



Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
806-005S	806-005SC	1/2	27/32	1-23/32	1-3/16	.08	.08
806-007S	806-007SC	3/4	1-1/32	2-1/32	1-13/32	.12	.12
806-010S	806-010SC	1	1-5/16	2-7/16	1-23/32	.20	.20
806-012S	806-012SC	1-1/4	1-9/16	2-13/16	2-3/32	.30	.31
806-015S	806-015SC	1-1/2	1-3/4	3-1/8	2-11/32	.39	.40
806-020S	806-020SC	2	2-5/16	3-13/16	2-7/8	.64	.68

90° LONG SWEEP ELBOW

Socket x Socket



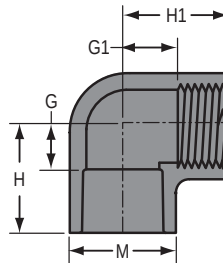
Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
806-005LSF	806-005LSCF	1/2	1-7/8	2-3/4	1-1/8	.13	.13
806-007LSF	806-007LSCF	3/4	2-7/16	3-7/16	1-7/16	.22	.24
806-010LSF	806-010LSCF	1	2-7/8	4	1-11/16	.33	.37
806-012LSF	806-012LSCF	1-1/4	3-5/8	4-7/8	2-1/16	.50	.56
806-015LSF	806-015LSCF	1-1/2	4-1/8	5-1/2	2-5/16	.60	.68
806-020LSF	806-020LSCF	2	4-3/4	6-5/16	2-13/16	.90	1.07
806-025LSF	806-025LSCF	2-1/2	5-3/4	7-3/4	3-7/16	1.65	1.70
806-030LSF	806-030LSCF	3	7	9	4-1/8	2.36	2.69
806-040LSF	806-040LSCF	4	9	11-1/4	5-3/16	4.76	4.85
806-060LSF	---	6	13	16-1/4	7-1/2	12.84	---
---	806-060LSCF	6	13	16-1/4	7-1/2	---	12.84
806-080LSF	806-080LSCF	8	23-1/2	27-3/4	9-5/8	31.58	33.18

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



90° ELBOW

Socket x Fipt

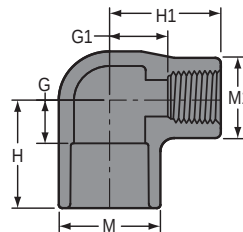


Part Number		Size	G	G1	H	H1	M	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
807-002	807-002C	1/4	5/16	5/16	15/16	15/16	7/8	.03	.03
807-003	807-003C	3/8	1/4	3/8	1-1/32	1-1/32	1-1/32	.05	.05
807-005	807-005C	1/2	15/32	9/16	1-11/32	1-9/32	1-3/16	.08	.11
807-007	807-007C	3/4	5/8	5/8	1-9/16	1-9/16	1-3/8	.09	.11
807-010	807-010C	1	11/16	25/32	1-13/16	1-11/16	1-23/32	.19	.19
807-012	807-012C	1-1/4	31/32	1	2-7/32	1-15/16	2-1/4	.36	.37
807-015	807-015C	1-1/2	15/16	1-7/32	2-11/32	2-5/32	2-11/32	.39	.46
807-020	807-020C	2	15/16	1-1/32	2-7/16	2	3	.80	.84
807-030	807-030C	3	1-27/32	2-7/32	3-23/32	3-9/16	4-9/32	1.72	2.02
807-040	807-040C	4	2-5/16	2-7/8	4-9/16	4-9/32	5-1/4	2.87	2.95
807-060 ¹	---	6	3-3/4	7-1/8	6-3/4	8-7/8	7-9/16	11.48	---

¹ Outlet sized with Female Adapter

90°REDUCING ELBOW

Socket x Fipt



Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-101	807-101C	3/4x1/2	1/2	25/32	1-17/32	1-17/32	1-13/32	1-3/16	.11	.12
807-130 ¹	807-130C ¹	1x1/2	27/32	1-17/32	1-31/32	2-1/4	1-23/32	1-23/32	.26	.27
807-131 ¹	807-131C ¹	1x3/4	7/8	1-17/32	2	2-1/4	1-3/4	1-3/4	.25	.26

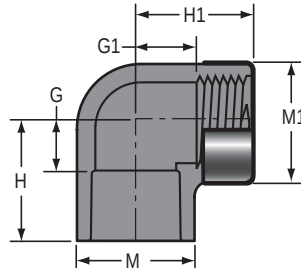
¹ Outlet sized with Female Adapter



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

SPECIAL REINFORCED 90° ELBOW

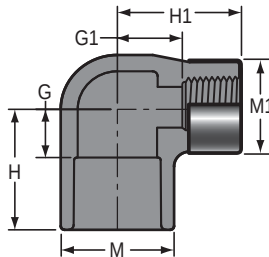
Socket x SR Fipt



Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-005SR	807-005CSR	1/2	15/32	23/32	1-11/32	1-9/32	1-3/16	1-7/32	.08	.09
807-007SR	807-007CSR	3/4	9/16	21/32	1-9/16	1-13/32	1-3/8	1-3/8	.11	.12
807-010SR	807-010CSR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.20	.21
807-012SR	807-012CSR	1-1/4	23/32	1-1/32	1-31/32	1-31/32	2-1/16	2-1/16	.30	.31
807-015SR	807-015CSR	1-1/2	31/32	1-5/32	2-3/8	2-1/8	2-11/32	2-7/16	.41	.44
807-020SR	807-020CSR	2	1-7/32	1-1/2	2-15/32	2-7/16	2-31/32	2-31/32	.83	.91
807-030SR	807-030CSR	3	1-13/16	2-7/32	3-23/32	3-9/16	4-9/32	4-9/32	1.98	2.08
807-040SR	807-040CSR	4	2-9/32	2-25/32	4-9/16	4-7/32	5-1/4	5-1/4	2.94	3.02

SPECIAL REINFORCED REDUCING 90° ELBOW

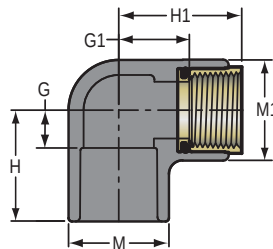
Socket x SR Fipt



Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-101SR	807-101CSR	3/4x1/2	1/2	13/16	1-17/32	1-17/32	1-13/32	1-3/16	.12	.12
807-130SR	807-130CSR	1x1/2	9/16	1	1-23/32	1-5/8	1-23/32	1-3/16	.13	.14

TRANSITION 90° ELBOW

Socket x Brass Fipt



Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-005BR	807-005CBR	1/2	7/16	31/32	1-5/16	1-17/32	1-5/32	1-7/32	.14	.19
807-007BR	807-007CBR	3/4	1/2	1-3/16	1-17/32	1-13/16	1-13/32	1-13/32	.21	.21

Not intended to convey or dispense water for human consumption through drinking or cooking

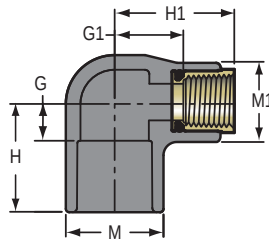
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



TRANSITION REDUCING

90° ELBOW

Socket x Brass Fipt

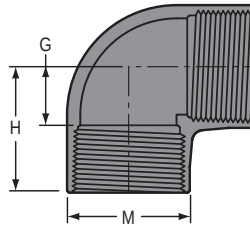


Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-101BR	807-101CBR	3/4x1/2	1/2	1-1/16	1-1/2	1-5/8	1-13/32	1-3/16	.18	.21

Not intended to convey or dispense water for human consumption through drinking or cooking

90° ELBOW

Fipt x Fipt

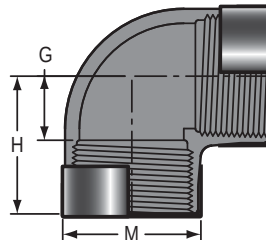


Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
808-002	808-002C	1/4	11/32	15/16	7/8	.04	.04
808-003	808-003C	3/8	9/16	1-5/32	15/16	.05	.06
808-005	808-005C	1/2	1/2	1-7/32	1-9/32	.09	.08
808-007	808-007C	3/4	5/8	1-3/8	1-3/8	.11	.12
808-010	808-010C	1	25/32	1-5/8	1-23/32	.20	.21
808-012	808-012C	1-1/4	15/16	1-15/16	2-1/4	.41	.38
808-015	808-015C	1-1/2	1-5/32	2-3/32	2-7/16	.46	.48
808-020	808-020C	2	1-9/16	2-17/32	3	.86	.90
808-025	808-025C	2-1/2	1-5/8	3-3/16	3-9/16	1.20	1.26
808-030	808-030C	3	1-29/32	3-17/32	4-13/32	2.30	2.37
808-040	808-040C	4	2-13/32	4-5/32	5-7/16	3.22	3.44

SPECIAL REINFORCED

90° ELBOW

SR Fipt x SR Fipt



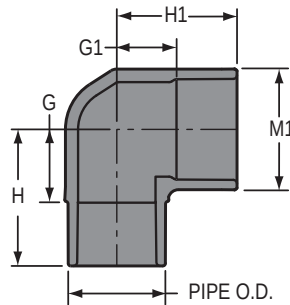
Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
808-003SR	808-003CSR	3/8	9/16	1-5/32	15/16	.07	.07
808-005SR	808-005CSR	1/2	1/2	1-7/32	1-3/16	.10	.11
808-007SR	808-007CSR	3/4	5/8	1-3/8	1-3/8	.13	.14
808-010SR	808-010CSR	1	25/32	1-11/16	1-23/32	.23	.24
808-012SR	808-012CSR	1-1/4	1	1-31/32	2-1/16	.34	.45
808-015SR	808-015CSR	1-1/2	1-1/32	2-1/8	2-7/16	.50	.52
808-020SR	808-020CSR	2	1-19/32	2-1/2	3	.92	1.04



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

90° STREET ELBOW

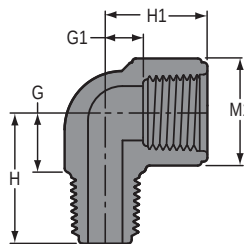
Spigot x Socket



Part Number		Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
809-005	809-005C	1/2	13/16	7/16	1-21/32	1-7/16	1-5/32	.07	.08
809-007	809-007C	3/4	29/32	11/16	1-27/32	1-11/16	1-3/8	.11	.12
809-010	809-010C	1	1-1/16	3/4	2-7/32	2	1-23/32	.19	.20
809-012	809-012C	1-1/4	1-9/32	13/16	2-19/32	2-1/4	2-3/32	.29	.31
809-015	809-015C	1-1/2	1-7/16	1-3/16	2-13/16	2-9/16	2-3/8	.40	.43
809-020	809-020C	2	1-3/4	1-7/16	3-1/4	2-31/32	2-7/8	.60	.64
809-025	809-025C	2-1/2	2-1/2	1-5/8	4-1/2	3-3/8	3-7/16	1.31	1.54
809-030	809-030C	3	2-3/8	1-13/16	4-1/4	3-11/16	4-3/16	1.65	1.70
809-040	809-040C	4	3-1/32	2-1/4	5-9/32	4-17/32	5-1/4	2.82	2.92
809-060	---	6	5-1/4	3-7/8	8-1/2	6-7/8	7-9/16	12.00	---
---	809-060C	6	5-1/4	3-11/16	8-7/16	6-3/4	7-9/16	---	10.01
809-080	809-080C	8	6-7/8	5	11-1/8	8-7/8	9-11/16	13.74	17.34
809-100	809-100C	10	8-5/8	5-13/16	14-5/16	11-3/8	12-1/16	37.73	41.05
809-120	809-120C	12	10-1/8	6-7/8	16-7/8	13-3/8	14-1/8	61.75	67.93
809-140F	---	14	13-1/2	13-1/2	20-1/2	20-1/2	15-1/2	82.49	---
---	809-140CF	14	19-1/2	16	27-1/2	23	15-1/2	---	101.86
809-160F	---	16	19-9/16	15-9/16	28-9/16	23-9/16	17-11/16	120.78	---
---	809-160CF	16	22-7/16	18-7/16	31-7/16	26-7/16	17-11/16	---	135.72
809-180F	---	18	22-3/16	17-11/16	32-3/16	26-11/16	19-7/8	140.91	---
---	809-180CF	18	25-3/8	20-7/8	35-3/8	29-7/8	19-7/8	---	217.54
809-200F	---	20	24-13/16	19-13/16	35-13/16	29-13/16	22-1/16	256.44	---
---	809-200CF	20	28-5/16	23-5/16	39-5/16	33-5/16	22-1/16	---	266.40
809-240F	---	24	30	24	43	36	26-7/16	395.00	---
---	809-240CF	24	34-1/4	28-1/4	47-1/4	40-1/4	26-7/16	---	435.00

90° STREET ELBOW

Mipt x Fipt



Part Number		Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
812-002	812-002C	1/4	17/32	5/16	1-1/32	29/32	13/16	.02	.03
812-005	---	1/2	13/16	17/32	1-19/32	1-9/32	1-3/16	.08	---
812-010	---	1	1-1/8	25/32	2-1/8	1-11/16	1-23/32	.20	---
812-012	---	1-1/4	2-9/16	1	3-9/32	1-31/32	2-7/32	.49	---
812-015 ¹	---	1-1/2	2-11/16	1-1/4	3-7/16	2-1/8	2-13/32	.54	---

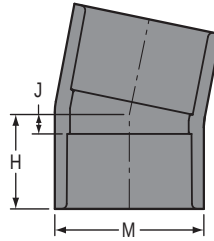
¹ Outlet sized with Female Adapter

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



11-1/4° ELBOW

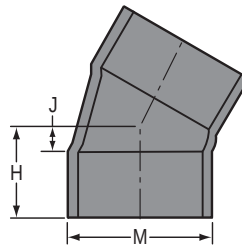
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
811-015	811-015C	1-1/2	1-19/32	7/32	2-3/8	.24	.25
811-020	811-020C	2	1-23/32	7/32	2-27/32	.33	.35
811-025F	811-025CF	2-1/2	2-11/16	11/16	3-7/16	.81	.88
811-030	811-030C	3	2-3/16	5/16	4-1/8	.88	.92
811-040	811-040C	4	2-21/32	13/32	5-1/4	1.53	1.58
811-045F	---	4-1/2	3-1/2	1	5-5/8	1.94	---
811-050F	811-050CF	5	3-13/16	13/16	6-5/16	2.88	3.22
811-060F	811-060CF	6	4-1/4	1	7-1/2	4.43	4.69
811-080F	811-080CF	8	5-3/8	1-1/8	9-5/8	8.73	10.52
811-100F	811-100CF	10	6-11/16	1-7/16	11-15/16	15.93	19.02
811-120F	811-120CF	12	7-13/16	1-9/16	14-1/8	24.66	29.25
811-140F	811-140CF	14	9	2	15-1/2	33.00	41.37
811-160F	811-160CF	16	10-3/8	2-3/8	17-11/16	48.74	---
811-180F	811-180CF	18	11-3/4	2-3/4	19-7/8	69.12	83.44
811-200F	811-200CF	20	13-1/8	3-1/8	22-1/16	96.58	99.90
811-240F	811-240CF	24	15-13/16	3-13/16	26-7/16	152.00	196.96

30° ELBOW

Socket x Socket



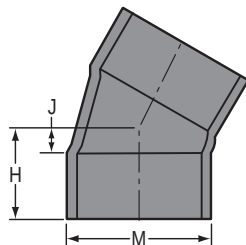
Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
815-005F	815-005CF	1/2	1-7/16	7/16	1-1/8	.07	.07
815-007F	815-007CF	3/4	1-7/16	7/16	1-3/8	.09	.11
815-010F	815-010CF	1	1-3/4	1/2	1-11/16	.14	.16
815-012F	815-012CF	1-1/4	2-3/16	11/16	2-1/16	.22	.24
815-015F	815-015CF	1-1/2	2-3/16	11/16	2-5/16	.30	.32
815-020F	815-020CF	2	2-5/16	9/16	2-13/16	.46	.54
815-025F	815-025CF	2-1/2	3	1	3-7/16	.81	.93
815-030F	815-030CF	3	3-5/16	1-1/16	4-1/8	1.21	1.44
815-040F	815-040CF	4	3-7/16	1-3/16	5-3/16	2.14	2.27
815-045F	---	4-1/2	4	1-1/2	5-5/8	2.18	---
815-050F	815-050CF	5	4-3/8	1-3/8	6-5/16	3.10	3.22
815-060	815-060C	6	4-13/16	1-7/8	7-9/16	5.59	5.89



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

30° ELBOW (continued)

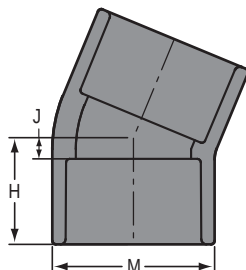
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
815-080F	815-080CF	8	6-3/16	1-15/16	9-5/8	10.08	11.08
815-100F	815-100CF	10	7-3/4	2-1/2	11-15/16	17.92	21.26
815-120F	815-120CF	12	9-1/16	2-13/16	14-1/8	27.40	32.33
815-140F	815-140CF	14	10-7/16	3-7/16	15-1/2	37.94	37.18
815-160F	815-160CF	16	11-15/16	3-15/16	17-11/16	55.09	64.23
815-180F	815-180CF	18	13-7/16	4-7/16	19-7/8	77.09	92.38
815-200F	815-200CF	20	15	5	22-1/16	119.89	109.89
815-240F	815-240CF	24	18-1/8	6-1/8	26-7/16	166.30	185.25

22-1/2° ELBOW

Socket x Socket



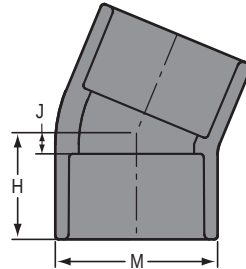
Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
816-005	816-005C	1/2	1-1/16	3/16	1-5/32	.06	.06
816-007	816-007C	3/4	1-3/16	3/16	1-7/16	.09	.09
816-010	816-010C	1	1-3/8	9/32	1-23/32	.13	.14
816-012	816-012C	1-1/4	1-1/2	5/16	2-3/32	.19	.20
816-015	816-015C	1-1/2	1-21/32	1/4	2-3/8	.26	.26
816-015F	816-015CF	1-1/2	2-1/8	5/8	2-5/16	.26	.28
816-020	816-020C	2	1-7/8	7/16	2-7/8	.38	.44
816-025	816-025C	2-1/2	2-7/32	15/32	3-1/2	.68	.72
816-025F	816-025CF	2-1/2	2-7/8	7/8	3-7/16	.75	.84
816-030	816-030C	3	2-13/32	9/16	4-5/32	.95	1.01
816-040	816-040C	4	2-7/8	5/8	5-1/4	1.64	1.71
816-045F	---	4-1/2	3-13/16	1-5/16	5-5/8	2.09	---
816-050F	816-050CF	5	4-1/8	1-1/8	6-5/16	3.15	3.22

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



22-1/2° ELBOW (continued)

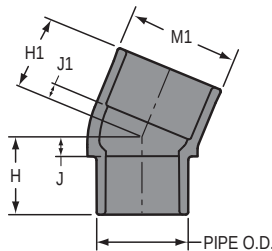
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
816-060	816-060C	6	4-9/16	1-3/8	7-7/16	4.33	4.59
816-060F	816-060CF	6	4-5/8	1-3/8	7-1/2	5.02	5.29
816-080	816-080C	8	5-1/16	1-1/32	9-3/4	8.19	8.95
816-080F	816-080CF	8	5-7/8	1-5/8	9-5/8	9.41	9.60
816-100F	816-100CF	10	7-5/16	2-1/16	11-15/16	17.25	18.77
816-120F	816-120CF	12	8-9/16	2-5/16	14-1/8	26.03	30.79
816-140F	816-140CF	14	9-13/16	2-13/16	15-1/2	34.65	40.74
816-160F	816-160CF	16	11-5/16	3-5/16	17-11/16	52.97	57.95
816-180F	816-180CF	18	12-3/4	3-3/4	19-7/8	74.44	86.42
816-200F	816-200CF	20	14-1/4	4-1/4	22-1/16	119.89	103.23
816-240F	816-240CF	24	17-3/16	5-3/16	26-7/16	189.96	---

22-1/2° STREET ELBOW

Spigot x Socket



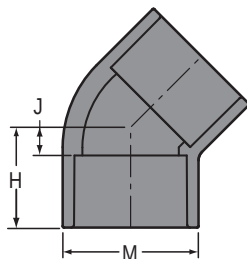
Part Number		Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
842-005	842-005C	1/2	1-1/16	1	1/4	1/4	1-5/32	.05	.05
842-007	842-007C	3/4	1-1/4	1-5/32	3/16	3/16	1-3/8	.08	.09
842-010	842-010C	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.13	.14
842-012	842-012C	1-1/4	1-9/16	1-1/2	9/16	5/8	2-1/16	.20	.22
842-015	842-015C	1-1/2	1-21/32	1-7/8	9/32	1/2	2-3/8	.26	.29
842-020	842-020C	2	2	1-29/32	15/32	13/32	2-7/8	.40	.43
842-025	842-025C	2-1/2	2-1/8	2-9/32	3/8	17/32	3-1/2	.66	.76
842-030	842-030C	3	2-1/2	2-5/16	21/32	7/16	4-5/32	1.44	1.00
842-040	842-040C	4	2-27/32	2-21/32	9/16	23/32	5-1/4	1.73	2.59
842-060	842-060C	6	5-11/16	3-15/16	2-3/8	7/8	7-5/8	9.46	6.87
842-080	842-080C	8	7-3/8	5-1/8	3-1/8	1-1/8	9-3/4	5.61	12.71



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

45° ELBOW

Socket x Socket



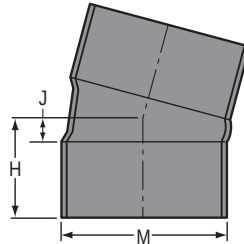
Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
817-002	817-002C	1/4	13/16	5/32	27/32	.03	.03
817-003	817-003C	3/8	31/32	7/32	1	.04	.04
817-005	817-005C	1/2	1-1/8	1/4	1-3/16	.06	.07
817-007	817-007C	3/4	1-5/16	5/16	1-7/16	.09	.10
817-010	817-010C	1	1-7/16	5/16	1-23/32	.15	.16
817-012	817-012C	1-1/4	1-11/16	13/32	2-5/32	.23	.24
817-015	817-015C	1-1/2	1-13/16	7/16	2-3/8	.30	.32
817-020	817-020C	2	2-1/8	19/32	2-7/8	.45	.47
817-025	817-025C	2-1/2	2-13/32	21/32	3-1/2	.77	.82
817-030	817-030C	3	2-29/32	29/32	4-5/32	1.12	1.16
817-040	817-040C	4	3-5/16	1-1/16	5-1/4	2.00	2.05
817-045F	---	4-1/2	4-1/2	2	5-5/8	2.32	---
817-050	817-050C	5	4	1-11/32	6-3/8	3.19	3.31
817-050F	817-050CF	5	4-7/8	1-7/8	6-5/16	3.86	4.25
817-060	817-060C	6	4-3/4	1-3/4	7-9/16	5.37	5.49
817-080	817-080C	8	6	2	9-25/32	10.07	10.43
817-100	817-100C	10	8-3/16	2-19/32	12-3/16	20.62	21.29
817-100F	817-100CF	10	8-11/16	3-7/16	11-15/16	19.91	23.50
817-120	817-120C	12	9-11/16	3-3/32	14-13/32	34.04	35.49
817-120F	817-120CF	12	10-1/8	3-7/8	14-1/8	31.51	32.40
817-140F	817-140CF	14	11-9/16	4-9/16	15-1/2	42.89	41.37
817-160F	817-160CF	16	13-5/16	5-5/16	17-11/16	61.45	57.91
817-180F	817-180CF	18	15	6	19-7/8	87.73	88.48
817-200F	817-200CF	20	16-3/4	6-3/4	22-1/16	107.05	123.21
817-240F	817-240CF	24	20-3/16	8-3/16	26-7/16	204.20	---

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



15° ELBOW

Socket x Socket



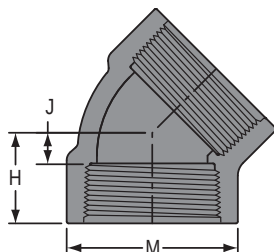
Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
818-020F	818-020CF	2	2-1/2	3/4	2-3/4	.42	.54
818-025F	818-025CF	2-1/2	2-3/4	3/4	3-7/16	.79	.69
818-030F	818-030CF	3	3	3/4	4-1/8	1.10	1.44
818-040F	818-040CF	4	3-1/8	7/8	5-3/16	1.90	1.96
818-045F	---	4-1/2	3-5/8	1-1/2	5-5/8	2.00	---
818-050F	818-050CF	5	3-15/16	15/16	6-5/16	2.98	3.22
818-060F	818-060CF	6	4-3/8	1-1/8	7-1/2	4.43	5.38
818-080F	818-080CF	8	4-1/2	1-1/4	9-5/8	8.73	10.52
818-100F	818-100CF	10	6-15/16	1-11/16	11-15/16	15.93	19.02
818-120F	818-120CF	12	8-1/16	1-13/16	14-1/8	24.66	29.25
818-140F	818-140CF	14	9-5/16	2-5/16	15-1/2	34.65	40.75
818-160F	818-160CF	16	10-11/16	2-11/16	17-11/16	50.85	59.47
818-180F	818-180CF	18	12-1/16	3-1/16	19-7/8	71.78	83.44
818-200F	818-200CF	20	13-1/2	3-1/2	22-1/16	119.89	99.90
818-240F	818-240CF	24	16-1/4	4-1/4	26-7/16	170.96	202.28



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

45° ELBOW

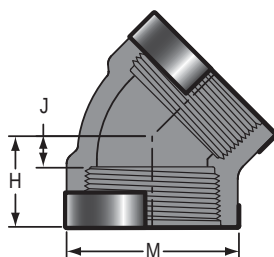
Fipt x Fipt



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
819-002	819-002C	1/4	25/32	3/16	27/32	.03	.03
819-003	819-003C	3/8	13/16	3/16	1	.04	.04
819-005	819-005C	1/2	1-1/32	9/32	1-9/32	.07	.08
819-007	819-007C	3/4	1-3/32	13/32	1-3/8	.11	.07
819-010	819-010C	1	1-13/32	13/32	1-13/16	.16	.19
819-012	819-012C	1-1/4	1-7/16	7/16	2-3/16	.24	.25
819-015	819-015C	1-1/2	1-1/2	15/32	2-1/2	.31	.33
819-020	819-020C	2	1-23/32	21/32	3	.46	.48
819-025	819-025C	2-1/2	2-17/32	31/32	3-1/2	1.14	1.24
819-030	819-030C	3	2-23/32	1	4-9/32	1.78	1.92
819-040	819-040C	4	3-1/4	1-7/32	5-1/4	2.71	2.79

SPECIAL REINFORCED 45° ELBOW

SR Fipt x SR Fipt



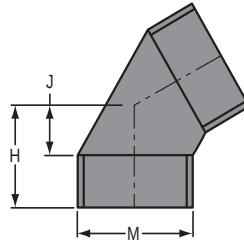
Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
819-007SR	819-007CSR	3/4	1-1/8	13/32	1-3/8	.10	.11

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



60° ELBOW

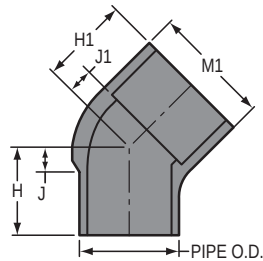
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
824-005F	824-005CF	1/2	1-5/8	5/8	1-1/8	.13	.14
824-007F	824-007CF	3/4	1-11/16	11/16	1-3/8	.18	.09
824-010F	824-010CF	1	2	3/4	1-11/16	.33	.34
824-012F	824-012CF	1-1/4	2-1/2	1	2-1/16	.68	.69
824-015F	824-015CF	1-1/2	2-5/8	1-1/8	1-3/8	.74	.75
824-020F	824-020CF	2	3	1-1/4	2-13/16	.93	.59
824-025F	824-025CF	2-1/2	3-9/16	1-9/16	3-7/16	.73	.95
824-030F	824-030CF	3	4	1-3/4	4-1/8	2.53	1.34
824-040F	824-040CF	4	4-5/16	2-1/16	5-3/16	4.05	5.10
824-050F	824-050CF	5	5-3/8	2-3/8	6-5/16	7.08	7.39
824-060F	824-060CF	6	6-1/8	2-7/8	7-1/2	9.30	10.87
824-080F	824-080CF	8	7-3/4	3-1/2	9-5/8	18.81	19.49
824-100F	824-100CF	10	9-11/16	4-7/16	11-15/16	33.04	36.34
824-120F	824-120CF	12	11-5/16	5-1/16	14-1/8	31.51	63.05
824-140F	824-140CF	14	12-15/16	5-15/16	15-1/2	42.89	88.90
824-160F	824-160CF	16	14-13/16	6-13/16	17-11/16	108.07	126.09
824-180F	824-180CF	18	16-3/4	7-3/4	19-7/8	95.71	175.82
824-200F	---	20	23-11/16	13-11/16	22-1/16	239.76	---
---	824-200CF	20	26-5/8	16-5/8	22-1/16	---	247.63
824-240F	---	24	28-11/16	16-11/16	26-7/16	348.00	---
---	824-240CF	24	32-1/8	20-1/8	26-7/16	---	362.00

45° STREET ELBOW

Spigot x Socket



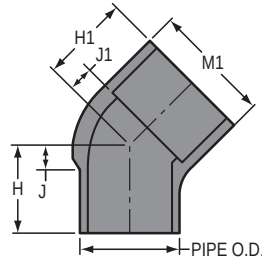
Part Number		Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
827-005	827-005C	1/2	1-9/32	1-5/16	11/32	7/16	1-3/16	.06	.06
827-007	827-007C	3/4	1-1/2	1-1/2	7/16	1/2	1-13/32	.10	.10
827-010	827-010C	1	1-19/32	1-11/16	13/32	19/32	1	.15	.16
827-012	827-012C	1-1/4	1-25/32	1-29/32	1/2	21/32	1-21/32	.22	.24
827-015	827-015C	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.30	.32
827-020	827-020C	2	2-5/16	2-11/32	11/16	3/8	2-27/32	.44	.47
827-025	827-025C	2-1/2	3-11/16	2-9/16	1-11/16	13/16	3-1/2	1.09	1.29
827-030	827-030C	3	3-1/4	2-13/16	1-3/16	29/32	4-5/32	1.22	1.25
827-040	827-040C	4	3-13/16	3-13/16	1-9/32	1-9/16	5-1/4	2.15	2.20
827-060	827-060C	6	5-1/8	4-3/4	2-1/8	1-3/4	7-9/16	5.70	5.87
827-080	827-080C	8	6-5/8	5-31/32	2-19/32	1-3/4	9-3/4	10.53	10.51



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

45° STREET ELBOW (continued)

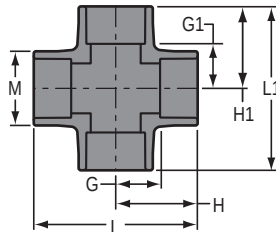
Spigot x Socket



Part Number		Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
827-100	827-100C	10	10-21/32	8-3/16	2-19/32	5-5/16	12-3/16	25.62	26.59
827-120	827-120C	12	13-1/4	9-11/16	6-3/8	3-3/32	14-13/32	45.44	46.00
827-140F	---	14	11-9/16	11-9/16	4-9/16	4-9/16	15-1/2	61.04	---
---	827-140CF	14	16-1/16	11-9/16	8-1/16	4-9/16	15-1/2	---	70.37
827-160F	827-160CF	16	18-5/16	13-5/16	9-5/16	5-5/16	17-11/16	78.40	90.40
827-180F	827-180CF	18	20-1/2	15	10-1/2	6	19-7/8	114.32	131.12
827-200F	827-200CF	20	22-3/4	16-3/4	11-3/4	6-3/4	22-1/16	156.53	153.18
827-240F	827-240CF	24	27-3/16	20-3/16	14-3/16	8-3/16	26-7/16	261.19	---

CROSS

Socket x Socket x Socket x Socket



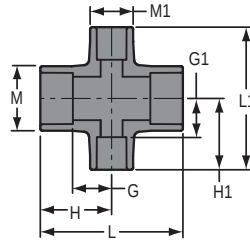
Part Number		Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
820-002	820-002C	1/4	13/32	13/32	1-1/32	1-1/32	2-1/16	2-1/16	27/32	.05	.05
820-005	820-005C	1/2	9/16	9/16	1-15/32	1-15/32	2-15/16	2-15/16	1-3/16	.13	.13
820-007	820-007C	3/4	5/8	5/8	1-5/8	1-5/8	3-9/32	3-9/32	1-13/32	.22	.21
820-010	820-010C	1	31/32	31/32	2-3/32	2-3/32	4-7/32	4-7/32	1-23/32	.39	.46
820-012	820-012C	1-1/4	1-3/32	1-3/32	2-3/8	2-3/8	4-3/4	4-3/4	2-1/8	.63	.65
820-015	820-015C	1-1/2	1-7/32	1-7/32	2-5/8	2-5/8	5-7/32	5-7/32	2-3/8	.79	.81
820-020	820-020C	2	1-1/2	1-1/2	3	3	6	6	3	1.34	1.38
820-025	820-025C	2-1/2	1-11/16	1-11/16	3-15/32	3-15/32	6-29/32	6-29/32	3-17/32	2.02	2.11
820-030	820-030C	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-11/32	3.30	3.39
820-040	820-040C	4	2-5/8	2-5/8	4-7/8	4-7/8	9-3/4	9-3/4	5-11/32	5.31	5.30
820-050F	820-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	17	6-5/16	14.69	15.06
820-060F	820-060CF	6	6-1/4	6-1/4	9-1/2	9-1/2	19	19	7-1/2	16.19	16.94
820-080F	820-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	23-3/4	9-5/8	28.22	40.50
820-100F	820-100CF	10	9	9	14-1/4	14-1/4	28-1/2	28-1/2	11-15/16	49.78	67.20
820-120F	820-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	35	14-1/8	80.83	107.80
820-140F	820-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	38-1/2	15-1/2	108.89	148.16
820-160F	820-160CF	16	13	13	21	21	42	42	17-11/16	156.80	180.80
820-180F	820-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	45-1/2	19-7/8	215.35	198.00
820-200F	820-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	52-3/4	22-1/16	300.00	249.75
820-240F	820-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	64-1/2	26-7/16	527.13	355.98

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCING CROSS

Socket x Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
820-130 ¹	820-130C ¹	1x1x1/2x1/2	1	1-7/16	2-1/8	2-3/8	4-7/32	4-3/4	1-23/32	1-23/32	.56	.59
820-131	820-131C	1x1x1/2x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.30	.31
820-166 ¹	820-166C ¹	1-1/4x1-1/4x1/2x1/2	1-3/32	1-3/32	2-3/8	2-11/16	4-3/4	5-3/16	3-3/32	3-3/32	.82	.84
820-167	820-167C	1-1/4x1-1/4x3/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.33	.35
820-209 ¹	820-209C ¹	1-1/2x1-1/2x1/2x1/2	1-7/32	1-7/32	2-21/32	2-31/32	5-1/4	5-15/16	2-3/8	2-3/8	1.18	1.21
820-210	820-210C	1-1/2x1-1/2x3/4x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.40	.42
820-211 ¹	820-211C ¹	1-1/2x1-1/2x1x1	1-3/4	1-3/4	2-5/8	3	5-5/16	5-7/8	1-3/8	1-3/8	1.12	1.16
820-248	820-248C	2x2x3/4x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.55	.56
820-251	---	2x2x1-1/2x1-1/2	1-1/2	2	3	3-3/8	6	6-3/4	2-7/8	2-7/8	1.72	---
820-289	820-289C	2-1/2x2-1/2x1x1	7/8	1-23/32	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.97	1.00
820-291 ¹	820-291C ¹	2-1/2x2-1/2x1-1/2x1-1/2	1-11/16	2-15/32	3-7/16	3-27/32	6-7/8	7-23/32	3-9/16	3-9/16	2.83	2.97
820-336 ¹	820-336C ¹	3x3x1-1/4x1-1/4	2-3/32	3-1/8	3-31/32	4-3/8	7-29/32	8-3/4	4-3/16	4-3/16	4.23	4.46
820-338 ¹	820-338C ¹	3x3x2x2	2-3/32	2-27/32	3-31/32	4-5/16	7-29/32	8-5/8	4-13/32	4-5/16	4.23	4.46
820-420 ¹	820-420C ¹	4x4x2x2	2-5/8	3-13/16	4-7/8	5-11/32	9-3/4	10-21/32	5-11/32	5-7/32	7.33	7.83
820-420F	820-420CF	4x4x2x2	3-7/8	4-1/4	6-1/8	6	12-1/4	12	5-3/16	2-13/16	5.26	5.79
820-422 ¹	820-422C ¹	4x4x3x3	2-5/8	3-7/16	4-7/8	5-5/16	9-3/4	10-5/8	5-1/4	5-1/4	6.94	7.21
820-528F	820-528CF	6x6x2x2	4-5/8	5-3/16	7-7/8	6-15/16	15-3/4	13-7/8	7-1/2	2-13/16	7.19	8.70
820-530F	820-530CF	6x6x3x3	4-3/4	5-3/4	8	8	16	16	7-1/2	4-1/8	12.60	10.24
820-532F	820-532CF	6x6x4x4	5-1/4	6-3/4	8-1/2	9	17	18	7-1/2	5-3/16	14.54	15.93
820-533F	820-533CF	6x6x5x5	5-3/4	6-1/2	9	9-1/2	18	19	7-1/2	6-5/16	14.00	14.41
820-578F	820-578CF	8x8x2x2	4-11/16	6-1/8	8-15/16	7-7/8	17-7/8	15-3/4	9-5/8	2-13/16	11.30	15.90
820-580F	820-580CF	8x8x3x3	5-3/16	6-11/16	9-7/16	8-15/16	18-7/8	17-7/8	9-5/8	4-1/8	12.93	13.77
820-582F	820-582CF	8x8x4x4	5-3/4	7-11/16	10	9-15/16	20	19-7/8	9-5/8	5-3/16	21.87	24.71
820-585F	820-585CF	8x8x6x6	6-3/4	8-1/16	11	11-5/16	22	22-5/8	9-5/8	7-1/2	30.04	30.75
820-621F	820-621CF	10x10x2x2	4-3/8	7-1/8	9-5/8	8-7/8	19-1/4	17-11/16	11-15/16	2-13/16	19.45	27.78
820-622F	---	10x10x2-1/2x2-1/2	5-1/4	7-5/16	10-1/2	9-5/16	21	18-5/8	11-15/16	3-7/16	20.00	---
820-623F	820-623CF	10x10x3x3	4-7/8	7-11/16	10-1/8	9-15/16	20-1/4	19-13/16	11-15/16	4-1/8	21.42	30.16
820-624F	820-624CF	10x10x4x4	5-3/8	8-11/16	10-5/8	10-15/16	21-1/4	21-13/16	11-15/16	5-3/16	24.17	28.17
820-626F	820-626CF	10x10x6x6	5-7/8	9-1/16	11-1/8	12-5/16	22-1/4	24-5/8	11-15/16	7-1/2	40.79	38.61
820-628F	820-628CF	10x10x8x8	8-1/4	9-15/16	13-1/2	14-3/16	27	28-3/8	11-15/16	9-5/8	65.94	59.10
820-661F	820-661CF	12x12x2x2	4-3/4	8	11	9-3/4	22	19-1/2	14-1/8	2-13/16	29.32	44.02
820-663F	820-663CF	12x12x3x3	5-1/4	8-9/16	11-1/2	10-13/16	23	21-5/8	14-1/8	4-1/8	33.02	45.28
820-664F	820-664CF	12x12x4x4	5-3/4	9-9/16	12	11-13/16	24	23-5/8	14-1/8	5-3/16	33.78	42.60
820-666F	820-666CF	12x12x6x6	7-1/4	9-15/16	13-1/4	13-3/16	26-1/2	26-3/8	14-1/8	7-1/2	57.20	61.56
820-668F	820-668CF	12x12x8x8	8	10-13/16	14-1/4	15-1/16	28-1/2	30-1/8	14-1/8	9-5/8	66.12	73.35
820-670F	820-670CF	12x12x10x10	9-5/8	10-13/16	15-7/8	16-1/16	31-3/4	32-1/8	14-1/8	11-15/16	105.91	78.03
820-691F	820-691CF	14x14x2x2	5-3/16	8-9/16	12-3/16	10-5/16	24-3/8	20-5/8	15-1/2	2-13/16	38.49	45.02
820-693F	820-693CF	14x14x3x3	5-3/4	9-1/8	12-3/4	11-3/8	25-1/2	22-3/4	15-1/2	4-1/8	49.59	57.57

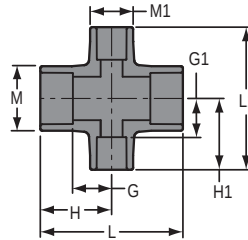
¹ Outlet sized with bushing



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCING CROSS (continued)

Socket x Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
820-694F	820-694CF	14x14x4x4	6-1/2	10-1/8	13-1/2	12-3/8	27	24-3/4	15-1/2	5-3/16	43.51	69.17
820-696F	820-696CF	14x14x6x6	8-1/4	10-1/2	15-1/4	13-3/4	30-1/2	27-1/2	15-1/2	7-1/2	78.72	63.15
820-698F	820-698CF	14x14x8x8	9-1/4	11-3/8	16-1/4	15-5/8	32-1/2	31-1/4	15-1/2	9-5/8	75.53	68.17
820-700F	820-700CF	14x14x10x10	10-1/8	11-3/8	17-1/8	16-5/8	34-1/4	33-1/4	15-1/2	11-15/16	95.66	89.80
820-702F	820-702CF	14x14x12x12	11	11-3/8	18	17-5/8	36	35-1/4	15-1/2	14-1/8	98.88	93.81
820-751F	820-751CF	16x16x2x2	5-7/8	9-1/2	13-7/8	11-1/4	27-3/4	22-1/2	17-11/16	2-13/16	55.64	71.71
820-752F	820-752CF	16x16x2-1/2x2-1/2	6	9-11/16	14	11-11/16	28	23-3/8	17-11/16	3-7/16	56.18	65.37
820-753F	820-753CF	16x16x3x3	6-5/16	10-1/16	14-5/16	12-5/16	28-5/8	24-5/8	17-11/16	4-1/8	58.72	67.39
820-754F	820-754CF	16x16x4x4	6-1/8	11-1/16	14-1/8	13-5/16	28-1/4	26-5/8	17-11/16	5-3/16	61.59	70.21
820-756F	820-756CF	16x16x6x6	8-5/8	11-7/16	16-5/8	14-11/16	33-1/4	29-3/8	17-11/16	7-1/2	93.13	90.09
820-758F	820-758CF	16x16x8x8	9-5/8	12-5/16	17-5/8	16-9/16	35-1/4	33-1/8	17-11/16	9-5/8	91.88	98.69
820-760F	820-760CF	16x16x10x10	10-5/8	12-5/16	18-5/8	17-9/16	37-1/4	35-1/8	17-11/16	11-15/16	104.59	103.85
820-762F	820-762CF	16x16x12x12	11-5/8	12-5/16	19-5/8	18-9/16	39-1/4	37-1/8	17-11/16	14-1/8	141.98	116.70
820-764F	820-764CF	16x16x14x14	12-3/4	12-11/16	20-3/4	19-11/16	41-1/2	39-3/8	17-11/16	15-1/2	129.00	135.00
820-784F	820-784CF	18x18x4x4	6-7/8	11-15/16	15-7/8	14-3/16	31-3/4	28-3/8	19-7/8	5-3/16	92.66	99.22
820-786F	820-786CF	18x18x6x6	8-1/2	12-5/16	17-1/2	15-9/16	35	31-1/8	19-7/8	7-1/2	118.63	122.13
820-788F	820-788CF	18x18x8x8	9-1/2	13-3/16	18-1/2	17-7/16	37	34-7/8	19-7/8	9-5/8	128.81	135.00
820-790F	820-790CF	18x18x10x10	10-1/2	13-3/16	19-1/2	18-7/16	39	36-7/8	19-7/8	11-15/16	130.87	150.90
820-792F	820-792CF	18x18x12x12	11-1/2	13-3/16	20-1/2	19-7/16	41	38-7/8	19-7/8	14-1/8	147.26	169.57
820-794F	820-794CF	18x18x14x14	12-3/4	13-9/16	21-3/4	20-9/16	43-1/2	41-1/8	19-11/16	15-1/2	164.25	165.78
820-796F	820-796CF	18x18x16x16	13-1/2	14-3/16	22-1/2	22-3/16	45	44-3/8	19-11/16	17-11/16	189.00	172.46
820-814F	820-814CF	20x20x4x4	7-11/16	12-7/8	17-11/16	15-1/8	35-3/8	30-1/4	22-1/16	5-3/16	115.50	116.55
820-816F	820-816CF	20x20x6x6	8-7/8	13-1/4	18-7/8	16-1/2	37-3/4	33	22-1/16	7-1/2	133.63	140.98
820-818F	820-818CF	20x20x8x8	9-7/8	14-1/8	19-7/8	18-3/8	39-3/4	36-3/4	22-1/16	9-5/8	153.30	151.48
820-820F	820-820CF	20x20x10x10	10-7/8	14-1/8	20-7/8	19-3/8	41-3/4	38-3/4	22-1/16	11-15/16	168.43	163.28
820-822F	820-822CF	20x20x12x12	11-7/8	14-1/8	21-7/8	20-3/8	43-3/4	40-3/4	22-1/16	14-1/8	186.06	176.50
820-824F	820-824CF	20x20x14x14	12-7/8	14-1/2	22-7/8	21-1/2	45-3/4	43	22-1/16	15-1/2	204.39	190.95
820-826F	820-826CF	20x20x16x16	14	15-1/8	24	23-1/8	48	46-1/4	22-1/16	17-11/16	230.10	210.27
820-828F	820-828CF	20x20x18x18	15	15	25	24	50	48	22-1/16	19-7/8	258.28	226.80
820-904F	820-904CF	24x24x4x4	9	14-11/16	21	16-15/16	42	33-7/8	26-7/16	5-3/16	192.22	195.97
820-906F	820-906CF	24x24x6x6	9-1/4	15-1/16	21-1/4	18-5/16	42-1/2	36-5/8	26-7/16	7-1/2	211.33	202.94
820-908F	820-908CF	24x24x8x8	10-1/4	15-15/16	22-1/4	20-3/16	44-1/2	40-3/8	26-7/16	9-5/8	221.76	236.29
820-910F	820-910CF	24x24x10x10	11-1/4	15-15/16	23-1/4	21-3/16	46-1/2	42-3/8	26-7/16	11-15/16	249.91	255.96
820-912F	820-912CF	24x24x12x12	12-1/4	15-15/16	24-1/4	22-3/16	48-1/2	44-3/8	26-7/16	14-1/8	279.88	280.93

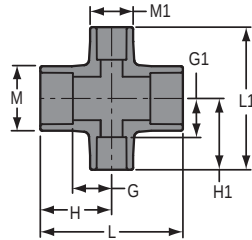
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCING CROSS

(continued)

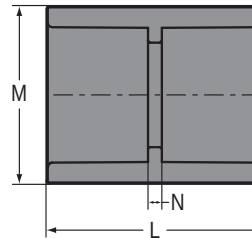
Socket x Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
820-914F	820-914CF	24x24x14x14	13-1/4	16-5/16	25-1/4	23-5/16	50-1/2	46-5/8	26-1/16	15-1/2	301.05	282.43
820-916F	820-916CF	24x24x16x16	14-3/4	16-15/16	26-3/4	24-15/16	53-1/2	49-7/8	26-7/16	17-11/16	329.60	306.44
820-918F	820-918CF	24x24x18x18	15-3/4	16-13/16	27-3/4	25-13/16	55-1/2	51-5/8	26-7/16	19-7/8	360.62	246.78
820-920F	820-920CF	24x24x20x20	16-3/4	18-3/16	28-3/4	28-3/16	57-1/2	56-3/8	26-7/16	22-1/16	398.22	351.60

COUPLING

Socket x Socket



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
829-002	829-002C	1/4	1-3/8	27/32	1/16	.02	.02
829-003	829-003C	3/8	1-5/8	1	3/16	.04	.04
829-005	829-005C	1/2	1-7/8	1-3/16	1/8	.05	.07
829-007	829-007C	3/4	2-1/8	1-13/32	1/8	.07	.10
829-010	829-010C	1	2-15/32	1-23/32	3/16	.13	.13
829-012	829-012C	1-1/4	2-23/32	2-7/32	7/32	.22	.23
829-015	829-015C	1-1/2	2-7/8	2-11/32	3/32	.21	.22
829-020	829-020C	2	3-1/8	2-27/32	3/32	.31	.32
829-025	829-025C	2-1/2	3-11/16	3-15/32	1/4	.55	.58
829-030	829-030C	3	3-31/32	4-5/32	3/16	.79	.82
829-040	829-040C	4	4-3/4	5-5/16	1/4	1.34	1.36
829-050	829-050C	5	5-21/32	6-3/8	3/16	2.06	2.21
829-050F	---	5	7-3/8	6-5/16	1-3/8	2.60	---
---	829-050CF	5	8	6-5/16	2	---	2.32
829-060	829-060C	6	6-3/8	7-9/16	1/4	3.39	3.93
829-080	829-080C	8	8-1/4	9-23/32	9/32	6.55	6.95
829-100	829-100C	10	10-9/32	12-1/16	1/4	11.76	12.31
829-100F	829-100CF	10	12-1/2	11-15/16	2	13.94	16.78
829-120	829-120C	12	12-3/8	14-7/32	3/8	19.39	20.05
829-120F	---	12	14-1/4	14-1/8	1-3/4	21.92	---

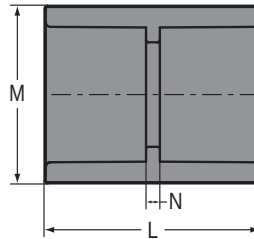


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

COUPLING

(continued)

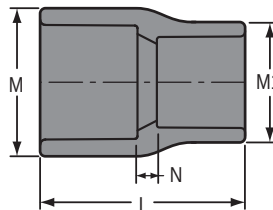
Socket x Socket



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
---	829-120CF	12	15-1/4	14-1/8	2-3/4	---	27.71
829-140	829-140C	14	14-7/16	15-5/8	3/8	29.70	28.11
829-140F	---	14	16-1/4	15-1/2	2-1/4	29.70	---
----	829-140CF	14	16	15-1/2	2	---	33.33
829-160F	829-160CF	16	18-5/8	17-11/16	2-5/8	42.38	42.93
829-180F	829-180CF	18	22	19-7/8	4	63.81	72.89
829-200F	829-200CF	20	23-3/4	22-1/16	3-3/4	86.58	99.56
829-240F	829-240CF	24	29-1/4	26-7/16	5-1/4	147.22	---

REDUCER COUPLING

Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-101	829-101C	3/4x1/2	2-3/32	1-13/32	1-5/32	7/32	.07	.07
829-130	829-130C	1x1/2	2-3/16	1-23/32	1-13/32	7/32	.11	.12
829-131	829-131C	1x3/4	2-13/32	1-23/32	1-13/32	1/4	.10	.10
829-166	829-166C	1-1/4x1/2	2-9/16	2-3/32	1-5/32	7/16	.13	.15
829-167	829-167C	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17	.18
829-168	829-168C	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.17	.15
829-209	829-209C	1-1/2x1/2	2-27/32	2-11/32	1-3/16	19/32	.19	.20
829-210	829-210C	1-1/2x3/4	2-7/8	2-3/8	1-13/32	17/32	.21	.19
829-211	829-211C	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.26	.25
829-212	829-212C	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.22	.23
829-247	829-247C	2x1/2	3-3/32	2-7/8	1-5/32	11/16	.30	.31
829-248	829-248C	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.30	.32
829-249	829-249C	2x1	3-1/8	2-7/8	1-23/32	17/32	.33	.35
829-250	829-250C	2x1-1/4	3-11/32	2-7/8	2-3/32	19/32	.31	.33
829-251	829-251C	2x1-1/2	3-7/32	2-27/32	2-11/32	1/4	.30	.31
829-290 ¹	829-290C ¹	2-1/2x1-1/4	3-29/32	3-1/2	2-3/8	15/16	.57	.59
829-291	829-291C	2-1/2x1-1/2	3-3/4	3-1/2	2-3/8	19/32	.51	.51
829-292	829-292C	2-1/2x2	3-21/32	3-15/32	2-27/32	13/32	.48	.51
829-335	829-335C	3x1	4-7/16	4-1/8	2-7/8	1-7/16	1.00	1.04
829-336 ¹	829-336C ¹	3x1-1/4	4-7/32	4-5/32	2-29/32	1-1/16	.94	.97
829-337 ¹	829-337C ¹	3x1-1/2	4-13/32	4-5/32	2-7/8	1-3/16	.94	.96

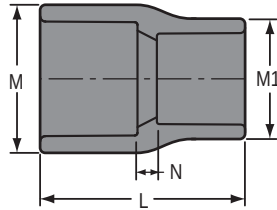
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCER COUPLING

(continued)

Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-338	829-338C	3x2	4	4-5/32	2-27/32	11/16	.68	.76
829-339	829-339C	3x2-1/2	3-27/32	4-3/16	3-1/2	3/16	1.26	.80
829-339F	829-339CF	3x2-1/2	6	4-1/16	3-7/16	1-3/4	.90	1.01
829-416 ¹	829-416C ¹	4x3/4	5-23/32	5-9/32	2-29/32	2-13/32	1.67	1.78
829-417 ¹	829-417C ¹	4x1	5-15/16	5-9/32	2-29/32	2-17/32	1.71	1.54
829-419 ¹	829-419C ¹	4x1-1/2	5-23/32	5-9/32	2-29/32	2-1/16	1.59	1.68
829-420	829-420C	4x2	5-1/2	5-9/32	2-7/8	1-25/32	1.45	1.50
829-421	829-421C	4x2-1/2	4-9/16	5-3/16	3-1/2	17/32	1.25	1.35
829-422	829-422C	4x3	4-5/8	5-1/4	4-1/8	1/2	1.25	1.33
829-460F	---	4-1/2x4	6-15/16	5-5/8	5-3/16	2-3/16	1.97	---
829-487F	---	5x2-1/2	8-1/8	6-1/4	5-3/16	3-5/8	2.64	---
829-488F	829-488CF	5x3	7-15/16	6-1/4	5-3/16	2-15/16	3.08	3.13
829-490F	829-490CF	5x4	7-3/4	6-1/4	5-3/16	2-1/2	2.09	2.53
829-491F	---	5x4-1/2	8-3/16	6-1/4	5-5/8	2-15/16	3.22	---
829-528 ¹	829-528C ¹	6x2	7-1/16	7-1/2	5	2-9/16	4.37	4.42
829-529 ¹	829-529C	6x2-1/2	6-31/32	7-19/32	5-9/32	2-3/16	4.30	4.72
829-530 ¹	829-530C ¹	6x3	7-1/8	7-9/16	5-9/32	2-1/4	4.07	4.25
829-530F	---	6x3	9-3/16	7-5/16	5-3/16	3-15/16	3.85	---
---	829-530CF	6x3	9-1/4	7-5/16	5-3/16	4-3/16	---	4.22
829-532	829-532C	6x4	6-5/8	7-5/8	5-5/16	1-7/16	3.28	3.45
829-533F	829-533CF	6x5	8-15/16	7-3/8	6-5/16	2-11/16	3.57	3.93
829-534F	---	6x4-1/2	9-5/16	7-5/16	5-5/8	3-9/16	3.22	---
829-579F	---	8x2-1/2	15	9-1/2	5-3/16	8-3/4	8.33	---
829-580F	---	8x3	14-15/16	9-1/2	5-3/16	8-11/16	7.95	---
---	829-580CF	8x3	15	9-1/2	5-3/16	8-7/8	---	8.74
829-582	829-582C	8x4	8-29/32	9-23/32	5-1/4	2-15/32	6.31	6.47
829-582F	829-582CF	8x4	14-5/8	9-1/2	5-3/16	8-1/8	8.17	9.36
829-583F	829-583CF	8x5	14-11/16	9-1/2	6-5/16	7-7/16	7.78	8.30
829-585	829-585C	8x6	8	9-3/4	7-1/2	1	6.16	6.48
829-621F	829-621CF	10x2	21-1/2	11-3/4	5-3/16	14-3/4	16.16	17.05
829-623F	829-623CF	10x3	21-7/16	11-3/4	5-3/16	14-3/16	15.77	17.18
---	829-623CF	10x3	21-1/2	11-3/4	5-3/16	14-7/16	---	20.10
829-624F	829-624CF	10x4	21-1/8	11-3/4	5-3/16	13-5/8	17.13	16.54
829-625F	829-625CF	10x5	21-3/16	11-3/4	6-5/16	12-15/16	16.38	16.94
829-626	829-626C	10x6	10-19/32	12-1/32	7-19/32	2-17/32	11.08	11.43
829-626F	---	10x6	17-1/2	11-3/4	7-1/2	9	14.72	---
---	829-626CF	10x6	17-5/8	11-3/4	7-1/2	9-1/8	---	15.00
829-628	829-628C	10x8	10-5/8	12	9-3/4	1-17/32	11.26	11.44
829-628F	---	10x8	13-1/4	11-3/4	9-5/8	3-3/4	11.42	---
---	829-628CF	10x8	13-3/8	11-3/4	9-5/8	3-7/8	---	12.00
829-664F	829-664CF	12x4	28-3/8	13-15/16	5-3/16	19-7/8	31.70	32.77
829-665F	829-665CF	12x5	28-7/16	13-15/16	6-5/16	19-3/16	27.25	33.24
829-666F	---	12x6	24-3/4	13-15/16	7-1/2	15-1/4	26.96	---
---	829-666CF	12x6	24-7/8	13-15/16	7-1/2	15-3/8	---	25.86
829-668	829-668C	12x8	12-5/8	14-7/32	9-3/4	2-7/16	17.92	19.26
829-668F	---	12x8	20-1/2	13-15/16	9-5/8	10	24.34	---

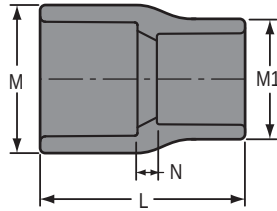
¹ Outlet sized with bushing



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCER COUPLING (continued)

Socket x Socket



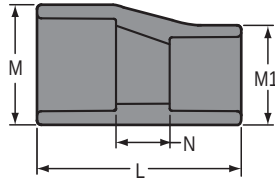
Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
---	829-668CF	12x8	20-5/8	13-15/16	9-5/8	10-1/8	---	24.34
829-670F	829-670CF	12x10	16-3/8	13-15/16	11-15/16	4-7/8	18.92	20.77
829-694F	829-694CF	14x4	30-1/8	15-3/16	5-3/16	20-7/8	31.56	32.89
829-696F	---	14x6	26-1/2	15-3/16	7-1/2	16-1/4	29.65	---
---	829-696CF	14x6	26-5/8	15-3/16	7-1/2	16-3/8	---	47.58
829-698F	---	14x8	22-1/4	15-3/16	9-5/8	11	29.32	---
---	829-698CF	14x8	22-3/8	15-3/16	9-5/8	11-1/8	---	27.69
829-700F	829-700CF	14x10	18-1/8	15-3/16	11-15/16	5-7/8	22.90	26.86
829-702F	829-702CF	14x12	17-3/4	15-3/8	14-1/8	4-1/2	27.40	29.14
829-754F	829-754CF	16x4	38	17-3/8	5-3/16	27-3/4	50.97	50.97
829-756F	---	16x6	34-3/8	17-3/8	7-1/2	23-1/8	61.19	---
---	829-756CF	16x6	34-1/2	17-3/8	7-1/2	23-1/4	---	61.20
829-758F	---	16x8	30-1/8	17-3/8	9-5/8	17-7/8	52.73	---
---	829-758CF	16x8	30-1/4	17-3/8	9-5/8	18	---	54.00
829-760F	829-760CF	16x10	26	17-3/8	11-15/16	12-3/4	43.70	51.35
829-762F	829-762CF	16x12	20-1/4	17-3/8	14-1/8	6	34.25	65.63
829-764F	829-764CF	16x14	21-1/4	17-1/2	15-1/2	5-1/4	42.89	50.00
829-784F	829-784CF	18x4	47-3/8	19-11/16	5-3/16	36-1/8	104.77	107.14
829-786F	---	18x6	43-3/4	19-11/16	7-1/2	31-1/2	91.02	---
---	829-786CF	18x6	43-7/8	19-11/16	7-1/2	31-5/8	---	105.76
829-788F	---	18x8	39-1/2	19-11/16	9-5/8	26-1/4	86.65	---
---	829-788CF	18x8	39-5/8	19-11/16	9-5/8	26-3/8	---	101.60
829-790F	829-790CF	18x10	35-3/8	19-11/16	11-15/16	21-1/8	91.28	89.54
829-792F	829-792CF	18x12	29-5/8	19-11/16	14-1/8	14-3/8	73.27	76.67
829-794F	829-794CF	18x14	29-5/8	19-11/16	15-1/2	13-5/8	73.72	87.00
829-796F	829-796CF	18x16	23	19-11/16	17-11/16	6	55.09	63.70
829-814F	829-814CF	20x4	58	21-7/8	5-3/16	45-3/4	152.76	159.76
829-816F	---	20x6	54-1/2	21-7/8	7-1/2	41-1/8	136.93	---
---	829-816CF	20x6	54-1/2	21-7/8	7-1/2	41-1/4	---	158.17
829-818F	---	20x8	50-1/8	21-7/8	9-5/8	35-7/8	144.26	---
---	829-818CF	20x8	50-1/4	21-7/8	9-5/8	36	---	154.50
829-820F	829-820CF	20x10	46	21-7/8	11-15/16	30-3/4	139.44	146.56
829-822F	829-822CF	20x12	40-1/4	21-7/8	14-1/8	24	119.04	137.46
829-824F	829-824CF	20x14	40-1/4	21-7/8	15-1/2	23-1/4	118.17	---
829-826F	829-826CF	20x16	33-5/8	21-7/8	17-11/16	15-5/8	100.87	115.51
829-828F	829-828CF	20x18	25-1/2	21-7/8	19-7/8	6-1/2	79.76	---
829-904F	829-904CF	24x4	71-1/2	26-1/16	5-3/16	57-1/4	231.96	241.69
829-906F	---	24x6	67-7/8	26-1/16	7-1/2	52-5/8	229.16	---
---	829-906CF	24x6	68	26-1/16	7-1/2	52-3/4	---	240.34
829-908F	---	24x8	63-5/8	26-1/16	9-5/8	47-3/8	223.42	---
---	829-908CF	24x8	63-3/4	26-1/16	9-5/8	47-1/2	---	236.18
829-910F	829-910CF	24x10	59-1/2	26-1/16	11-15/16	42-1/4	218.80	270.28
829-912F	829-912CF	24x12	53-3/4	26-1/16	14-1/8	35-1/2	192.82	219.13
829-914F	829-914CF	24x14	53-3/4	26-1/16	15-1/2	34-3/4	225.10	---
829-916F	829-916CF	24x16	47-1/8	26-1/16	17-11/16	27-1/8	171.54	179.54
829-918F	829-918CF	24x18	39	26-1/16	19-7/8	18	147.20	167.74
829-920F	829-920CF	24x20	30-5/8	26-1/16	22-1/16	8-5/8	116.56	139.32

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



ECCENTRIC REDUCER COUPLING

Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-101FE	829-101CFE	3/4x1/2	3-3/8	1-3/8	1-1/8	1-5/8	.09	.09
829-130FE	829-130CFE	1x1/2	3-1/2	1-5/8	1-1/8	1-1/2	.12	.11
829-168FE	829-168CFE	1-1/4x1	5-1/8	2	1-11/16	2-3/8	.24	.30
829-209FE	829-209CFE	1-1/2x1/2	7-1/8	2-1/4	1-1/8	4-7/8	.30	.33
829-210FE	829-210CFE	1-1/2x3/4	7-5/8	2-1/4	1-3/8	5-1/8	.33	.34
829-211FE	829-211CFE	1-1/2x1	5-3/8	2-1/4	1-11/16	2-5/8	.33	.35
829-212FE	829-212CFE	1-1/2x1-1/4	5-1/4	2-5/16	2-1/16	2-1/4	.37	.33
829-249FE	829-249CFE	2x1	6-1/8	2-3/4	1-11/16	3-1/8	.39	.37
829-250FE	829-250CFE	2x1-1/4	6-1/8	2-3/4	2-1/16	2-7/8	.37	.46
829-251FE	829-251CFE	2x1-1/2	6	2-3/4	2-5/16	2-3/4	.46	.47
829-289FE	829-289CFE	2-1/2x1	10-5/8	3-5/16	1-11/16	7-3/8	.88	.90
829-290FE	829-290CFE	2-1/2x1-1/4	10-5/8	3-5/16	2-1/16	7-1/8	.91	1.15
829-291FE	829-291CFE	2-1/2x1-1/2	10-1/2	3-5/16	2-5/16	7	.91	1.24
829-292FE	829-292CFE	2-1/2x2	6-7/8	3-5/16	2-13/16	3-1/8	.68	.86
829-335FE	829-335CFE	3x1	11-7/8	3-15/16	1-11/16	8-3/8	1.17	1.58
829-336FE	829-336CFE	3x1-1/4	11-7/8	3-15/16	2-1/16	8-1/8	1.10	1.27
829-337FE	829-337CFE	3x1-1/2	11-3/4	3-15/16	2-5/16	8	1.28	1.41
829-338FE	829-338CFE	3x2	5-7/8	4-5/32	2-7/8	2-15/32	1.01	1.07
829-339FE	829-339CFE	3x2-1/2	7-1/4	4-1/16	3-7/16	3	1.12	1.26
829-417FE	829-417CFE	4x1	17	5-1/8	1-11/16	13-1/2	2.75	3.48
829-418FE	829-418CFE	4x1-1/4	17	5-1/8	2-1/16	13-1/4	2.65	3.00
829-419FE	829-419CFE	4x1-1/2	16-7/8	5-1/8	2-5/16	13-1/8	3.10	2.60
829-420FE	829-420CFE	4x2	13-1/4	5-1/8	2-13/16	9-1/4	2.83	2.47
829-421FE	829-421CFE	4x2-1/2	12-3/8	5-1/8	3-7/16	8-1/8	2.42	2.58
829-422FE	829-422CFE	4x3	8-3/4	5-1/8	4-1/8	4-1/4	1.70	2.04
829-528FE	829-528CFE	6x2	20-7/8	7-5/16	2-13/16	15-7/8	5.86	7.02
829-529FE	829-529CFE	6x2-1/2	20	7-5/16	3-7/16	14-3/4	5.77	7.48
829-530FE	829-530CFE	6x3	16-3/8	7-5/16	4-1/8	10-7/8	6.24	6.16
829-532FE	829-532CFE	6x4	11-1/8	7-5/16	5-3/16	5-5/8	3.39	4.43
829-533FE	829-533CFE	6x5	11-1/4	7-3/8	6-5/16	5	4.32	6.44
829-578FE	829-578CFE	8x2	30-5/8	9-1/2	2-13/16	24-5/8	11.96	17.32
829-580FE	829-580CFE	8x3	26-1/8	9-1/2	4-1/8	19-5/8	11.13	16.42
829-582FE	829-582CFE	8x4	20-7/8	9-1/2	5-3/16	14-3/8	11.54	13.59
829-583FE	829-583CFE	8x5	21	9-1/2	6-5/16	13-3/4	10.77	11.81
829-585FE	829-585CFE	8x6	15-1/4	9-1/2	7-1/2	7-3/4	8.41	9.78
829-624FE	829-624CFE	10x4	32	11-3/4	5-3/16	24-1/2	25.43	29.89
829-625FE	829-625CFE	10x5	32-1/8	11-3/4	6-5/16	23-7/8	22.82	27.68
829-626FE	829-626CFE	10x6	26-3/8	11-3/4	7-1/2	17-7/8	22.31	25.59
829-628FE	829-628CFE	10x8	18-1/16	11-3/4	9-5/8	8-9/16	14.78	17.28
829-664FE	829-664CFE	12x4	43-1/2	13-15/16	5-3/16	35	42.54	56.73

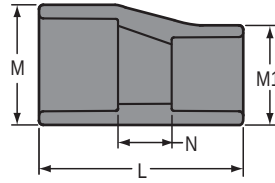


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

ECCENTRIC REDUCER COUPLING

(continued)

Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-665FE	829-665CFE	12x5	43-5/8	13-15/16	6-5/16	34-3/8	41.73	42.50
829-666FE	829-666CFE	12x6	37-7/8	13-15/16	7-1/2	28-3/8	35.33	52.43
829-668FE	829-668CFE	12x8	29-9/16	13-15/16	9-5/8	19-1/16	32.68	34.80
829-670FE	829-670CFE	12x10	20-5/8	13-15/16	11-15/16	9-1/8	24.89	26.06
829-696FE	829-696CFE	14x6	41-3/8	15-3/16	7-1/2	31-1/8	56.76	67.95
829-698FE	829-698CFE	14x8	33-1/16	15-3/16	9-5/8	21-13/16	53.73	39.32
829-700FE	829-700CFE	14x10	24-1/8	15-3/16	11-15/16	11-7/8	51.42	60.41
829-702FE	829-702CFE	14x12	20-1/8	15-3/8	14-1/8	6-7/8	30.11	41.52
829-756FE	829-756CFE	16x6	54-1/4	17-1/2	7-1/2	43	113.09	96.99
829-758FE	829-758CFE	16x8	45-15/16	17-1/2	9-5/8	33-11/16	69.73	91.61
829-760FE	829-760CFE	16x10	37	17-1/2	11-15/16	23-3/4	59.25	85.11
829-762FE	829-762CFE	16x12	33	17-1/2	14-1/8	18-3/4	63.26	71.78
829-764FE	829-764CFE	16x14	24-5/8	17-1/2	15-1/2	9-5/8	45.99	59.26
829-786FE	829-786CFE	18x6	69-1/4	19-11/16	7-1/2	57	145.31	164.92
829-788FE	829-788CFE	18x8	60-15/16	19-11/16	9-5/8	47-11/16	140.24	152.22
829-790FE	829-790CFE	18x10	52	19-11/16	11-15/16	37-3/4	109.43	148.37
829-792FE	829-792CFE	18x12	48	19-11/16	14-1/8	32-3/4	118.07	132.56
829-794FE	829-794CFE	18x14	39-5/8	19-11/16	15-1/2	23-5/8	97.05	111.06
829-796FE	829-796CFE	18x16	28-5/8	19-11/16	17-11/16	11-5/8	66.94	85.64

FABRICATED REPAIR COUPLING

Gasket x Gasket



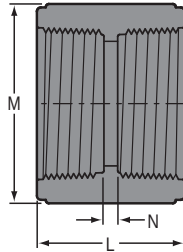
Part Number		Size	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
828-020F	828-020CF	2	9-1/8	6	2-13/16	3-3/16	.79	.97
828-030F	828-030CF	3	15-1/2	11	4-1/8	4-5/8	3.26	3.39
828-040F	828-040CF	4	19-1/2	15-5/8	5-3/16	5-13/16	5.82	6.54
828-060F	828-060CF	6	23	16	7-1/2	8-1/8	12.61	13.41
828-080F	828-080CF	8	26-5/8	19-11/16	9-5/8	10-3/8	21.39	21.45
828-100F	828-100CF	10	29	21	10-3/4	12-1/4	32.98	---
828-120F	828-120CF	12	30	22-1/2	14-1/8	16-1/8	46.66	---
828-140F	828-140CF	14	19	11-1/2	15-1/2	16-3/8	39.40	45.50
828-160F	828-160CF	16	21-5/8	12-3/8	17-11/16	18-3/4	57.20	60.00

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



COUPLING

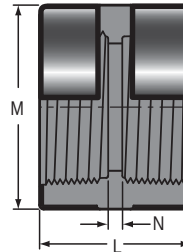
Fipt x Fipt



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
830-002	830-002C	1/4	1-11/32	13/16	5/32	.03	.02
830-003	830-003C	3/8	1-15/32	1	9/32	.04	.04
830-005	830-005C	1/2	1-5/8	1-9/32	1/4	.07	.07
830-007	830-007C	3/4	1-11/16	1-5/8	3/32	.09	.09
830-010	830-010C	1	2-3/32	1-15/16	1/8	.15	.15
830-012	830-012C	1-1/4	2-3/16	2-9/32	5/32	.21	.22
830-015	830-015C	1-1/2	2-1/4	2-17/32	5/16	.29	.30
830-020	830-020C	2	2-7/32	3	7/32	.33	.35
830-025	830-025C	2-1/2	3-5/16	3-9/16	1/8	.68	.71
830-030	830-030C	3	3-1/2	4-3/8	11/16	1.12	1.12
830-040	830-040C	4	3-21/32	5-13/32	7/32	1.49	1.61
830-060F	830-060CF	6	3-3/4	7-3/16	3/4	1.65	1.76
830-080F	830-080CF	8	4-1/2	9-3/8	1-1/16	2.84	3.33

SPECIAL REINFORCED COUPLING

SR Fipt x SR Fipt



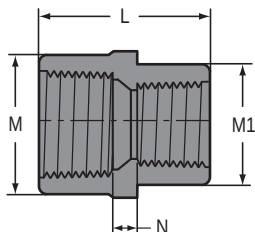
Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
830-005SR	830-005CSR	1/2	1-19/32	1-7/32	9/32	.06	.06
830-007SR	830-007CSR	3/4	1-5/8	1-3/8	1/8	.07	.07
830-010SR	830-010CSR	1	1-15/16	1-23/32	1/16	.13	.13
830-012SR	830-012CSR	1-1/4	2-1/16	2-1/16	5/16	.17	.17
830-015SR	830-015CSR	1-1/2	2-5/32	2-7/16	11/32	.27	.25
830-020SR	830-020CSR	2	2-1/4	3-1/32	1/4	.37	.39



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCER COUPLING

Fipt x Fipt

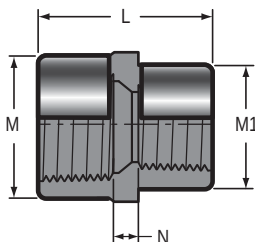


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
830-072 ¹	830-072C ¹	1/2x1/4	1-31/32	1-5/16	1-5/32	5/8	.07	.08
830-073 ¹	830-073C ¹	1/2x3/8	1-29/32	1-7/32	1-7/32	19/32	.06	.08
830-101	830-101C	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.07	.08
830-211 ¹	---	1-1/2x1	2-7/8	2-11/32	2-11/32	1-1/32	.27	---

¹ Outlet sized with bushing

SPECIAL REINFORCED REDUCER COUPLING

SR Fipt x SR Fipt



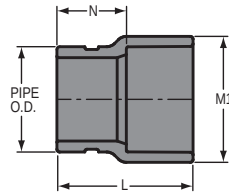
Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
830-101SR	830-101CSR	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.08	.09
830-130SR	830-130CSR	1x1/2	2-1/4	1-23/32	1-7/32	21/32	.16	.17
830-131SR	830-131CSR	1x3/4	2-13/32	1-23/32	1-3/8	23/32	.14	.17
830-210SR	830-210CSR	1-1/2x3/4	2-7/8	2-7/16	1-3/8	1-7/32	.28	.29
830-211SR	830-211CSR	1-1/2x1	2-15/16	2-7/16	1-11/16	7/16	.35	.36
830-212SR	830-212CSR	1-1/2x1-1/4	2-7/8	2-1/2	2-3/32	15/16	.33	.34
830-249SR	830-249CSR	2x1	3-3/16	3	1-23/32	1-17/32	.46	.48
830-251SR	830-251CSR	2x1-1/2	3-1/4	3	2-7/16	1-7/16	.43	.52

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



GROOVED COUPLING ADAPTER

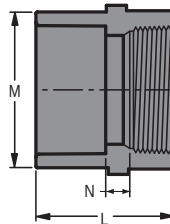
Groove x Socket



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
833-012	833-012C	1-1/4	2-13/16	2-1/16	1-9/16	.18	.17
833-015	833-015C	1-1/2	2-29/32	2-11/32	1-1/2	.19	.20
833-020	833-020C	2	3-1/16	2-7/8	1-9/16	.29	.30
833-025	833-025C	2-1/2	3-3/8	3-1/2	1-5/8	.49	.52
833-030	833-030C	3	3-9/16	4-3/16	1-11/16	.68	.72
833-040	833-040C	4	4-17/32	5-1/4	2-9/32	1.28	1.38
833-050F	833-050CF	5	7	6-5/16	4	2.14	2.35
833-060	833-060C	6	5-5/16	7-9/16	2-5/16	2.78	3.00
833-080F	833-080CF	8	8-3/16	9-5/8	3-15/16	6.19	7.16
833-100F	833-100CF	10	9-7/8	11-15/16	4-5/8	10.62	10.72
833-120F	833-120CF	12	10-7/8	14-1/8	4-5/8	21.92	24.11

FEMALE ADAPTER

Socket x Fipt



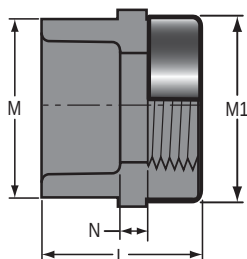
Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
835-002	835-002C	1/4	1-11/32	27/32	3/32	.02	.02
835-003	835-003C	3/8	1-15/32	1	3/32	.04	.04
835-005	835-005C	1/2	1-23/32	1-5/32	3/32	.05	.06
835-007	835-007C	3/4	1-27/32	1-13/32	3/32	.07	.08
835-010	835-010C	1	2-1/8	1-23/32	3/32	.11	.14
835-012	835-012C	1-1/4	2-5/16	2-3/32	3/32	.16	.22
835-015	835-015C	1-1/2	2-1/2	2-11/32	3/32	.20	.21
835-020	835-020C	2	3	3-1/32	1/4	.41	.42
835-025	835-025C	2-1/2	3-1/4	3-9/16	7/32	.63	.67
835-030	835-030C	3	3-15/32	4-1/4	3/16	.74	.76
835-040	835-040C	4	3-31/32	5-7/32	1/4	1.19	1.71
835-060	835-060C	6	4-31/32	7-21/32	5/16	3.12	3.22
835-080	835-080C	8	6-5/32	9-23/32	1/4	5.19	5.39
835-080F	835-080CF	8	8-9/16	9-5/8	2-9/16	6.19	6.56
835-100F	835-100CF	10	10-1/4	11-15/16	3	10.88	11.59
835-120F	835-120CF	12	11-1/8	14-1/8	2-5/8	16.56	20.00



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

SPECIAL REINFORCED FEMALE ADAPTER

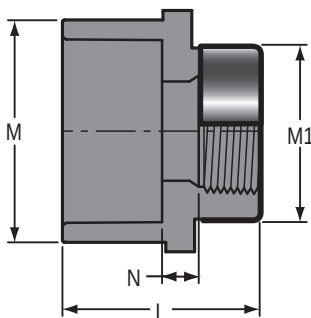
Socket x SR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-002SR	835-002CSR	1/4	1-13/32	27/32	27/32	3/32	.03	.03
835-003SR	835-003CSR	3/8	1-15/32	15/16	31/32	3/32	.04	.04
835-005SR	835-005CSR	1/2	1-3/4	1-5/32	1-3/16	3/16	.06	.07
835-007SR	835-007CSR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08	.09
835-010SR	835-010CSR	1	2-1/8	1-11/16	1-23/32	3/32	.13	.14
835-012SR	835-012CSR	1-1/4	2-5/16	2-3/32	2-1/16	3/32	.18	.20
835-015SR	835-015CSR	1-1/2	2-7/16	2-13/32	2-7/16	7/32	.26	.28
835-020SR	835-020CSR	2	2-23/32	3	3-1/32	1/4	.44	.45
835-025SR	835-025CSR	2-1/2	3-1/4	3-9/16	3-9/16	11/32	.68	.70
835-030SR	835-030CSR	3	3-1/2	4-1/4	4-9/32	7/32	.96	1.01
835-040SR	835-040CSR	4	3-31/32	5-7/32	5-1/4	7/32	1.29	1.35
835-060SR	835-060CSR	6	4-31/32	7-5/8	7-21/32	1/4	3.17	3.25

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

Socket x SR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-074SR	835-074CSR	1/2x3/4	1-3/4	1-3/16	1-3/8	7/32	.07	.08
835-101SR	835-101CSR	3/4x1/2	1-7/8	1-3/8	1-3/16	3/16	.07	.08
835-102SR	835-102CSR	3/4x1	2-1/16	1-7/16	1-11/16	7/32	.12	.13
835-130SR	835-130CSR	1x1/2	2	1-11/16	1-3/16	7/32	.10	.11
835-131SR	835-131CSR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.12	.13

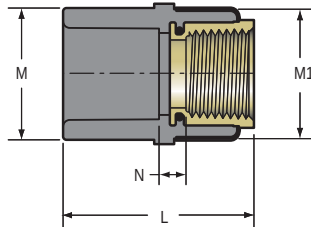
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



TRANSITION FEMALE ADAPTER

Socket x Brass Fipt

Dimensions Also Applicable to 835-XXXSS

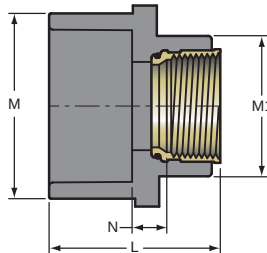


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-005BR	835-005CBR	1/2	1-25/32	1-5/32	1-7/32	5/8	.11	.12
835-007BR	835-007CBR	3/4	2	1-13/32	1-3/8	3/8	.23	.24
835-010BR	835-010CBR	1	2-7/32	1-3/4	1-11/16	13/32	.25	.31
835-012BR	835-012CBR	1-1/4	2-3/8	2-3/32	2-1/16	3/8	.35	.36
835-015BR	835-015CBR	1-1/2	2-17/32	2-13/32	2-7/16	13/32	.46	.48
835-020BR	835-020CBR	2	2-25/32	2-7/8	3-3/16	7/16	1.03	1.05

Not intended to convey or dispense water for human consumption through drinking or cooking

TRANSITION REDUCING FEMALE ADAPTER

Socket x Brass Fipt

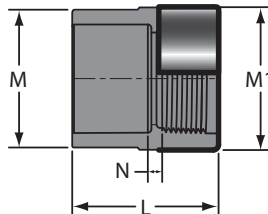


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-101BR	835-101CBR	3/4x1/2	2-1/32	1-7/16	1-3/16	15/32	.17	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

ENCAPSULATED SPECIAL REINFORCED FEMALE ADAPTER

Socket x ESR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-002ESR	835-002CESR	1/4	1-1/2	27/32	29/32	3/32	.04	.05
835-003ESR	835-003CESR	3/8	1-17/32	15/16	1-1/32	3/16	.04	.04
835-005ESR	835-005CESR	1/2	1-7/8	1-3/16	1-9/32	9/32	.08	.07
835-007ESR	835-007CESR	3/4	2	1-13/32	1-15/32	1/8	.10	.11

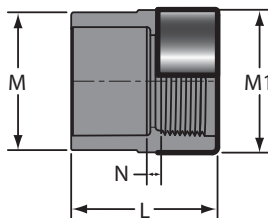
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

ENCAPSULATED SPECIAL REINFORCED FEMALE ADAPTER (continued)

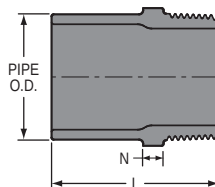
Socket x ESR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-010ESR	835-010CESR	1	2-1/4	1-3/4	1-13/16	1/8	.13	.15
835-012ESR	835-012CESR	1-1/4	2-7/16	2-1/8	2-5/32	3/16	.21	.22
835-015ESR	835-015CESR	1-1/2	2-9/16	2-13/32	2-1/2	1/4	.29	.31
835-020ESR	835-020CESR	2	2-27/32	3	3-3/32	13/32	.46	.49

MALE ADAPTER

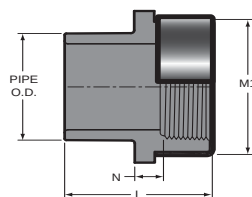
Spigot x Mipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
861-005	861-005C	1/2	1-13/16	5/16	.03	.03
861-007	861-007C	3/4	1-31/32	5/16	.05	.05
861-010	861-010C	1	2-3/32	1/4	.07	.08
861-131	861-131C	1x3/4	2	1/4	.07	.07
861-012	861-012C	1-1/4	2-9/32	9/32	.11	.13
861-015	861-015C	1-1/2	2-5/8	11/32	.15	.15
861-020	861-020C	2	2-13/16	13/32	.23	.24

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

Spigot x SR Fipt



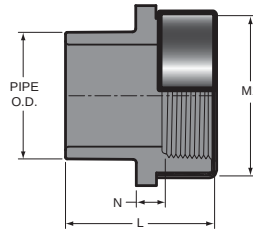
Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-005SR	878-005CSR	1/2	1-3/4	1-3/16	5/32	.05	.06
878-007SR	878-007CSR	3/4	1-15/16	1-3/8	3/16	.07	.08
878-010SR	878-010CSR	1	2-1/4	1-11/16	7/32	.13	.13
878-012SR	878-012CSR	1-1/4	2-15/32	2-1/16	1/4	.18	.19
878-015SR	878-015CSR	1-1/2	2-21/32	2-7/16	13/32	.25	.26

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



SPECIAL REINFORCED SPIGOT FEMALE ADAPTER (continued)

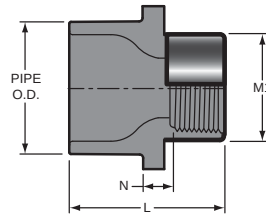
Spigot x SR Fipt



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-020SR	878-020CSR	2	2-13/16	3	3/8	.39	.40
878-030SR	878-030CSR	3	3-27/32	4-9/32	17/32	.91	.97
878-040SR	878-040CSR	4	4-3/8	5-1/4	5/8	1.36	1.42

SPECIAL REINFORCED REDUCING SPIGOT FEMALE ADAPTER

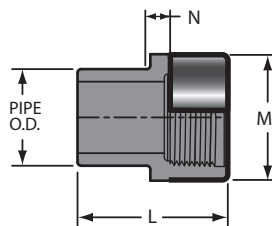
Spigot x SR Fipt



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-072SR	878-072CSR	1/2x1/4	1-13/32	27/32	3/16	.03	.03
878-098SR	878-098CSR	3/4x1/4	1-27/32	27/32	7/32	.05	.06
878-128SR	878-128CSR	1x1/4	2-3/8	27/32	21/32	.08	.09

ENCAPSULATED SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

Spigot x ESR Fipt



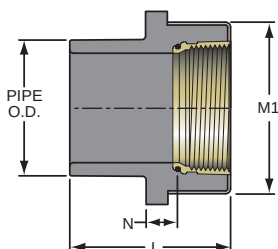
Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-005ESR	878-005CESR	1/2	1-7/8	1-9/32	3/16	.06	.07
878-007ESR	878-007CESR	3/4	2-1/16	1-15/32	3/8	.09	.09
878-010ESR	878-010CESR	1	2-3/8	1-25/32	11/32	.14	.15
878-012ESR	878-012CESR	1-1/4	2-19/32	2-5/32	5/16	.20	.20
878-015ESR	878-015CESR	1-1/2	2-3/4	2-1/2	13/32	.27	.29
878-020ESR	878-020CESR	2	2-15/16	3-3/32	5/16	.41	.44



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

TRANSITION FEMALE ADAPTER

Spigot x Brass Fipt

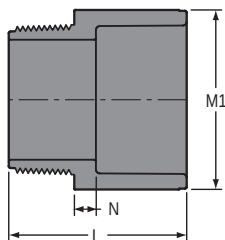


Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-005BR	---	1/2	1-15/16	1-3/16	17/32	.11	---
878-010BR	878-010CBR	1	2-9/32	1-23/32	13/32	.22	.23

Not intended to convey or dispense water for human consumption through drinking or cooking

MALE ADAPTER

Mipt x Socket



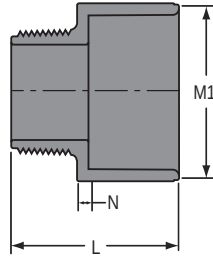
Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-005	836-005C	1/2	1-23/32	1-5/16	3/16	.04	.05
836-007	836-007C	3/4	1-27/32	1-7/16	7/32	.06	.06
836-010	836-010C	1	2-5/32	1-23/32	7/32	.10	.10
836-012	836-012C	1-1/4	2-1/4	2-1/8	1/32	.15	.16
836-015	836-015C	1-1/2	2-11/16	2-3/8	9/32	.19	.20
836-020	836-020C	2	2-7/8	2-7/8	5/16	.28	.31
836-025	836-025C	2-1/2	3-21/32	3-17/32	11/32	.52	.54
836-030	836-030C	3	3-7/8	4-1/4	3/8	.74	.78
836-040	836-040C	4	4-13/32	5-5/16	13/32	1.15	1.18
836-050F	836-050CF	5	6	6-5/16	1-5/8	2.07	2.22
836-060	836-060C	6	5-7/16	7-1/2	13/16	2.79	3.07
836-080F	836-080CF	8	8-3/16	9-5/8	2-3/16	6.00	5.95
836-100F	836-100CF	10	10-3/8	11-15/16	3-3/16	10.95	10.95
836-120F	836-120CF	12	11-1/8	14-1/8	2-3/4	16.44	19.99

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCING MALE ADAPTER

Mipt x Socket

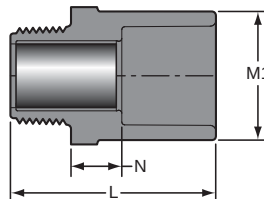


Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-053	---	3/8x1/2	1-11/16	1-3/16	1/4	.04	---
836-102	836-102C	3/4x1	2-9/32	1-3/4	17/32	.10	.10
836-131	836-131C	1x3/4	2-1/16	1-13/32	1/4	.07	.07
836-251 ¹	---	2x1-1/2	3-3/32	2-29/32	19/32	.43	---

¹Outlet sized with bushing

REINFORCED MALE ADAPTER

Rmpt x Socket



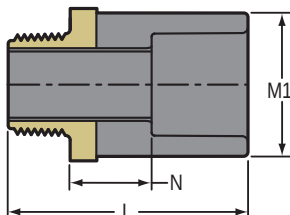
Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-005R	836-005CR	1/2	2-3/32	1-5/32	9/16	.05	.06
836-007R	836-007CR	3/4	2-1/4	1-3/8	9/16	.08	.09
836-010R	836-010CR	1	2-21/32	1-23/32	11/16	.15	.15



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

TRANSITION MALE ADAPTER

Brass Mipt x Socket

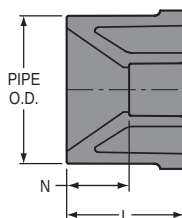


Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-005BR	836-005CBR	1/2	2-13/32	1-9/32	27/32	.19	.20
836-007BR	836-007CBR	3/4	2-17/32	1-13/32	13/16	.26	.26
836-010BR	836-010CBR	1	2-15/16	1-23/32	29/32	.43	.43
836-012BR	836-012CBR	1-1/4	3-1/8	2-3/32	31/32	.66	.66
836-015BR	836-015CBR	1-1/2	3-9/32	2-11/32	1	.79	.80
836-020BR	836-020CBR	2	3-7/16	2-27/32	31/32	.99	1.01

REDUCER BUSHING

Flush Style

Spigot x Socket



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-052	837-052C	3/8x1/4	31/32	5/16	.01	.01
837-072	837-072C	1/2x1/4	1-3/32	13/32	.02	.02
837-073	837-073C	1/2x3/8	1-1/8	11/32	.01	.02
837-101	837-101C	3/4x1/2	1-1/16	3/16	.02	.03
837-129 ¹	837-129C ¹	1x3/8	1-5/8	27/32	.09	.10
837-130	837-130C	1x1/2	1-11/32	11/32	.06	.07
837-131	837-131C	1x3/4	1-11/32	5/16	.04	.04
837-166	837-166C	1-1/4x1/2	1-1/2	5/8	.12	.12
837-167	837-167C	1-1/4x3/4	1-1/2	1/2	.10	.10
837-168	837-168C	1-1/4x1	1-19/32	15/32	.06	.09
837-209	837-209C	1-1/2x1/2	1-23/32	13/16	.15	.15
837-210	837-210C	1-1/2x3/4	1-5/8	5/8	.16	.16
837-211	837-211C	1-1/2x1	1-5/8	1/2	.13	.15
837-212	837-212C	1-1/2x1-1/4	1-9/16	9/32	.07	.07
837-247	---	2x1/2	1-25/32	7/8	.24	---
---	837-247C	2x1/2	1-29/32	1	---	.30
837-248	837-248C	2x3/4	1-29/32	29/32	.26	.28
837-249	837-249C	2x1	1-25/32	5/8	.24	.25

¹ Outlet sized with bushing

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

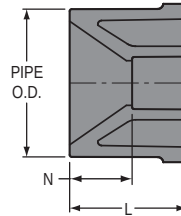


REDUCER BUSHING

Flush Style

Spigot x Socket

(continued)



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-250	837-250C	2x1-1/4	1-11/16	7/16	.20	.23
837-251	837-251C	2x1-1/2	1-3/4	11/32	.15	.16
837-287 ¹	---	2-1/2x1/2	2-1/2	1-1/2	.54	---
837-288 ¹	---	2-1/2x3/4	2-17/32	1-15/32	.55	---
837-289	837-289C	2-1/2x1	2-1/32	29/32	.37	.39
837-290	837-290C	2-1/2x1-1/4	2-5/32	13/32	.43	.41
837-291	837-291C	2-1/2x1-1/2	2-5/32	3/4	.37	.40
837-292	837-292C	2-1/2x2	2-1/16	17/32	.23	.30
837-334 ¹	837-334C ¹	3x3/4	2-9/16	1-17/32	.69	.74
837-335	837-335C	3x1	2-9/32	1-1/8	.69	.70
837-336	837-336C	3x1-1/4	2-1/4	1	.63	.70
837-337	837-337C	3x1-1/2	2-9/32	7/8	.59	.67
837-338	837-338C	3x2	2-7/32	23/32	.47	.64
837-339	837-339C	3x2-1/2	2-5/16	1/4	.37	.43
837-415 ¹	---	4x1/2	3-1/16	2-5/32	1.31	---
837-416 ¹	837-416C ¹	4x3/4	2-27/32	1-27/32	1.25	1.37
837-417 ¹	---	4x1	3-1/16	1-1/8	1.31	---
837-418 ¹	837-418C ¹	4x1-1/4	3-9/16	1-11/16	1.33	1.38
837-419 ¹	---	4x1-1/2	4-7/8	3-7/16	1.23	---
837-420	837-420C	4x2	2-21/32	1-1/8	1.01	1.13
837-421	---	4x2-1/2	2-17/32	25/32	1.00	---
837-422	837-422C	4x3	2-9/16	11/16	.84	.86
837-490	837-490C	5x4	2-31/32	23/32	1.29	---
837-490F	837-490CF	5x4	3	3/4	1.41	1.50
837-524 ¹	---	6x3/4	4-1/2	3-1/2	3.45	---
837-525 ¹	837-525C ¹	6x1	3-31/32	2-13/16	3.13	3.28
837-526 ¹	---	6x1-1/4	4-7/16	2-3/4	3.22	---
837-528	837-528C	6x2	3-17/32	2-1/32	2.83	3.00
837-529 ¹	837-529C ¹	6x2-1/2	3-29/32	2-5/32	3.29	3.45
837-530	837-530C	6x3	3-17/32	2-1/8	2.84	3.05
837-532	837-532C	6x4	3-9/16	1-1/4	2.71	2.95
837-533F	837-533CF	6x5	3	3/8	1.76	1.94
837-534	---	6x5	3-1/2	7/8	1.93	---
837-578 ¹	837-578C ¹	8x2	4-15/16	3-3/8	8.64	8.99
837-580 ¹	837-580C ¹	8x3	5-1/8	3-1/4	8.68	8.81

¹ Outlet sized with bushing

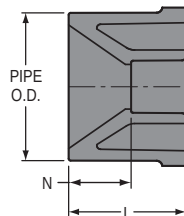


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCER BUSHING (continued)

Flush Style

Spigot x Socket



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-582	837-582C	8x4	4-1/2	2-1/4	5.53	9.01
837-585	837-585C	8x6	4-3/8	1-3/8	5.05	5.15
837-624 ¹	837-624C ¹	10x4	6	3-3/4	10.56	11.36
837-626	837-626C	10x6	5-13/32	1-11/32	5.79	8.41
837-628	837-628C	10x8	5-13/32	1-11/32	5.79	9.69
837-666	---	12x6	7	4	15.51	---
837-666F	837-666CF	12x6	6-7/16	3-3/8	15.31	19.45
837-668	837-668C	12x8	6-7/8	2-7/16	10.13	10.82
837-670	---	12x10	6-7/16	1-13/32	12.49	---
837-670F	837-670CF	12x10	6	1	11.04	11.78
837-696F	837-696CF	14x6	7-3/4	4-3/4	27.16	37.74
837-698F	837-698CF	14x8	7-1/2	3-7/16	32.31	32.02
837-700F	---	14x10	7-7/16	2-7/16	22.30	---
---	837-700CF	14x10	7	2	---	22.64
837-702F	837-702CF	14x12	7	1	9.36	9.40
837-756F	837-756CF	16x6	8-3/4	5-3/4	44.23	67.03
837-758F	837-758CF	16x8	8-1/2	4-7/16	46.90	61.33
837-760F	---	16x10	8-7/16	3-7/16	39.12	---
---	837-760CF	16x10	8	3	---	44.88
837-762F	837-762CF	16x12	8	2	28.08	27.95
837-764F	837-764CF	16x14	8	1	18.37	20.00
837-788F	837-788CF	18x8	9-1/2	5-7/16	70.33	---
837-790F	837-790CF	18x10	9	4	65.60	97.24
837-792F	837-792CF	18x12	9	3	51.82	84.92
837-794F	837-794CF	18x14	9	2	40.70	56.27
837-796F	837-796CF	18x16	9	1	32.00	34.00
837-818F	---	20x8	10-1/2	6-7/16	125.96	---
837-820F	---	20x10	10-7/16	5-7/16	94.18	---
837-822F	---	20x12	10	4	83.14	---
837-824F	---	20x14	10	3	73.74	---
837-826F	---	20x16	10	2	55.07	---
837-828F	---	20x18	10	1	30.35	---
837-910F	---	24x10	12-7/16	7-7/16	173.68	---
837-912F	---	24x12	12	6	159.41	---
837-914F	---	24x14	12	5	80.35	---

¹ Outlet sized with bushing

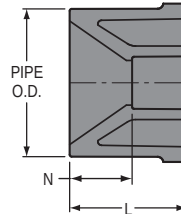
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCER BUSHING (continued)

Flush Style

Spigot x Socket

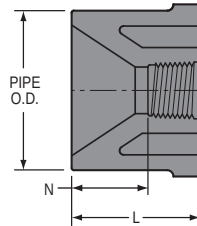


Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-916F	---	24x16	12	4	134.57	---
837-918F	---	24x18	12	3	112.54	---
837-920F	---	24x20	12	2	79.50	---

REDUCER BUSHING

Flush Style

Spigot x Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
838-052	838-052C	3/8x1/4	31/32	3/8	.01	.01
838-071	838-071C	1/2x1/8	1	9/16	.02	.02
838-072	838-072C	1/2x1/4	1	7/8	.02	.02
838-073	838-073C	1/2x3/8	1-3/32	17/32	.02	.02
838-098	838-098C	3/4x1/4	1-7/32	5/8	.04	.04
838-099	838-099C	3/4x3/8	1-1/4	21/32	.04	.04
838-101	838-101C	3/4x1/2	1-1/4	7/16	.03	.03
838-127	---	1x1/8	1-13/32	29/32	.07	---
838-128	---	1x1/4	1-13/32	25/32	.07	---
838-129	838-129C	1x3/8	1-13/32	19/32	.07	.07
838-130	838-130C	1x1/2	1-5/32	21/32	.06	.06
838-131	838-131C	1x3/4	1-3/8	21/32	.05	.06
838-166	838-166C	1-1/4x1/2	1-15/32	23/32	.10	.12
838-167	838-167C	1-1/4x3/4	1-7/16	23/32	.09	.10
838-168	838-168C	1-1/4x1	1-17/32	5/8	.07	.09
838-206	---	1-1/2x1/8	1-11/16	1-1/4	.15	---

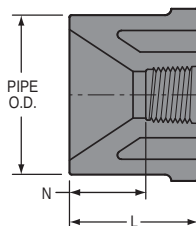


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCER BUSHING (continued)

Flush Style

Spigot x Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
838-207	838-207C	1-1/2x1/4	1-9/16	1-3/16	.13	.14
838-209	838-209C	1-1/2x1/2	1-11/16	31/32	.17	.17
838-210	838-210C	1-1/2x3/4	1-9/16	27/32	.13	.18
838-211	838-211C	1-1/2x1	1-23/32	13/16	.14	.16
838-212	838-212C	1-1/2x1-1/4	1-1/2	9/16	.07	.10
838-247	838-247C	2x1/2	1-29/32	1-5/32	.25	.27
838-248	838-248C	2x3/4	1-7/8	1-5/32	.26	.27
838-249	838-249C	2x1	1-29/32	1	.25	.27
838-250	838-250C	2x1-1/4	1-19/32	21/32	.18	.25
838-251	838-251C	2x1-1/2	1-9/16	5/8	.14	.20
838-287	838-287C	2-1/2x1/2	2-3/8	1-21/32	.41	.46
838-288	838-288C	2-1/2x3/4	2-7/16	1-5/8	.45	.48
838-289	838-289C	2-1/2x1	2-13/32	1-13/32	.45	.48
838-290	838-290C	2-1/2x1-1/4	2-13/32	1-3/8	.42	.45
838-291	838-291C	2-1/2x1-1/2	2-3/8	1-13/32	.47	.50
838-292	838-292C	2-1/2x2	2-1/16	1-1/16	.25	.33
838-334	838-334C	3x3/4	2-9/32	1-1/2	.57	.63
838-335	838-335C	3x1	2-9/32	1-11/32	.58	.63
838-336	838-336C	3x1-1/4	2-1/4	1-3/8	.57	.61
838-337	838-337C	3x1-1/2	2-1/4	1-5/8	.59	.62
838-338	838-338C	3x2	2-3/16	1-7/32	.63	.58
838-339	838-339C	3x2-1/2	2-3/8	3/4	.46	.50
838-419	---	4x1-1/2	3-3/16	2-5/16	1.44	---
838-420	838-420C	4x2	2-11/16	1-21/32	1.10	1.20
838-421	838-421C	4x2-1/2	2-21/32	1-1/16	1.08	1.15
838-422	838-422C	4x3	2-5/8	1	.86	.85
838-528	838-528C	6x2	3-17/32	2-1/2	2.92	3.04
838-530	838-530C	6x3	3-17/32	2-1/8	2.98	3.14
838-532	838-532C	6x4	3-17/32	2-1/32	2.54	2.68

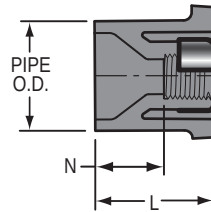
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



SPECIAL REINFORCED REDUCER BUSHING

Flush Style

Spigot x SR Fipt

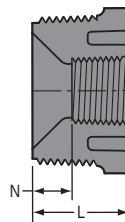


Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
838-128SR	838-128CSR	1x1/4	1-13/32	25/32	.08	.08
838-166SR	---	1-1/4x1/2	1-7/16	3/4	.11	---
838-207SR	838-207CSR	1-1/2x1/4	1-9/16	1	.13	.14
838-209SR	838-209CSR	1-1/2x1/2	1-23/32	31/32	.16	.18
838-210SR	838-210CSR	1-1/2x3/4	1-9/16	13/16	.14	.15
838-247SR	838-247CSR	2x1/2	1-29/32	1-5/32	.25	.25
838-248SR	838-248CSR	2x3/4	1-29/32	1-5/32	.26	.28
838-249SR	838-249CSR	2x1	1-7/8	31/32	.26	.27
838-334SR	838-334CSR	3x3/4	2-9/32	1-17/32	.58	.63
838-335SR	838-335CSR	3x1	2-9/32	1-11/32	.59	.63
838-336SR	838-336CSR	3x1-1/4	2-1/4	1-5/16	.57	.63
838-337SR	838-337CSR	3x1-1/2	2-1/4	1-3/8	.58	.64
838-528SR	838-528CSR	6x2	3-1/2	2-9/16	2.81	2.96
838-530SR	838-530CSR	6x3	3-17/32	2-1/8	2.94	3.07
838-532SR	838-532CSR	6x4	3-1/2	1-15/16	2.59	2.62

REDUCER T.T. BUSHING

Flush Style

Mipt x Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
839-041	839-041C	1/4x1/8	23/32	11/32	.01	.01
839-052	839-052C	3/8x1/4	13/16	1/8	.01	.01

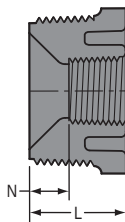


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCER T.T. BUSHING (continued)

Flush Style

Mipt x Fipt



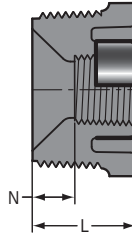
Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
839-072	839-072C	1/2x1/4	29/32	9/32	.02	.02
839-073	839-073C	1/2x3/8	15/16	11/32	.01	.01
839-098	839-098C	3/4x1/4	1-1/32	7/16	.03	.04
839-099	839-099C	3/4x3/8	1-1/32	7/16	.03	.03
839-101	839-101C	3/4x1/2	15/16	3/16	.02	.02
839-128	839-128C	1x1/4	1-1/8	17/32	.05	.06
839-129	839-129C	1x3/8	1-7/32	5/8	.05	.06
839-130	839-130C	1x1/2	1-7/32	1/2	.06	.06
839-131	839-131C	1x3/4	1-1/8	13/32	.03	.04
839-166	839-166C	1-1/4x1/2	1-5/16	9/16	.10	.11
839-167	839-167C	1-1/4x3/4	1-9/32	9/16	.08	.09
839-168	---	1-1/4x1	1-3/16	9/32	.06	---
---	839-168C	1-1/4x1	1-9/32	1-1/32	---	.06
839-209	839-209C	1-1/2x1/2	1-11/32	19/32	.12	.13
839-210	839-210C	1-1/2x3/4	1-11/32	19/32	.12	.13
839-211	839-211C	1-1/2x1	1-11/32	13/32	.10	.11
839-212	839-212C	1-1/2x1-1/4	1-11/32	13/32	.06	.07
839-247	839-247C	2x1/2	1-3/8	21/32	.17	.18
839-248	839-248C	2x3/4	1-3/8	5/8	.17	.18
839-249	839-249C	2x1	1-3/8	15/32	.18	.19
839-250	839-250C	2x1-1/4	1-3/8	7/16	.16	.17
839-251	839-251C	2x1-1/2	1-3/8	13/32	.12	.13
839-292	839-292C	2-1/2x2	1-29/32	7/8	.22	.23
839-337	839-337C	3x1-1/2	1-15/16	29/32	.49	.52
839-338	839-338C	3x2	1-15/16	15/16	.45	.47
839-339	839-339C	3x2-1/2	1-15/16	5/8	.37	.39
839-420	839-420C	4x2	2-1/8	1-1/8	.83	.87
839-422	839-422C	4x3	2-1/8	1/2	.71	.74
839-532	839-532C	6x4	2-7/8	1-5/32	2.26	2.40

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



SPECIAL REINFORCED REDUCER T.T. BUSHING

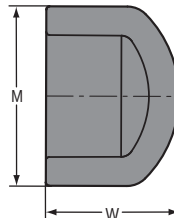
Mipt x SR Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
839-128SR	----	1x1/4	1-1/8	17/32	.05	---
839-209SR	839-209CSR	1-1/2x1/2	1-11/32	19/32	.13	.13
839-210SR	839-210CSR	1-1/2x3/4	1-11/32	19/32	.12	.13
839-247SR	839-247CSR	2x1/2	1-3/8	21/32	.18	.19
839-248SR	839-248CSR	2x3/4	1-3/8	5/8	.18	.19
839-249SR	839-249CSR	2x1	1-3/8	15/32	.19	.20
839-420SR	839-420CSR	4x2	2-1/8	1-1/8	.88	.91

CAP

Socket



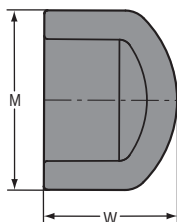
Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
847-002	847-002C	1/4	13/16	15/16	.01	.01
847-003	847-003C	3/8	31/32	1-1/8	.02	.02
847-005	847-005C	1/2	1-3/16	1-7/32	.03	.03
847-007	847-007C	3/4	1-3/8	1-13/32	.05	.05
847-010	847-010C	1	1-23/32	1-5/8	.08	.08
847-012	847-012C	1-1/4	2-3/32	1-27/32	.16	.13
847-015	847-015C	1-1/2	2-11/32	2	.16	.17
847-020	847-020C	2	2-27/32	2-9/32	.26	.37
847-025	847-025C	2-1/2	3-17/32	2-5/8	.48	.50
847-030	847-030C	3	4-5/32	3-1/32	.70	.93
847-040	847-040C	4	5-1/4	3-9/16	1.15	1.46
847-050F	847-050CF	5	6-1/2	4-7/16	1.83	5.28
847-060	847-060C	6	7-1/2	4-7/8	3.17	3.30



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

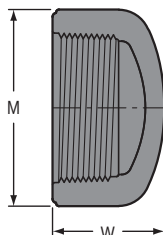
CAP
Socket

(continued)



Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
847-080	847-080C	8	9-23/32	6-3/8	6.10	6.36
847-100F	847-100CF	10	12-1/4	5-15/16	8.26	7.49
847-120F	847-120CF	12	14-1/4	7-1/8	11.30	11.72
847-140F	847-140CF	14	15-1/2	8	14.65	16.54
847-160F	847-160CF	16	17-7/8	9	23.44	24.52
847-180F	847-180CF	18	19-15/16	9-1/4	28.88	28.88
847-200F	847-200CF	20	22	12-3/4	49.05	52.00
847-240F	847-240CF	24	26-3/8	17-1/4	89.38	89.74

CAP
Fipt



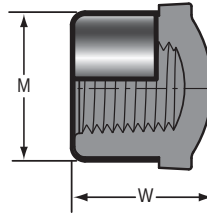
Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
848-002	848-002C	1/4	29/32	15/16	.02	.02
848-003	848-003C	3/8	31/32	29/32	.02	.02
848-005	848-005C	1/2	1-3/16	1-1/16	.04	.05
848-007	848-007C	3/4	1-3/32	1-7/32	.04	.05
848-010	848-010C	1	1-27/32	1-7/16	.10	.11
848-012	848-012C	1-1/4	2-7/32	1-17/32	.15	.15
848-015	848-015C	1-1/2	2-17/32	1-5/8	.19	.20
848-020	848-020C	2	3-5/32	1-25/32	.29	.30
848-025	848-025C	2-1/2	3-5/8	2-7/16	.54	.58
848-030	848-030C	3	4-3/8	2-7/16	.90	.78
848-040	848-040C	4	5-7/16	3-1/16	1.32	1.45
848-060F	848-060CF	6	7-3/16	4-3/8	2.07	6.18
848-080F	848-080CF	8	9-3/8	4-3/8	3.62	10.07
848-100F	---	10	11-7/8	5-3/4	7.44	---
848-120F	---	12	13-13/16	6-3/16	37.94	---

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



SPECIAL REINFORCED CAP

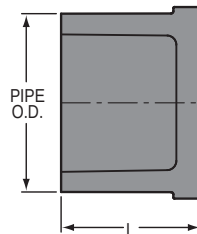
SR Fipt



Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
848-002SR	848-002CSR	1/4	27/32	27/32	.02	.02
848-003SR	848-003CSR	3/8	31/32	29/32	.03	.03
848-005SR	848-005CSR	1/2	1-3/16	1-1/8	.04	.05
848-007SR	848-007CSR	3/4	1-3/8	1-3/32	.05	.06
848-030SR	848-030CSR	3	4-9/32	2-7/16	.79	.84

PLUG

Spigot



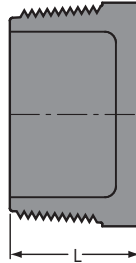
Part Number		Size	L	Approx. Wt. (Lbs.)	
PVC	CPVC			PVC	CPVC
849-005	---	1/2	1-5/32	.03	---
849-007	849-007C	3/4	1-1/4	.03	.04
849-010	849-010C	1	1-3/8	.06	.07
849-012	---	1-1/4	1-17/32	.10	---
849-015	---	1-1/2	1-11/16	.13	---
849-020	849-020C	2	1-7/8	.21	.22
849-025F	849-025CF	2-1/2	5-3/8	1.10	1.17
849-030F	849-030CF	3	5-5/8	1.63	1.42
849-040F	849-040CF	4	6-1/2	2.76	3.00
849-060F	849-060CF	6	9	6.71	8.59
849-080F	849-080CF	8	11-3/8	12.73	13.50
849-100F	849-100CF	10	11-15/16	17.99	19.14
849-120F	849-120CF	12	14-1/8	26.34	31.17



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

PLUG

Mipt



Part Number		Size	L	Approx. Wt. (Lbs.)	
PVC	CPVC			PVC	CPVC
850-002	850-002C	1/4	23/32	.01	.01
850-003	850-003C	3/8	13/16	.01	.01
850-005	850-005C	1/2	13/16	.02	.02
850-007	850-007C	3/4	7/8	.02	.03
850-010	850-010C	1	1-1/4	.06	.06
850-012	850-012C	1-1/4	1-9/32	.08	.08
850-015	850-015C	1-1/2	1-11/32	.10	.11
850-020	850-020C	2	1-3/8	.15	.20
850-025	850-025C	2-1/2	1-25/32	.30	.33
850-030	850-030C	3	1-7/8	.43	.45
850-040	850-040C	4	2-3/32	.77	.79
850-060	850-060C	6	2-3/32	1.73	1.80
850-080F	850-080CF	8	8-5/8	11.45	12.39
850-100F	850-100CF	10	8-7/16	12.91	13.76

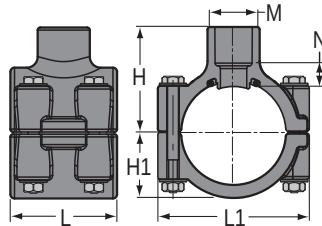
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



CLAMP ON SADDLE x SOCKET SINGLE OUTLET

Dimensions Also Applicable to
866S-XXX, 866V-XXX & 866SV-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
866-247	866-247C	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	.56	.59
866-248	866-248C	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/16	.57	.60
866-249	866-249C	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	5/16	.40	.62
866-250	866-250C	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	5/16	.68	.64
866-251	866-251C	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	5/16	.65	.70
866-291	866-291C	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	3/8	1.02	1.09
866-333 ¹	866-333C ¹	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	13/16	.88	.92
866-334	866-334C	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/32	.85	.89
866-335	866-335C	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	5/16	.91	.91
866-336 ¹	866-336C ¹	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-1/32	1.48	1.56
866-337 ¹	866-337C ¹	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	29/32	1.41	1.52
866-338	866-338C	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	3/8	1.24	1.31
866-415 ¹	866-415C ¹	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	31/32	1.31	1.38
866-416 ¹	866-416C ¹	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	27/32	1.29	1.35
866-417	866-417C	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	7/16	1.24	1.31
866-418 ¹	866-418C ¹	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	29/32	1.70	1.80
866-419	866-419C	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	1/2	1.63	1.72
866-420	866-420C	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	7/16	1.69	1.79
866-421 ¹	866-421C ¹	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	3/4	2.78	2.95
866-422	866-422C	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	1/2	2.39	2.57
866-523 ¹	866-523C ¹	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-7/32	2.35	2.50
866-524 ¹	866-524C ¹	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-1/8	2.33	2.47
866-525	866-525C	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	11/16	2.29	2.43
866-526 ¹	866-526C ¹	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/8	3.28	3.48
866-527 ¹	866-527C ¹	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-1/4	3.22	3.43
866-528	866-528C	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	11/16	3.04	3.23
866-529 ¹	866-529C ¹	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-1/8	4.73	5.02
866-530	866-530C	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	25/32	4.35	4.61
866-532	866-532C	6x4	6	3-29/32	6	7-15/16	5-3/16	5/8	5.09	5.49

¹ Outlet sized with bushing



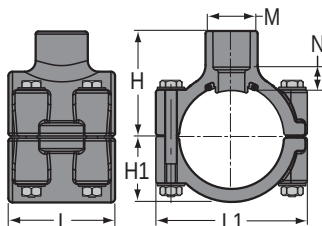
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

CLAMP ON SADDLE x SOCKET (continued)

SINGLE OUTLET

Dimensions Also Applicable to
866S-XXX, 866V-XXX & 866SV-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
866-573 ¹	866-573C ¹	8x1/2	7-3/4	4-7/8	9-1/2	8-1/2	5-5/16	1-1/2	9.70	10.09
866-574 ¹	866-574C ¹	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	9.65	10.07
866-575 ¹	866-575C ¹	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-5/8	9.67	10.07
866-576 ¹	866-576C ¹	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	9.79	10.23
866-577 ¹	866-577C ¹	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	10.23	10.44
866-578 ¹	866-578C ¹	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/8	10.28	10.50
866-579 ¹	866-579C ¹	8x2-1/2	8-5/32	4-7/8	8-15/32	10	5-7/32	2-1/2	9.43	10.02
866-580 ¹	866-580C ¹	8x3	7-1/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/16	10.21	10.61
866-582	866-582C	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	11/16	12.22	12.89
866-585	866-585C	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	11/16	9.80	9.30
866-621 ¹	866-621C ¹	10x2	8-7/8	6-1/32	8-1/2	12-5/16	5-1/4	1-15/16	13.02	13.56
866-624	866-624C	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	13/16	11.92	12.46
866-626	866-626C	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	13/16	12.92	13.50
866-664	866-664C	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	7/8	15.47	16.42
866-666	866-666C	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	7/8	16.33	17.20

¹ Outlet sized with bushing

- 1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 866-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.
- 2) Clamp On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g. Part Number 866S-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.
- 3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter "V" Before The Dash.
e.g. Part Number 866V-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter "SV" Before The Dash.
e.g. Part Number 866SV-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

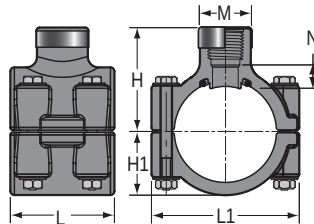
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



CLAMP ON SADDLE x SR FIPT SINGLE OUTLET

Dimensions Also Applicable to
867S-XXXSR, 867V-XXXSR & 867SV-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
867-247SR	867-247CSR	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	.56	.59
867-248SR	867-248CSR	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/8	.57	.60
867-249SR	867-249CSR	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	9/16	.40	.62
867-250SR	867-250CSR	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	11/16	.61	.64
867-251SR	867-251CSR	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/4	.65	.70
867-291SR	867-291CSR	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	13/16	1.02	1.09
867-333SR ¹	867-333CSR ¹	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	15/16	.89	.93
867-334SR	867-334CSR	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/16	.87	.91
867-335SR	867-335CSR	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	9/16	.89	.93
867-336SR ¹	867-336CSR ¹	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-5/16	1.51	1.61
867-337SR ¹	867-337CSR ¹	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	2-11/16	1.47	1.56
867-338SR	867-338CSR	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	7/8	1.36	1.40
867-415SR ¹	867-415CSR ¹	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1.32	1.39
867-416SR ¹	867-416CSR ¹	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1.31	1.38
867-417SR	867-417CSR	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	11/16	1.26	1.33
867-418SR ¹	867-418CSR ¹	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	1-7/32	1.75	1.85
867-419SR ¹	867-419CSR ¹	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	15/16	1.68	1.78
867-420SR	867-420CSR	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	15/16	1.78	1.87
867-421SR ¹	867-421CSR ¹	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	1-7/32	2.91	3.13
867-422SR	867-422CSR	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	31/32	2.53	2.69
867-523SR ¹	867-523CSR ¹	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-3/8	2.37	2.50
867-524SR ¹	867-524CSR ¹	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-3/8	2.35	2.50
867-525SR	867-525CSR	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	15/16	2.31	2.45
867-526SR ¹	867-526CSR ¹	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-11/16	3.31	3.52
867-527SR ¹	867-527CSR ¹	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/4	3.27	3.48
867-528SR	867-528CSR	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	1-7/32	3.13	3.32
867-529SR ¹	867-529CSR ¹	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-9/16	4.87	5.17
867-530SR	867-530CSR	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	1-1/4	4.46	4.78
867-532SR	867-532CSR	6x4	6	3-29/32	6	7-15/16	5-3/16	1-3/8	5.44	5.78

¹ Outlet sized with bushing



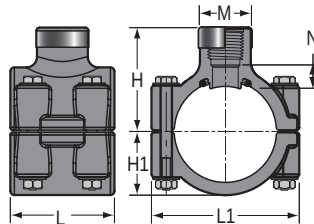
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

CLAMP ON SADDLE x SR FIPT SINGLE OUTLET

(continued)

Dimensions Also Applicable to
867S-XXXSR, 867V-XXXSR & 867SV-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	H1	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
867-573SR	867-573CSR	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	9.69	10.07
867-574SR ¹	867-574CSR ¹	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	9.70	10.25
867-575SR	867-575CSR	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-13/16	9.81	10.08
867-576SR ¹	867-576CSR ¹	8x1-1/4	9-5/16	4-15/16	8-9/16	9-29/32	5-7/32	1-19/32	9.68	9.85
867-577SR ¹	867-577CSR ¹	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	---	---
867-578SR ¹	867-578CSR ¹	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	---	---
867-579SR ¹	867-579CSR ¹	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	---	---
867-580SR ¹	867-580CSR ¹	8x3	7-1/16	4-7/8	8-1/2	10-1/8	5-1/4	1-15/16	---	---
867-582SR	867-582CSR	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	1-1/2	7.74	8.09
867-585SR	867-585CSR	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	2-3/32	8.61	9.08
867-624SR	867-624CSR	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	2-3/16	---	---
867-626SR	867-626CSR	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	3-3/16	---	---
867-664SR	867-664CSR	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	1-5/8	---	---
867-666SR	867-666CSR	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	2-1/4	---	---

¹ Outlet sized with bushing

- 1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 867-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.
- 2) Clamp On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g. Part Number 867S-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.
- 3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter "V" Before The Dash.
e.g. Part Number 867V-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter "SV" Before The Dash.
e.g. Part Number 867SV-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

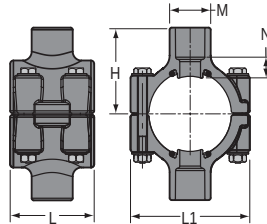
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



CLAMP ON SADDLE x SOCKET DOUBLE OUTLET

Dimensions Also Applicable to
868S-XXX, 868V-XXX & 868SV-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
868-247	868-247C	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	.56	.59
868-248	868-248C	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	.57	.60
868-249	868-249C	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	.40	.62
838-250	838-250C	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	.61	.64
868-251	868-251C	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	5/16	.65	.70
868-291	868-291C	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1.02	1.09
868-333 ¹	868-333C ¹	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	.93	.97
868-334	868-334C	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	.89	.92
868-335	868-335C	3x1	3-3/16	3	4-5/8	1-11/16	5/16	.91	.96
868-336 ¹	868-336C ¹	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	1.94	2.06
868-337 ¹	868-337C ¹	3x1-1/2	4-1/32	4-3/32	4-5/8	3	29/32	1.82	1.97
868-338	868-338C	3x2	3-5/8	4-3/32	4-5/8	3	3/8	1.47	1.57
868-415 ¹	868-415C ¹	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1.43	1.51
868-416 ¹	868-416C ¹	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1.39	1.46
868-417	868-417C	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1.30	1.37
868-418 ¹	868-418C ¹	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1.92	2.04
868-419	868-419C	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1.77	1.87
868-420	868-420C	4x2	4-3/16	4-1/8	5-5/8	3	7/16	1.90	2.01
868-421 ¹	868-421C ¹	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3.69	3.98
868-422	868-422C	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	2.92	3.16
868-523 ¹	868-523C ¹	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	2.48	2.63
868-524 ¹	868-524C ¹	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	2.44	2.58
868-525	868-525C	6x1	5-1/8	3	7-15/16	1-11/16	11/16	2.35	2.49
868-526 ¹	868-526C ¹	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	3.72	3.93
868-527 ¹	868-527C ¹	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	3.60	3.84
868-528	868-528C	6x2	5-1/2	4-1/8	7-3/4	3	11/16	3.25	3.44
868-529 ¹	868-529C ¹	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	5.58	5.93
868-530	868-530C	6x3	5-15/16	6	7-15/16	4-1/4	25/32	4.81	5.11
868-532	868-532C	6x4	6	6	7-15/16	5-3/16	5/8	5.56	6.10
868-573 ¹	868-573C ¹	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	11.50	12.06

¹ Outlet sized with bushing



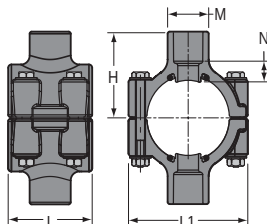
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

CLAMP ON SADDLE x SOCKET (continued)

DOUBLE OUTLET

Dimensions Also Applicable to
868S-XXX, 868V-XXX & 868SV-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
868-574 ¹	868-574C ¹	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	11.45	12.01
868-575 ¹	868-575C ¹	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	11.52	12.02
868-576 ¹	868-576C ¹	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	11.48	11.88
868-577 ¹	868-577C ¹	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	11.30	11.78
868-578 ¹	868-578C ¹	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	11.00	11.47
868-579 ¹	868-579C ¹	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	8.90	9.21
868-580 ¹	868-580C ¹	8x3	7-9/16	8-1/2	9-7/8	5-7/32	2-1/16	10.25	10.92
868-582	868-582C	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	8.00	8.62
868-585	868-585C	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	10.32	10.81
868-624	868-624C	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	15.37	12.99
868-626	868-626C	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	14.51	15.15
868-664	868-664C	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	15.75	17.06
868-666	868-666C	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	17.58	18.64

¹ Outlet sized with bushing

- 1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 868-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.
- 2) Clamp On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g. Part Number 868S-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.
- 3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter "V" Before The Dash.
e.g. Part Number 868V-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter "SV" Before The Dash.
e.g. Part Number 868SV-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

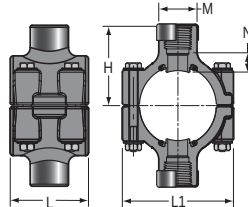
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



CLAMP ON SADDLE x SR FIPT DOUBLE OUTLET

Dimensions Also Applicable to
869S-XXXSR, 869V-XXXSR & 869SV-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
869-247SR	869-247CSR	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	.56	.59
869-248SR	869-248CSR	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/8	.57	.60
869-249SR	869-249CSR	2x1	2-5/8	2-7/16	3-7/16	1-11/16	9/16	.40	.62
869-250SR	869-250CSR	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	11/16	.61	.64
869-251SR	869-251CSR	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/4	.65	.70
869-291SR	869-291CSR	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	13/16	1.02	1.09
869-333SR ¹	869-333CSR ¹	3x1/2	3-5/16	3	4-5/8	1-3/8	15/16	.96	1.00
869-334SR	869-334CSR	3x3/4	3-1/16	3	4-5/8	1-3/8	9/16	.93	.96
869-335SR	869-335CSR	3x1	3-3/16	3	4-5/8	1-11/16	9/16	.95	1.00
869-336SR ¹	869-336CSR ¹	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-5/16	2.01	2.15
869-337SR ¹	869-337CSR ¹	3x1-1/2	4-1/32	4-3/32	4-5/8	3	2-11/16	1.93	2.06
869-338SR	869-338CSR	3x2	3-5/8	4-3/32	4-5/8	3	7/8	1.71	1.74
869-415SR ¹	869-415CSR ¹	4x1/2	4-3/32	3	5-9/16	2-3/8	1-1/8	1.46	1.53
869-416SR ¹	869-416CSR ¹	4x3/4	4-3/32	3	5-9/16	2-3/8	1-1/8	1.43	1.52
869-417SR	869-417CSR	4x1	3-13/16	3	5-5/8	1-11/16	11/16	1.34	1.41
869-418SR ¹	869-418CSR ¹	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	1-7/32	2.02	2.13
869-419SR	869-419CSR	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	15/16	1.87	1.99
869-420SR	869-420CSR	4x2	4-3/16	4-1/8	5-5/8	3	15/16	2.08	2.18
869-421SR ¹	869-421CSR ¹	4x2-1/2	5	5-7/16	5-23/32	4-9/32	1-7/32	3.96	4.29
869-422SR	869-422CSR	4x3	4-5/8	5-7/16	5-11/16	4-1/4	31/32	3.19	3.39
869-523SR ¹	869-523CSR ¹	6x1/2	5-13/32	3	7-3/4	1-11/16	1-3/8	2.51	2.64
869-524SR ¹	869-524CSR ¹	6x3/4	5-7/16	3	7-3/4	1-11/16	1-3/8	2.48	2.63
869-525SR	869-525CSR	6x1	5-1/8	3	7-15/16	1-11/16	15/16	2.39	2.53
869-526SR ¹	869-526CSR ¹	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-11/16	3.79	4.03
869-527SR ¹	869-527CSR ¹	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-3/4	3.70	3.93
869-528SR	869-528CSR	6x2	5-1/2	4-1/8	7-3/4	3	1-7/32	3.43	3.62
869-529SR ¹	869-529CSR ¹	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-9/16	5.85	6.23
869-530SR	869-530CSR	6x3	5-15/16	6	7-15/16	4-1/4	1-1/4	5.04	5.45
869-532SR	869-532CSR	6x4	6	6	7-15/16	5-3/16	1-3/8	6.26	6.67
869-573SR ¹	869-573CSR ¹	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	3	11.52	12.02

¹ Outlet sized with bushing



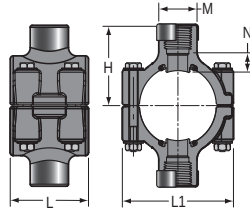
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

CLAMP ON SADDLE x SR FIPT DOUBLE OUTLET

(continued)

Dimensions Also Applicable to
869S-XXSR, 869V-XXSR & 869SV-XXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
869-574SR ¹	869-574CSR ¹	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	3	---	---
869-575SR ¹	869-575CSR ¹	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-13/16	---	---
869-576SR ¹	869-576CSR ¹	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	---	---
869-577SR ¹	869-577CSR ¹	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	---	---
869-578SR ¹	869-578CSR ¹	8x2	7-11/16	8-1/2	10-1/8	5-1/4	2-3/8	---	---
869-579SR ¹	869-579CSR ¹	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	2-1/2	---	---
869-580SR ¹	869-580CSR ¹	8x3	7-1/16	8-1/2	10-1/8	5-1/4	1-15/16	---	---
869-582SR	869-582CSR	8x4	7-5/16	8-1/2	10-1/8	5-1/4	1-1/2	8.59	9.29
869-585SR	869-585CSR	8x6	8-3/32	8-1/2	10-1/8	7-5/8	2-3/32	10.32	10.81
869-624SR	869-624CSR	10x4	8-15/32	8-1/2	12-5/16	5-1/4	2-3/16	---	---
869-626SR	869-626CSR	10x6	9-9/32	8-1/2	12-5/16	7-5/8	3-3/16	---	---
869-664SR	869-664CSR	12x4	9-9/16	8-1/2	14-5/16	5-1/4	1-5/8	---	---
869-666SR	869-666CSR	12x6	10-3/8	8-1/2	14-5/16	7-5/8	2-1/4	---	---

¹ Outlet sized with bushing

- 1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 869-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.
- 2) Clamp On Saddles w/Stainless Steel (SS) Bolts, Add The Letter "S" Before The Dash.
e.g. Part Number 869S-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.
- 3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter "V" Before The Dash.
e.g. Part Number 869V-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.
- 4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter "SV" Before The Dash.
e.g. Part Number 869SV-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

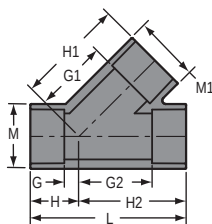
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



WYE

Socket x Socket x Socket

1/2" - 2" 235 psi @ 73°F
2-1/2" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-005	875-005C	1/2	1/4	1-5/32	1-5/32	1-1/8	2-1/16	2-1/32	3-3/16	1-5/32	1-5/32	.12	.13
875-007	875-007C	3/4	5/16	1-3/8	1-3/8	1-5/16	2-3/8	2-3/8	3-23/32	1-3/8	1-3/8	.19	.20
875-010	875-010C	1	5/16	1-3/4	1-3/4	1-7/16	2-29/32	2-7/8	4-11/32	1-11/16	1-11/16	.31	.33
875-012	875-012C	1-1/4	13/32	2-5/32	2-5/32	1-21/32	3-13/32	3-13/32	5-3/32	2-1/16	2-1/16	.50	.53
875-015	875-015C	1-1/2	11/16	2-13/32	2-3/8	2-1/16	3-3/4	3-3/4	5-13/16	2-11/32	2-5/16	.69	.74
875-020	875-020C	2	5/8	3-7/32	3-7/32	2-5/32	4-7/8	4-7/8	6-7/8	2-7/8	2-7/8	1.20	1.28
875-025 ¹	875-025C ¹	2-1/2	1-3/16	5-1/8	4-23/32	2-15/16	6-7/8	6-15/32	9-13/32	4-3/16	4-3/16	3.81	3.99
875-030	875-030C	3	11/16	4-23/32	4-1/4	2-9/16	6-1/8	6-1/8	8-23/32	4-3/16	4-3/16	2.62	2.79
875-040	875-040C	4	1-7/32	5-23/32	5	3-1/2	7-31/32	7-1/4	10-3/4	5-1/4	5-1/4	4.61	4.70
875-050F	---	5	5-1/8	10-11/16	10-11/16	8-1/8	13-11/16	13-11/16	21-13/16	6-5/16	6-5/16	9.34	---
875-060	875-060C	6	1-5/32	8-25/32	8-3/16	4-3/16	11-25/32	11-3/16	15-3/8	7-9/16	7-9/16	12.01	12.67
875-080	875-080C	8	1-15/16	11-11/32	11-11/32	5-31/32	15-11/32	15-11/32	21-5/16	9-3/4	9-3/4	25.44	26.97
875-080F	875-080CF	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	39.76	44.67
875-100F	875-100CF	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	65.51	75.04
875-120F	875-120CF	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	109.85	123.20
875-140F	875-140CF	14	9-13/16	23-13/16	23-13/16	16-13/16	30-13/16	30-13/16	47-5/8	15-1/2	15-1/2	135.75	149.48
875-160F	875-160CF	16	10-1/8	26-1/8	26-1/8	18-1/8	34-1/8	34-1/8	52-1/4	17-11/16	17-11/16	183.59	211.73
875-180F	875-180CF	18	10	29-3/8	28	19	38-3/8	37	56	19-7/8	19-7/8	255.49	292.04
875-200F	---	20	11-5/8	31-5/8	31-5/8	21-5/8	41-5/8	41-5/8	63-1/4	22-1/16	22-1/16	399.60	---
875-240F	---	24	14-1/4	38-1/4	38-1/4	26-1/4	50-1/4	50-1/4	76-1/2	26-7/16	26-7/16	617.50	---

¹ Outlet sized with bushing

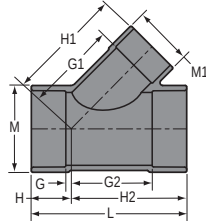


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCING WYE

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-131 ¹	---	1x1x3/4	1/4	2-7/32	1-27/32	1-3/8	2-31/32	2-31/32	4-11/32	1-11/16	1-11/16	.35	---
875-167 ¹	875-167C ¹	1-1/4x1-1/4x3/4	3/8	2-3/4	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.61	.65
875-168 ¹	875-168C ¹	1-1/4x1-1/4x1	3/8	2-5/8	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.56	.62
875-210 ¹	875-210C ¹	1-1/2x1-1/2x3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.88	.94
875-211 ¹	875-211C ¹	1-1/2x1-1/2x1	1/2	3	2-9/16	1-7/8	4-5/32	3-15/16	5-13/16	2-11/32	2-11/32	.83	.89
875-212 ¹	875-212C ¹	1-1/2x1-1/2x1-1/4	1/2	3-1/4	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.74	.82
875-248 ¹	875-248C ¹	2x2x3/4	5/8	4-5/32	3-7/32	2-5/32	5-5/32	4-7/8	6-7/8	2-7/8	2-7/8	1.46	1.56
875-250 ¹	875-250C ¹	2x2x1-1/4	5/8	3-5/16	3-3/8	2-5/32	5	4-3/4	6-7/8	2-7/8	2-7/8	1.46	1.52
---	875-251C ¹	2x2x1-1/2	1/2	3-23/32	3-11/32	2-1/32	5-3/32	4-7/8	6-7/8	2-7/8	2-7/8	---	1.44
875-291 ¹	---	2-1/2x2-1/2x1-1/2	1	6-1/4	4-9/16	3-1/16	7-5/8	6-5/8	9-11/16	4-3/16	4-3/16	4.34	---
875-292 ¹	---	2-1/2x2-1/2x2	1/2	3-3/4	4-3/4	2-1/2	6-7/8	6-1/2	9-3/8	4-1/4	4-1/4	3.97	---
875-335 ¹	875-335C ¹	3x3x1	11/16	5-7/8	4-7/32	2-9/16	6-15/16	6-1/8	8-23/32	4-3/16	4-3/16	3.27	3.57
875-336 ¹	875-336C ¹	3x3x1-1/4	7/8	5-3/4	4-1/8	2-3/4	7	6	8-3/4	4-3/16	4-3/16	3.21	3.34
875-337 ¹	875-337C ¹	3x3x1-1/2	2-5/8	5-1/2	4-1/4	2-5/8	6-7/8	6-1/8	8-3/4	4-3/16	4-3/16	3.14	3.21
875-338 ¹	875-338C ¹	3x3x2	1/2	3-3/4	3-3/4	2-1/2	6-1/2	5-3/4	8-3/4	4-1/4	4-1/4	3.20	3.21
875-339 ¹	875-339C ¹	3x3x2-1/2	7/8	4-1/8	4-21/32	2-3/4	6-3/4	6	8-3/4	4-3/16	4-3/16	2.97	3.11
875-419 ¹	---	4x4x1-1/2	1	6-5/8	5-1/4	3-1/4	8-13/16	7-1/2	10-3/4	5-1/4	5-3/16	6.04	---
875-420	875-420C	4x4x2	-5/16	4-11/16	4	2	6-7/32	6-5/16	8-5/16	5-9/32	2-29/32	2.78	2.92
875-421F	---	4x4x2-1/2	4-9/16	8-13/16	9-1/16	6-13/16	10-1/2	11-5/16	18-1/8	5-1/4	3-1/2	5.37	---
875-422 ¹	875-422C ¹	4x4x3	1	7-3/8	5-1/4	3-1/4	9-1/4	7-1/2	10-3/4	5-1/4	5-3/16	5.41	5.81
875-528 ¹	875-528C ¹	6x6x2	1/16	8-13/16	6-9/16	3-1/16	10-5/16	9-9/16	12-5/8	7-9/16	5-7/16	9.78	10.10
875-528F	875-528CF	6x6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	9.36	10.07
875-530 ¹	875-530C ¹	6x6x3	-1/16	8-3/8	6-11/16	3	10-1/4	9-11/16	12-5/8	7-9/16	5-3/8	9.60	9.82
875-530F	875-530CF	6x6x3	2-15/16	10-5/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	13.92	12.14
875-532	875-532C	6x6x4	31/32	6-9/16	5-11/16	3-15/16	8-27/32	8-23/32	12-21/32	7-9/16	5-7/16	8.61	9.22
875-578 ¹	875-578C ¹	8x8x2	2	14-15/16	11-1/4	6	16-9/16	16-7/16	21-1/4	9-11/16	9-11/16	34.05	35.44
875-578F	875-578CF	8x8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	17.93	19.12
875-579F	875-579CF	8x8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	21.92	22.00
875-580F	875-580CF	8x8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	21.92	18.87
875-582 ¹	875-582C ¹	8x8x4	2	14-3/16	11-1/4	6	16-7/16	15-1/4	21-1/4	9-11/16	9-11/16	32.83	35.13
875-582F	875-582CF	8x8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	18.50	27.78
875-585 ¹	875-585C ¹	8x8x6	2	12-15/16	11-1/4	6	15-15/16	15-1/4	21-1/4	9-11/16	9-11/16	30.74	32.29
875-585F	875-585CF	8x8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	32.97	34.75
875-621 ¹	---	10x10x2	3-3/4	6	14-1/2	9	17-1/2	19-3/4	28-3/4	11	7-1/2	30.84	---

¹Outlet sized with bushing

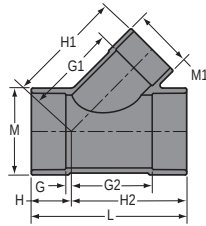
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCING WYE (continued)

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
 3" - 6" 150 psi @ 73°F
 8" & Up & All Fab 100 psi @ 73°F



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-621F	875-621CF	10x10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	41.46	26.48
875-622F	---	10x10x2-1/2	1/8	12-5/16	10-7/8	5-3/8	14-5/16	16-1/8	21-1/2	11-15/16	3-7/16	29.34	---
875-623 ¹	---	10x10x3	7/8	12-7/8	11-5/8	6-1/8	15-1/4	16-7/8	23	12	4-1/8	30.70	---
875-623F	875-623CF	10x10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	31.71	29.62
875-624 ¹	---	10x10x4	1-7/8	10-5/8	12-5/8	7-1/8	12-1/4	17-7/8	25	12	5-3/8	30.56	---
875-624F	875-624CF	10x10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	39.93	39.21
875-626	875-626C	10x10x6	-9/32	12-27/32	11-1/32	4-23/32	15-7/8	16-1/32	20-3/4	12-1/32	7-19/32	28.12	31.56
875-626F	875-626CF	10x10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	42.69	29.74
875-628	875-628C	10x10x8	1-7/32	12-3/4	12-1/4	6-7/32	16-25/32	17-9/32	23-1/2	12-1/32	9-23/32	34.14	38.99
875-628F	875-628CF	10x10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	55.19	56.37
875-661F	875-661CF	12x12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	37.58	40.76
875-662F	---	12x12x2-1/2	15/16	13-5/8	11-13/16	5-5/16	15-5/8	18-1/16	23-3/8	14-1/8	3-7/16	43.72	---
875-663F	875-663CF	12x12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	43.39	44.74
875-664F	875-664CF	12x12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	48.41	49.06
875-666F	875-666CF	12x12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	64.52	58.24
875-668F	875-668CF	12x12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	71.04	68.98
875-670F	875-670CF	12x12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	80.79	81.76
875-694F	875-694CF	14x14x4	1-1/4	15-5/16	15-1/4	8-1/4	17-9/16	22-1/4	30-1/2	15-1/2	5-3/16	68.80	63.95
875-696F	875-696CF	14x14x6	2	17-3/8	16	9	20-5/8	23	32	15-1/2	7-1/2	78.50	83.85
875-698F	875-698CF	14x14x8	4-1/4	19-5/16	18-1/4	11-1/4	23-9/16	25-1/4	36-1/2	15-1/2	9-5/8	90.50	82.78
875-700F	875-700CF	14x14x10	5-3/4	20-15/16	19-3/4	12-3/4	26-3/16	26-3/4	39-1/2	15-1/2	11-15/16	84.58	107.47
875-702F	875-702CF	14x14x12	7-1/4	22-9/16	21-1/4	14-1/4	28-13/16	28-1/4	42-1/2	15-1/2	14-1/8	108.22	115.64
875-754F	875-754CF	16x16x4	1-1/8	16-5/8	17-1/8	9-1/8	18-7/8	25-1/8	34-1/4	17-11/16	5-3/16	76.47	88.48
875-756F	875-756CF	16x16x6	1-5/8	18-11/16	17-5/8	9-5/8	21-15/16	25-5/8	35-1/4	17-11/16	7-1/2	105.73	94.93
875-758F	875-758CF	16x16x8	3-5/8	20-5/8	19-5/8	11-5/8	24-7/8	27-5/8	39-1/4	17-11/16	9-5/8	120.00	108.85
875-760F	875-760CF	16x16x10	5-1/8	22-1/4	21-1/8	13-1/8	27-1/2	29-1/8	42-1/4	17-11/16	11-15/16	123.77	137.97
875-762F	875-762CF	16x16x12	6-1/2	23-7/8	22-1/2	14-1/2	30-1/8	30-1/2	45	17-11/16	14-1/8	142.80	146.49
875-764F	875-764CF	16x16x14	7-7/8	25-1/8	23-7/8	15-7/8	32-1/8	31-7/8	47-3/4	17-11/16	15-1/2	161.25	167.10
875-784F	875-784CF	18x18x4	0	17-7/8	18	9	20-1/8	27	36	19-7/8	5-3/16	116.63	119.05
875-786F	875-786CF	18x18x6	3/8	20-1/8	18-9/16	9-3/8	23-3/8	27-9/16	36-15/16	19-7/8	7-1/2	114.13	131.59
875-788F	875-788CF	18x18x8	3	21-7/8	21	12	26-1/8	30	42	19-7/8	9-5/8	92.20	146.16
875-790F	875-790CF	18x18x10	4-1/2	23-1/2	22-1/2	13-1/2	28-3/4	31-1/2	45	19-7/8	11-15/16	164.27	163.18
875-792F	875-792CF	18x18x12	6	25-1/8	24	15	31-3/8	33	48	19-7/8	14-1/8	184.56	184.28
875-794F	875-794CF	18x18x14	7	26-3/8	25	16	33-3/8	34	50	19-7/8	15-1/2	225.00	211.65
875-796F	875-796CF	18x18x16	8-1/2	27-3/8	26-1/2	17-1/2	35-3/8	35-1/2	53	19-7/8	17-11/16	225.00	243.00
875-814F	---	20x20x4	1	19-3/16	19	9	21-7/16	29	38	22-1/16	5-3/16	142.64	---
875-816F	---	20x20x6	1/8	21-1/4	19-7/8	9-7/8	24-1/2	29-7/8	39-3/4	22-1/16	7-1/2	156.65	---

¹ Outlet sized with bushing

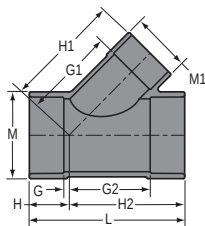


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

REDUCING WYE (continued)

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F

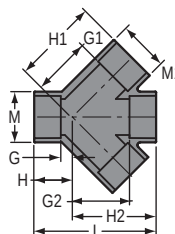


Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-816F	---	20x20x6	1/8	21-1/4	19-7/8	9-7/8	24-1/2	29-7/8	39-3/4	22-1/16	7-1/2	156.65	---
875-818F	---	20x20x8	2-5/8	23-3/16	22-5/8	12-5/8	27-7/16	32-5/8	45-1/4	22-1/16	9-5/8	173.00	---
875-820F	---	20x20x10	4-1/8	24-13/16	24-1/8	14-1/8	30-1/16	34-1/8	48-1/4	22-1/16	11-15/16	190.74	---
875-822F	875-822CF	20x20x12	5-5/8	26-7/16	25-5/8	15-5/8	32-11/16	35-5/8	51-1/4	22-1/16	14-1/8	237.50	213.90
875-824F	875-824CF	20x20x14	7-1/8	27-11/16	27-1/8	17-1/8	34-11/16	37-1/8	54-1/4	22-1/16	15-1/2	243.75	239.07
875-826F	875-826CF	20x20x16	8-1/2	28-11/16	28-1/2	18-1/2	36-11/16	38-1/2	57	22-1/16	17-11/16	250.00	321.08
875-828F	---	20x20x18	10-1/8	30-11/16	30-1/8	20-1/8	39-11/16	40-1/8	60-1/4	22-1/16	19-7/8	255.62	---
875-904F	---	24x24x4	3	21-3/4	21	9	24	33	42	26-7/16	5-3/16	230.78	---
875-906F	---	24x24x6	7/8	23-13/16	23-1/8	11-1/8	27-1/16	35-1/8	46-1/4	26-7/16	7-1/2	248.89	---
875-908F	---	24x24x8	1-3/4	25-3/4	25-3/4	13-3/4	30	37-3/4	51-1/2	26-7/16	9-5/8	269.27	---
875-910F	---	24x24x10	3-1/4	27-3/8	27-1/4	15-1/4	32-5/8	39-1/4	54-1/2	26-7/16	11-15/16	291.66	---
875-912F	---	24x24x12	4-3/4	29	28-3/4	16-3/4	35-1/4	40-3/4	57-1/2	26-7/16	14-1/8	264.99	---
875-914F	---	24x24x14	6-1/4	30-1/4	30-1/4	18-1/4	37-1/4	42-1/4	60-1/2	26-7/16	15-1/2	283.70	---
875-916F	---	24x24x16	7-3/4	31-1/4	31-3/4	19-3/4	39-1/4	43-3/4	63-1/2	26-7/16	17-11/16	310.60	---
875-918F	---	24x24x18	9-1/4	33-1/4	33-1/4	21-1/4	42-1/4	45-1/4	66-1/2	26-7/16	19-7/8	255.60	---
875-920F	---	24x24x20	9-5/8	34-3/16	33-5/8	21-5/8	44-3/16	45-5/8	67-1/4	26-7/16	22-1/16	372.56	---

DOUBLE WYE

Socket x Socket x Socket x Socket

100 psi @ 73°F



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
876-020F	876-020CF	2	3-7/8	6-1/4	6-1/4	5-7/16	7-13/16	7-13/16	13-3/16	2-7/8	2-7/8	2.97	3.01
876-030F	876-030CF	3	4-7/8	8-1/8	8-1/8	6-3/4	10-1/16	10-1/16	16-13/16	4-3/16	4-3/16	6.48	5.84
876-040F	876-040CF	4	4-11/16	9-3/16	9-3/16	6-15/16	11-7/16	11-7/16	18-3/8	5-3/16	5-3/16	9.74	13.33
876-060F	876-060CF	6	4-15/16	12-5/8	11-9/16	8-3/16	15-7/8	14-13/16	23	7-1/2	7-1/2	25.44	28.16
876-080F	876-080CF	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	48.35	55.13
876-100F	876-100CF	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	65.51	94.00
876-120F	876-120CF	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	101.98	149.15

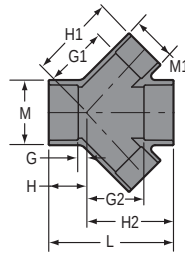
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



REDUCING DOUBLE WYE

Socket x Socket x Socket x Socket

3" - 6" 150 psi @ 73°F
All Fab 100 psi @ 73°F



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
876-338	876-338C	3x2	3/8	4-1/4	4-13/32	2-1/4	5-3/4	5-29/32	8	4-3/16	2-7/8	2.24	2.24
876-421F	876-421CF	4x2-1/2	4-9/16	8-13/16	9-1/16	6-13/16	10-1/2	11-5/16	18-1/8	5-1/4	3-1/2	5.37	6.00
876-422F	876-422CF	4x3	4-11/16	10	9-3/16	6-15/16	11-13/16	11-7/16	18-3/8	5-3/16	5-3/16	13.87	14.00
876-528F	876-528CF	6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	10.07	11.45
876-529F	876-529CF	6x2-1/2	2-7/16	9-5/8	9-1/16	5-11/16	11-5/8	12-5/16	18	7-1/2	3-7/16	13.21	14.00
876-530F	876-530CF	6x3	2-15/16	10-15/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	13.21	12.14
876-532F	876-532CF	6x4	3-15/16	10-9/16	10-9/16	7-3/16	12-13/16	13-13/16	21	7-1/2	5-3/16	18.77	19.78
876-578F	876-578CF	8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	14.55	19.56
876-579F	876-579CF	8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	21.92	22.00
876-580F	876-580CF	8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	18.87	21.92
876-582F	876-582CF	8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	20.88	24.78
876-585F	876-585CF	8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	28.76	41.48
876-621F	876-621CF	10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	26.48	26.98
876-622F	876-622CF	10x2-1/2	1/8	12-5/16	10-7/8	5-3/8	14-5/16	16-1/8	21-1/2	11-15/16	3-7/16	29.34	32.27
876-623F	876-623CF	10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	22.67	29.62
876-624F	876-624CF	10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	30.53	34.22
876-626F	876-626CF	10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	40.05	46.55
876-628F	876-628CF	10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	55.99	60.66
876-661F	876-661CF	12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	37.58	40.76
876-662F	876-662CF	12x2-1/2	15/16	13-5/8	11-13/16	5-5/16	15-5/8	18-1/16	23-3/8	14-1/8	3-7/16	44.74	55.95
876-663F	876-663CF	12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	43.39	44.74
876-664F	876-664CF	12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	40.74	49.06
876-666F	876-666CF	12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	68.02	58.24
876-668F	876-668CF	12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	71.03	86.23
876-670F	876-670CF	12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	80.79	100.26



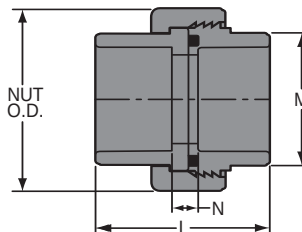
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

UNION (Old Style)

Socket x Socket

Dimensions Also Applicable to
897-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
857-002	857-002C	1/4	1-15/16	15/16	5/8	1-21/32	.09	.10
857-003	857-003C	3/8	2-5/32	1-1/32	19/32	1-25/32	.11	.11
857-005	857-005C	1/2	2-3/32	1-9/32	11/32	1-31/32	.15	.16
857-007	857-007C	3/4	2-3/8	1-17/32	11/32	2-1/2	.26	.28
857-010	857-010C	1	2-9/16	1-27/32	3/8	2-7/8	.37	.39
857-012	857-012C	1-1/4	2-7/8	2-7/32	3/8	3-5/16	.50	.52
857-015	857-015C	1-1/2	3-3/32	2-9/16	15/32	3-9/16	.60	.63
857-020	857-020C	2	3-5/8	3-1/32	9/16	4-3/16	.96	1.05
857-025	857-025C	2-1/2	4-3/8	3-5/8	15/16	4-7/8	1.51	1.66
857-030	857-030C	3	5-1/16	4-3/8	1-3/16	5-3/4	2.33	2.51
857-040	857-040C	4	5-7/8	5-13/32	1-3/8	7-1/16	3.74	3.98

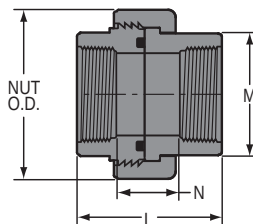
1) For (Socket X Socket) Unions Equipped With EPDM O-ring, Replace The 857 With An 897 Before The Dash.
e.g. Part Number 897-002 = 1/4" PVC, Union, Socket x Socket, With EPDM O-rings.

UNION (Old Style)

Fipt x Fipt

Dimensions Also Applicable to
898-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
858-002	858-002C	1/4	1-15/16	15/16	11/16	1-21/32	.10	.10
858-003	858-003C	3/8	2-5/32	1-1/32	15/16	1-25/32	.12	.13
858-005	858-005C	1/2	2-3/32	1-9/32	19/32	1-31/32	.16	.17
858-007	858-007C	3/4	2-3/8	1-17/32	3/4	2-1/2	.28	.30

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

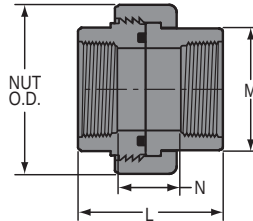


UNION (Old Style) (continued)

Fipt x Fipt

Dimensions Also Applicable to
898-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
858-010	858-010C	1	2-9/16	1-27/32	7/16	2-7/8	.39	.41
858-012	858-012C	1-1/4	2-7/8	2-7/32	7/8	3-5/16	.56	.61
858-015	858-015C	1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.65	.69
858-020	858-020C	2	3-5/8	3-1/32	1-11/16	4-3/16	1.05	1.13
858-025	858-025C	2-1/2	4-3/8	3-5/8	1-7/8	4-7/8	1.67	1.74
858-030	858-030C	3	5-1/16	4-3/8	1-13/16	5-3/4	2.51	2.70
858-040	858-040C	4	5-7/8	5-7/16	2-3/8	7-1/16	4.07	4.30

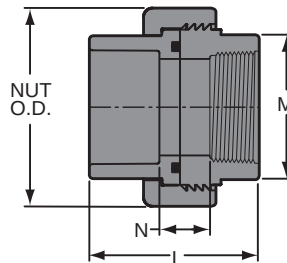
1) For (Fipt X Fipt) Unions Equipped With EPDM O-ring, Replace The 858 With An 898 Before The Dash.
e.g. Part Number 898-002 = 1/4" PVC, Union, Fipt x Fipt, With EPDM O-rings.

UNION (Old Style)

Socket x Fipt

Dimensions Also Applicable to
899-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-002	---	1/4	1-15/16	15/16	21/32	1-21/32	.08	---
859-003	---	3/8	2-5/32	1-1/32	3/4	1-25/32	.10	---
859-005	859-005C	1/2	2-3/32	1-9/32	15/32	1-31/32	.16	.17
859-007	859-007C	3/4	2-3/8	1-17/32	9/16	2-1/2	.27	.29
859-010	859-010C	1	2-9/16	1-27/32	13/32	2-7/8	.38	.40
859-012	859-012C	1-1/4	2-7/8	2-7/32	5/8	3-5/16	.52	.54
859-015	859-015C	1-1/2	3-1/8	2-19/32	27/32	3-9/16	.63	.66



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

UNION (Old Style)

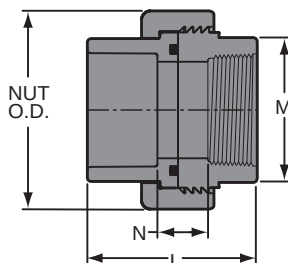
(continued)

Socket x Fipt

Dimensions Also Applicable to

899-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-020	859-020C	2	3-5/8	3-1/32	1-1/16	4-3/16	1.00	1.10
859-025	859-025C	2-1/2	4-3/8	3-5/8	1-13/32	4-7/8	1.58	1.66
859-030	859-030C	3	5-1/16	4-3/8	1-1/2	5-3/4	2.42	2.61
859-040	859-040C	4	5-7/8	5-7/16	1-7/8	7-1/16	3.91	4.13

1) For (Socket X Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.

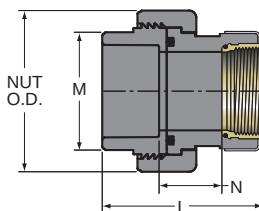
e.g. Part Number 899-002 = 1/4" PVC, Union, Socket x Fipt, With EPDM O-rings.

TRANSITION UNION

Socket x Brass Fipt Threaded Insert and FKM O-ring Seal

Dimensions Also Applicable to 899-XXXBR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-005BR	859-005CBR	1/2	2-1/4	1-9/32	3/4	1-31/32	.21	.22
859-007BR	859-007CBR	3/4	2-11/16	1-17/32	15/16	2-1/2	.35	.36
859-010BR	859-010CBR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52	.55
859-012BR	859-012CBR	1-1/4	3-9/32	2-7/32	1-1/16	3-5/16	.69	.71
859-015BR	859-015CBR	1-1/2	3-1/2	2-9/16	1-3/32	3-17/32	.89	.92
859-020BR	859-020CBR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.60	1.64

Not intended to convey or dispense water for human consumption through drinking or cooking

1) For (Socket X Metal Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.

e.g. Part Number 899-010BR = 1" PVC, Union Socket x Metal Fipt With EPDM O-rings.

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



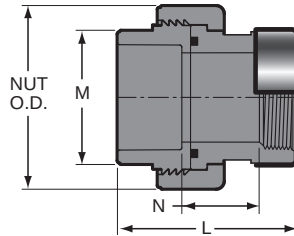
SPECIAL REINFORCED UNION (Old style)

Socket x SR Fipt

Dimensions Also Applicable to

899-XXSR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-002SR	859-002CSR	1/4	2-1/16	15/16	25/32	1-21/32	.09	.10
859-003SR	859-003CSR	3/8	2-9/32	1-1/32	29/32	1-25/32	.13	.15
859-005SR	859-005CSR	1/2	2-9/32	1-9/32	21/32	1-31/32	.17	.19
859-007SR	859-007CSR	3/4	2-19/32	1-17/32	25/32	2-1/2	.28	.27
859-010SR	859-010CSR	1	2-15/16	1-27/32	25/32	2-7/8	.40	.42
859-012SR	859-012CSR	1-1/4	3-5/32	2-7/32	29/32	3-5/16	.55	.59
859-015SR	859-015CSR	1-1/2	3-13/32	2-9/16	1-1/32	3-9/16	.67	.71
859-020SR	859-020CSR	2	4-3/32	3-1/32	1-19/32	4-3/16	1.12	1.21
859-030SR	859-030CSR	3	5-1/4	4-3/8	1-11/16	5-3/4	2.50	2.60
859-040SR	859-040CSR	4	5-7/8	5-13/32	2-1/8	7-3/32	3.96	4.21

1) For (Socket X SR Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.

e.g. Part Number 899-002SR = 1/4" PVC, Union, Socket x SR Fipt, With EPDM O-rings.

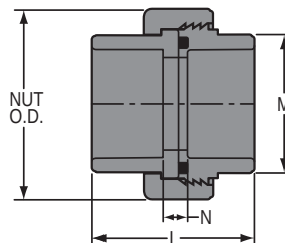
UNION 2000

Socket x Socket

Dimensions Also Applicable to

8097-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8057-005	8057-005C	1/2	2-3/32	1-3/16	11/32	1-7/8	.12	.08
8057-007	8057-007C	3/4	2-3/8	1-13/32	3/8	2-9/32	.17	.19
8057-010	8057-010C	1	2-11/16	1-23/32	7/16	2-9/16	.28	.17
8057-012	8057-012C	1-1/4	2-15/16	2-3/32	7/16	3-3/32	.36	.40



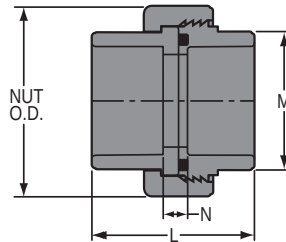
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

UNION 2000 (continued)

Socket x Socket

Dimensions Also Applicable to
8097-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



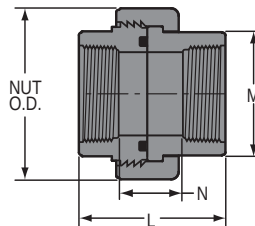
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8057-015	8057-015C	1-1/2	3-1/4	2-3/8	1/2	3-1/2	.50	.51
8057-020	8057-020C	2	3-17/32	2-7/8	17/32	4-9/32	.86	.89
8057-025	8057-025C	2-1/2	4-7/32	3-1/2	25/32	6-5/32	2.14	2.25
8057-030	8057-030C	3	4-1/4	4-3/16	1/2	6-5/32	2.16	2.50
8057-040	8057-040C	4	5-1/8	5-1/4	5/8	7-3/4	3.75	3.97
8057-060	8057-060C	6	6-27/32	7-1/2	25/32	11-5/8	10.38	10.88

UNION 2000

Fipt x Fipt

Dimensions Also Applicable to
8098-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8058-005	8058-005C	1/2	1-29/32	1-3/16	17/32	1-7/8	.08	.08
8058-007	8058-007C	3/4	2-1/16	1-3/8	9/16	2-9/32	.17	.18
8058-010	8058-010C	1	2-17/32	1-11/16	25/32	2-9/16	.21	.11
8058-012	8058-012C	1-1/4	2-21/32	2-1/32	3/4	3-1/8	.38	.40
8058-015	8058-015C	1-1/2	2-25/32	2-3/8	29/32	3-1/2	.53	.50
8058-020	8058-020C	2	3-1/8	3	1-3/16	4-7/32	.89	.94
8058-025	8058-025C	2-1/2	4-1/32	3-9/16	1-15/32	6-5/32	1.67	1.74
8058-030	8058-030C	3	4-5/32	4-9/32	1-13/32	6-5/32	2.37	2.50
8058-040	8058-040C	4	4-21/32	5-1/4	1-21/32	7-3/4	3.59	4.03
8058-060	8058-060C	6	6-1/8	7-21/32	2-13/16	11-19/32	12.10	11.96

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

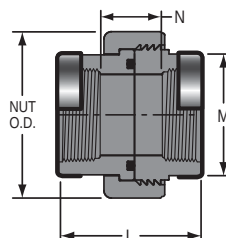


SPECIAL REINFORCED UNION 2000

SR Fipt x SR Fipt

Dimensions Also Applicable to
8098-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



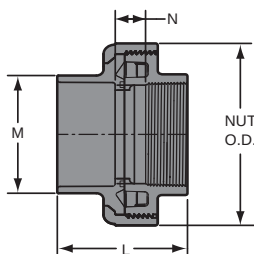
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8058-005SR	8058-005CSR	1/2	2	1-3/16	5/8	1-7/8	.14	.14
8058-007SR	8058-007CSR	3/4	2-5/32	1-3/8	21/32	2-9/32	.15	.20
8058-010SR	8058-010CSR	1	2-9/16	1-11/16	13/16	2-9/16	.21	.24
8058-012SR	8058-012CSR	1-1/4	2-23/32	2-1/32	13/16	3-1/8	.39	.41
8058-015SR	8058-015CSR	1-1/2	2-27/32	2-13/32	29/32	3-17/32	.59	.56
8058-020SR	8058-020CSR	2	3-7/32	3-1/32	1-3/16	4-7/32	.97	1.02
8058-025SR	8058-025CSR	2-1/2	4-3/32	3-9/16	1-15/32	6-5/32	1.66	1.73
8058-030SR	8058-030CSR	3	4-3/16	4-9/32	1-3/8	6-5/32	2.44	2.50
8058-040SR	8058-040CSR	4	4-11/16	5-1/4	1-11/16	7-3/4	3.73	4.17
8058-060SR	8058-060CSR	6	6-3/16	7-11/16	2-13/16	11-5/8	10.98	11.54

UNION 2000

Socket x Fipt

Dimensions Also Applicable to
8099-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8059-005	8059-005C	1/2	1-7/8	1-3/16	5/16	1-7/8	.11	.08
8059-007	8059-007C	3/4	2-1/16	1-13/32	5/16	2-9/32	.18	.19
8059-010	8059-010C	1	2-13/32	1-23/32	13/32	2-9/16	.20	.09
8059-012	8059-012C	1-1/4	2-19/32	2-3/32	13/32	3-1/8	.35	.37
8059-015	8059-015C	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.49	.50



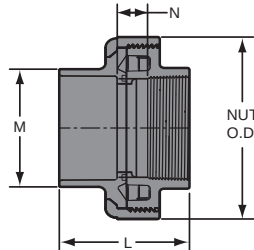
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

UNION 2000 (continued)

Socket x Fipt

Dimensions Also Applicable to
8099-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



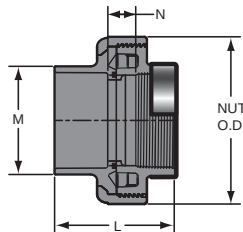
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8059-020	8059-020C	2	2-31/32	2-7/8	13/32	4-9/32	.92	.96
8059-025	8059-025C	2-1/2	3-15/32	3-1/2	13/32	6-3/16	1.58	1.66
8059-030	8059-030C	3	3-25/32	4-3/16	17/32	6-5/32	2.17	2.32
8059-040	8059-040C	4	4-3/8	5-1/4	5/8	7-3/4	3.64	3.83
8059-060	8059-060C	6	6-27/32	7-1/2	1-1/2	11-5/8	11.69	11.80

UNION 2000

Socket x SR Fipt

Dimensions Also Applicable to
8099-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8059-005SR	8059-005CSR	1/2	1-29/32	1-3/16	11/32	1-7/8	.12	.09
8059-007SR	8059-007CSR	3/4	2-5/32	1-13/32	13/32	2-9/32	.14	.20
8059-010SR	8059-010CSR	1	2-7/16	1-23/32	7/16	2-9/16	.20	.20
8059-012SR	8059-012CSR	1-1/4	2-5/8	2-3/32	7/16	3-1/8	.37	.39
8059-015SR	8059-015CSR	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.56	.56
8059-020SR	8059-020CSR	2	3	2-7/8	7/16	4-7/32	1.00	1.04
8059-025SR	8059-025CSR	2-1/2	3-27/32	3-15/32	27/32	6-3/16	2.19	2.29
8059-030SR	8059-030CSR	3	3-3/4	4-3/16	1/2	6-9/32	2.24	2.38
8059-040SR	8059-040CSR	4	4-3/8	5-1/4	5/8	7-3/4	2.81	2.95
8059-060SR	8059-060CSR	6	6-27/32	7-1/2	2-5/32	11-5/8	11.50	11.95

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

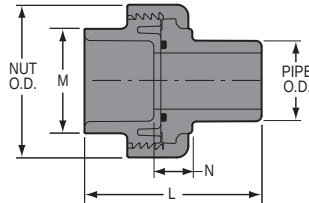


UNION 2000

Socket x Spigot

Dimensions Also Applicable to
8096-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



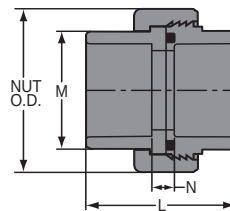
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8056-005	8056-005C	1/2	2-5/16	1-3/16	9/16	1-7/8	.12	.13
8056-007	8056-007C	3/4	2-5/8	1-3/8	21/32	2-9/32	.19	.21
8056-010	8056-010C	1	2-15/16	1-23/32	5/8	2-9/16	.29	.30
8056-012	8056-012C	1-1/4	3-7/32	2-3/32	11/16	3-3/16	.41	.41
8056-015	8056-015C	1-1/2	3-1/2	2-3/8	11/16	3-9/16	.50	.54
8056-020	8056-020C	2	3-3/4	2-7/8	3/4	4-5/16	.81	.85
8056-025	8056-025C	2-1/2	4-21/32	3-15/32	1-5/32	6-5/32	2.23	2.30
8056-030	8056-030C	3	4-25/32	4-5/32	7/32	6-5/32	2.28	2.40
8056-040	8056-040C	4	5-5/8	5-1/4	1-1/8	7-23/32	3.95	4.04
8056-060	8056-060C	6	7-3/4	7-9/16	1-1/2	11-11/16	11.84	12.68

PVC TRANSITION UNION

DIN (mm) Socket x ASTM (in) Socket

Dimensions Also Applicable to 8697-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8657-020	20mm x 1/2	2-1/16	1-9/32	5/16	1-31/32	.16
8657-025	25mm x 3/4	2-11/32	1-17/32	11/32	2-1/2	.27
8657-032	32mm x 1	2-9/16	1-27/32	3/8	2-7/8	.37
8657-040	40mm x 1-1/4	2-7/8	2-7/32	3/8	3-5/16	.52
8657-050	50mm x 1-1/2	3-1/8	2-9/16	5/16	3-9/16	.59
8657-063	63mm x 2	3-5/8	3-1/32	9/16	4-3/16	.94
8657-090	90mm x 3	5-1/16	4-3/8	1-3/16	5-3/4	2.31
8657-110	110mm x 4	5-7/8	5-7/16	1-3/8	7-1/16	3.91

1) For DIN (mm) Socket X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8657 With An 8697 Before The Dash.
e.g. Part Number 8697-020 = 20mm x 1/2" PVC, Union Socket x Socket With EPDM O-rings.



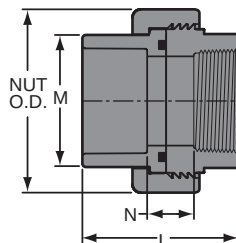
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

PVC TRANSITION UNION

DIN (mm) Socket x ASTM (in) Fipt

Dimensions Also Applicable to 8698-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8658-020	20 mm x 1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8658-025	25mm x 3/4	2-3/8	1-17/32	3/4	2-1/2	.28
8658-032	32mm x 1	2-9/16	1-27/32	7/16	2-7/8	.38
8658-040	40mm x 1-1/4	2-7/8	2-7/32	7/8	3-5/16	.56
8658-050	50mm x 1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.61
8658-063	63mm x 2	3-9/16	3-1/32	1-5/8	4-3/16	.99
8658-090	90mm x 3	5-1/16	4-3/8	1-13/16	5-3/4	2.41
8658-110	110mm x 4	5-7/8	5-7/16	2-3/8	7-1/16	4.07

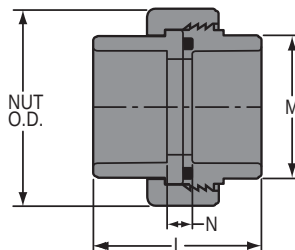
1) For DIN (mm) Socket X NPT (in) Fipt Unions Equipped with EPDM O-ring, Replace The 8658 With An 8698 Before The Dash.
e.g. Part Number 8698-020 = 20mm x 1/2" PVC, Union, DIN Socket x ASTM Fipt With EPDM O-rings.

PVC TRANSITION UNION

JIS (mm) Socket X ASTM (in) Socket

Dimensions Also Applicable to 8297-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8257-016	16 DN x 1/2	2-1/16	1-9/32	5/16	1-31/32	.15
8257-020	20 DN x 3/4	2-3/8	1-17/32	5/16	2-1/2	.26
8257-025	25 DN x 1	2-9/16	1-27/32	3/8	2-7/8	.37
8257-030	30 DN x 1-1/4	2-15/16	2-3/32	7/16	3-3/16	.42
8257-040	40 DN x 1-1/2	3-1/8	2-9/16	5/16	3-9/16	.61
8257-050	50 DN x 2	3-5/8	3-1/32	9/16	4-3/16	.97
8257-075	75 DN x 3	5-1/16	4-3/8	1-3/16	5-3/4	2.34
8257-100	100 DN x 4	5-7/8	5-13/32	1-11/32	7-1/8	3.75

1) For JIS (mm) Socket X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8257 With An 8297 Before The Dash.
e.g. Part Number 8297-016 = 16mm x 1/2" PVC, Union, JIS Socket x ASTM Socket With EPDM O-rings.

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

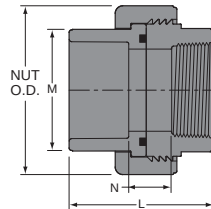


PVC TRANSITION UNION

JIS (mm) Socket X ASTM (in) Fipt

Dimensions Also Applicable to 8298-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8258-016	16 DN x 1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8258-020	20 DN x 3/4	2-3/8	1-17/32	3/4	2-1/2	.27
8258-025	25 DN x 1	2-25/32	1-23/32	13/16	2-21/32	.38
8258-030	30 DN x 1-1/4	2-7/8	2-7/32	7/8	3-5/16	.57
8258-040	40 DN x 1-1/2	3-1/8	2-17/32	25/32	3-17/32	.63
8258-050	50 DN x 2	3-11/16	2-7/8	1-7/32	4-9/32	1.02
8258-075	75 DN x 3	5-1/16	4-3/8	1-13/16	5-3/4	2.43
8258-100	100 DN x 4	5-7/8	5-7/16	2-3/8	7-1/16	3.96

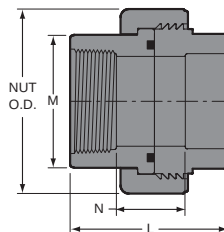
1) For JIS (mm) Socket X ASTM (in) Fipt Unions Equipped with EPDM O-ring, Replace The 8258 With An 8298 Before The Dash.
e.g. Part Number 8298-016 = 16dn x 1/2" PVC, Union, JIS Socket x ASTM Fipt With EPDM O-rings.

PVC TRANSITION UNION

BSP Threaded x ASTM (in) Socket

Dimensions Also Applicable to 8399-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8359-005	1/2	1-29/32	1-3/16	13/32	1-15/16	.12
8359-007	3/4	2-3/8	1-17/32	9/16	2-1/2	.27
8359-010	1	2-9/16	1-27/32	13/32	2-7/8	.38
8359-012	1-1/4	2-5/8	2-1/4	7/16	3-3/16	.37
8359-015	1-1/2	3-3/32	2-9/16	23/32	3-9/16	.62
8359-020	2	3-1/32	3	17/32	4-1/4	.85
8359-030	3	5	4-3/8	1-11/16	5-25/32	2.43
8359-040	4	5-7/8	5-7/16	1-7/8	7-1/16	3.84

1) For BSP Threaded X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8359 With An 8399 Before The Dash.
e.g. Part Number 8399-005 = 1/2" PVC, Union, BSP Thread x ASTM Socket With EPDM O-rings.

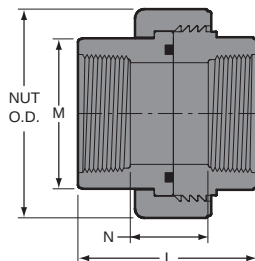


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

PVC TRANSITION UNION

BSP Threaded x ASTM (in.) Fipt
 Dimensions Also Applicable to
 8398-XXX EPDM O-ring Seal Units

235 psi @ 73°F
 (PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8358-005	1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8358-007	3/4	2-3/8	1-17/32	27/32	2-1/2	.28
8358-010	1	2-9/16	1-27/32	7-16	2-7/8	.39
8358-012	1-1/4	2-23/32	2-1/32	27/32	3-3/16	.40
8358-015	1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.64
8358-020	2	3-9/16	3-1/32	1-5/8	4-3/16	1.05
8358-030	3	5-1/32	4-11/32	1-15/16	5-25/32	2.52
8358-040	4	5-7/8	5-7/16	2-3/8	7-1/16	4.00

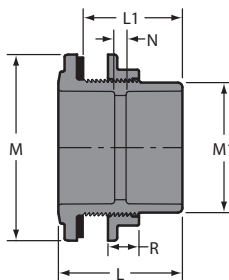
1) For BSP Threaded X ASTM Fipt Unions Equipped with EPDM O-ring, Replace The 8358 With An 8398 Before The Dash.
 e.g. Part Number 8398-005 = 1/2" PVC, Union, BSP Thread x ASTM Fipt With EPDM O-rings.

NEW STYLE - TANK ADAPTER

Socket x Socket

Dimensions Also Applicable to 8170E-XXX & 8170V-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8170-002	8170-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-3/16	1/2	.10	.11
8170-003	8170-003C	3/8	2-1/2	1-27/32	1-5/8	31/32	7/8	1/2	.11	.12
8170-005	8170-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/8	5/8	.22	.23
8170-007	8170-007C	3/4	2-15/16	2-3/16	2-1/4	1-5/8	15/16	5/8	.26	.27
8170-010	8170-010C	1	3-5/16	2-9/16	2-5/8	2	1-1/16	5/8	.37	.41
8170-012	8170-012C	1-1/4	3-7/16	2-5/8	3-1/8	2-5/16	15/16	5/8	.42	.45

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



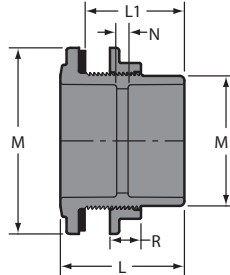
NEW STYLE - TANK ADAPTER

(continued)

Socket x Socket

Dimensions Also Applicable to 8170E-XXX & 8170V-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8170-015	8170-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	13/16	5/8	.98	1.04
8170-020	8170-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	1.28	1.33
8170-025	8170-025C	2-1/2	4-27/32	3-7/8	5-1/4	3-9/16	29/32	1	1.79	2.60
8170-030	8170-030C	3	5-1/2	4-1/2	6	4-9/16	1-11/16	1	2.62	2.69
8170-040	8170-040C	4	5	4	7-1/2	5-1/2	7/16	1-1/4	3.13	3.40
8170-080	8170-080C	8	8-5/8	7	12-15/16	10-1/4	1/2	1-1/2	16.02	17.30

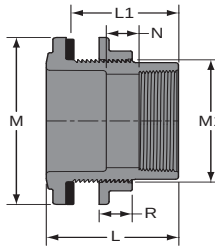
Tank Adapter Referenced Dimension Tolerance = $\pm 1/16$ "

NEW STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 8171E-XXX & 8171V-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8171-002	8171-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.10	.11
8171-003	8171-003C	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.11	.12
8171-005	8171-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/4	5/8	.22	.23
8171-007	8171-007C	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.25	.26
8171-010	8171-010C	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36	.38
8171-012	8171-012C	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8171-015	8171-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.67	.71
8171-020	8171-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.32	1.34



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

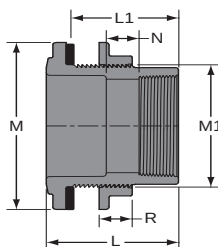
NEW STYLE - TANK ADAPTER

(continued)

Socket x Fipt

Dimensions Also Applicable to 8171E-XXX & 8171V-XXX

150 psi @ 73°F



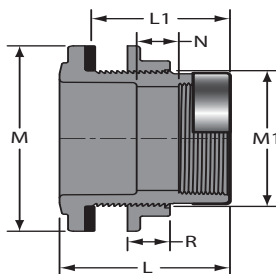
Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8171-025	8171-025C	2-1/2	4-7/8	7/8	5-1/4	3-13/16	1-13/16	1	1.78	1.92
8171-030	8171-030C	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.61	2.80
8171-040	8171-040C	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	3.24	3.36
8171-060	8171-060C	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	5.65	5.92

NEW STYLE - TANK ADAPTER

Socket x SR Fipt

Dimensions Also Applicable to 8171E-XXXSR & 8171V-XXXSR

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8171-002SR	8171-002CSR	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.11	.11
8171-003SR	8171-003CSR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.12	.13
8171-005SR	8171-005CSR	1/2	2-15/16	2-1/4	2-1/16	1-7/32	1-9/32	5/8	.22	.24
8171-007SR	8171-007CSR	3/4	2-15/16	2-3/16	2-1/4	1-5/8	1-1/4	5/8	.26	.28
8171-010SR	8171-010CSR	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36	.38
8171-012SR	8171-012CSR	1-1/4	3-13/32	2-5/8	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8171-015SR	8171-015CSR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.70	.74
8171-020SR	8171-020CSR	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.36	1.70
8171-025SR	8171-025CSR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	1-11/16	1	1.90	1.99
8171-030SR	8171-030CSR	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.78	2.82
8171-040SR	8171-040CSR	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	3.60	4.45
8171-060SR	8171-060CSR	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	5.74	6.02

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

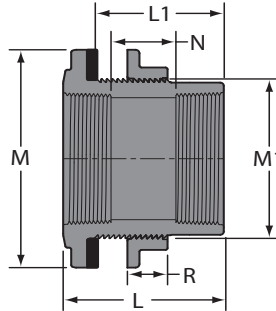


NEW STYLE - TANK ADAPTER

Fipt x Fipt

Dimensions Also Applicable to 8172E-XXX & 8172V-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8172-002	8172-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-5/16	1/2	.10	.11
8172-003	8172-003C	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.13	.14
8172-005	8172-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-13/32	5/8	.23	.24
8172-007	8172-007C	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-1/2	5/8	.25	.26
8172-010	8172-010C	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36	.38
8172-012	8172-012C	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8172-015	8172-015C	1-1/2	3-19/32	3-1/16	3-19/32	2-21/32	1-11/16	5/8	.68	.72
8172-020	8172-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	2-3/16	3/4	1.34	1.42
8172-025	8172-025C	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	1.91	2.06
8172-030	8172-030C	3	5-1/2	4-1/2	6	4-9/16	2-11/16	1	2.80	2.95
8172-040	8172-040C	4	5	4	7-1/2	5-1/2	2	1-1/4	3.53	3.70
8172-060	8172-060C	6	5	4-3/16	9-7/8	7-31/32	1-5/32	1-1/4	5.90	6.21



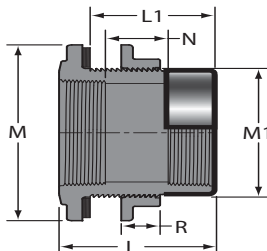
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

NEW STYLE - TANK ADAPTER

Fipt x SR Fipt

Dimensions Also Applicable to 8172E-XXXSR & 8172V-XXXSR

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8172-002SR	8172-002CSR	1/4	2-1/2	1-7/8	1-9/16	1-1/16	1-5/16	1/2	.12	.13
8172-003SR	8172-003CSR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.14	.15
8172-005SR	8172-005CSR	1/2	2-15/16	2-3/16	2-1/16	1-7/32	1-13/32	5/8	.24	.25
8172-007SR	8172-007CSR	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.26	.25
8172-010SR	8172-010CSR	1	3-15/16	2-19/32	2-5/8	1-31/32	1-1/4	5/8	.38	.36
8172-012SR	8172-012CSR	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8172-015SR	8172-015CSR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-3/4	5/8	.73	.77
8172-020SR	8172-020CSR	2	4-1/8	3-1/4	4-27/32	3-1/32	2-1/8	3/4	1.34	1.41
8172-025SR	8172-025CSR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	1.97	2.11
8172-030SR	8172-030CSR	3	5-15/32	4-17/32	5-31/32	4-17/32	2-21/32	1	2.87	3.02
8172-040SR	8172-040CSR	4	5	4	7-1/2	5-1/2	2	1-1/4	3.61	3.80

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/4	1.49	0.99	1/4
	3/8	1.62	1.12	1/4
	1/2	1.98	1.41	1/4
	3/4	2.20	1.57	1/4
	1	2.60	1.90	1/4
	1-1/4	3.04	2.23	1/4
	1-1/2	3.54	2.57	1/4
	2	4.76	3.15	1/4
	2-1/2	5.13	3.70	1/4
	3	5.86	4.39	1/4
	4	7.34	5.31	1/4
	6	9.85	7.95	3/16
	8	12.70	9.94	3/8

New Style Tank Adapter Gasket & Hole Size Requirements			
Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/4	1-1/16	2.50	.50
3/8	1-3/16	3.00	.50
1/2	1-1/2	4.00	.75
3/4	1-3/4	5.00	.75
1	2	7.00	.86
1-1/4	2-3/8	9.50	.86
1-1/2	2-3/4	12.00	.86
2	3-3/8	18.50	1.19
2-1/2	3-7/8	23.50	1.50
3	4-5/8	32.50	2.00
4	5-1/2	43.50	1.25
6	8	79.50	2.06
8	10-3/8	98.00	4.25

* Both outside and inside dimensions are +/- .01 to .03 shore hardness 50-60

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

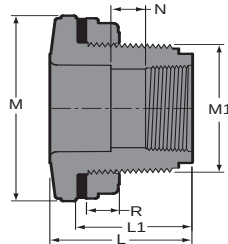


OLD STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 871E-XXX

150 psi @ 73°F



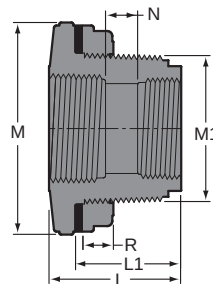
Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
871-005	871-005C	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-3/8	5/8	.24	.26
871-007	871-007C	3/4	2-23/32	2-7/32	2-1/2	1-5/8	29/32	5/8	.30	.32
871-010	871-010C	1	2-25/32	2-1/8	2-13/16	1-7/8	25/32	21/32	.34	.34
871-012	871-012C	1-1/4	3-1/8	2-7/16	3-29/32	2-11/32	27/32	5/8	.64	.63
871-015	871-015C	1-1/2	3-5/32	2-21/32	3-29/32	2-11/32	3/4	5/8	.55	.59
871-020	871-020C	2	3-3/16	2-17/32	4-31/32	3-15/32	13/16	3/4	1.33	1.43
871-030	871-030C	3	4-19/32	3-13/16	6-7/16	4-15/32	31/32	1-3/16	2.47	2.63
871-040	871-040C	4	4-7/16	3-23/32	7-7/16	5-1/2	1/2	1-1/4	3.17	3.37

OLD STYLE - TANK ADAPTER

Fipt x Fipt

Dimensions Also Applicable to 872E-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
872-005	872-005C	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-13/32	5/8	.24	.26
872-007	872-007C	3/4	2-23/32	2-1/4	2-1/2	1-5/8	1-5/32	5/8	.31	.32
872-010	872-010C	1	2-25/32	2-5/16	2-13/16	1-7/8	25/32	5/8	.36	.38
872-012	872-012C	1-1/4	3-1/8	2-5/8	3-27/32	2-11/32	1-1/8	5/8	.67	.65
872-015	872-015C	1-1/2	3-1/8	2-5/8	3-29/32	2-11/32	1-1/16	5/8	.58	.61
872-020	872-020C	2	3-5/32	2-3/8	5-1/16	3-7/16	1-5/32	3/4	1.35	1.42



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

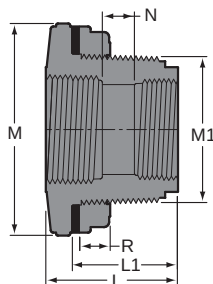
OLD STYLE - TANK ADAPTER

(continued)

Fipt x Fipt

Dimensions Also Applicable to 872E-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
872-030	872-030C	3	4-19/32	3-13/16	6-7/16	4-15/32	1-11/32	1-3/16	2.56	2.61
872-040	872-040C	4	4-7/16	3-1/2	7-1/2	5-1/2	15/16	1-1/4	3.34	3.47

TANK ADAPTER GASKET SECTION					Old Style Tank Adapter Gasket & Hole Size Requirements			
	SIZE	O.D.*	I.D.*	T	Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
	1/2	2.25	1.33	3/16	1/2	1-3/8	3.88	1.06
	3/4	2.49	1.69	3/16	3/4	1-3/4	5.00	1.06
	1	2.79	1.94	3/16	1	2	6.12	1.06
	1-1/4	3.81	2.39	3/16	1-1/4	2-7/16	10.75	1.34
	1-1/2	3.81	2.39	3/16	1-1/2	2-7/16	10.75	1.34
	2	4.89	3.51	3/16	2	3-9/16	18.50	1.16
	3	6.30	4.49	3/16	3	4-9/16	31.00	1.75
	4	7.33	5.50	3/16	4	5-9/16	42.75	1.81

* Both outside and inside dimensions are +/- .03 shore hardness 65-70

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

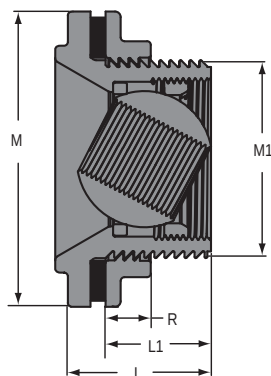


SELF ALIGNING TANK ADAPTER

Fipt

Dimensions Also Applicable to 8172ESA-XXX & 8172VSA-XXX

75 psi @ 73°F



Part Number		Size	L	L1	M	M1	R	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
8172SA-010	8172SA-010C	1	2-9/16	1-3/4	4-7/8	3-1/4	3/4	1.11	1.23
8172SA-020	8172SA-020C	2	2-11/16	1-3/4	6	4-9/16	1	1.99	2.09
8172SA-030	8172SA-030C	3	3-1/4	2-1/4	7-1/2	5-1/2	1-1/4	2.61	2.97



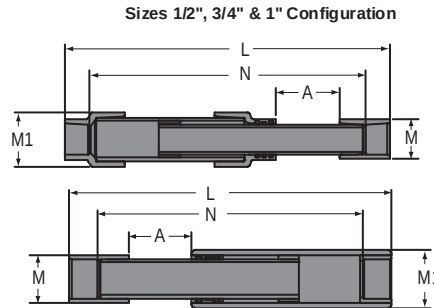
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

FABRICATED EXPANSION JOINTS WITH 6" & 12" TRAVEL

Socket x Socket

1/2" - 2" 235 psi @ 73°F
2-1/2" & 12" 150 psi @ 73°F
14" 100 psi @ 73°F

Note: "A" = midpoint
of extension



Sizes 1-1/4" & Up Configuration

Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005x6	826-005x6C	1/2	3	13-11/16	1-9/32	1-23/32	11-15/16	.50	.55
826-007x6	826-007x6C	3/4	3	14-13/16	1-1/2	2-1/16	12-13/16	1.00	1.10
826-010x6	826-010x6C	1	3	15-15/16	1-23/32	2-11/32	13-11/16	1.00	1.10
826-012x6	826-012x6C	1-1/4	3	15-3/4	2-7/32	2-3/8	13-3/8	1.50	1.65
826-015x6	826-015x6C	1-1/2	3	16-1/8	2-11/32	2-7/8	13-7/16	2.00	2.20
826-020x6	826-020x6C	2	3	16-15/16	2-7/8	3-1/2	13-15/16	3.00	3.30
826-025x6	826-025x6C	2-1/2	3	18-7/8	4-3/16	4-1/2	14-7/8	6.00	6.60
826-030x6	826-030x6C	3	3	18-3/4	4-3/16	4-1/2	15-1/4	6.00	6.60
826-040x6	826-040x6C	4	3	19-3/4	5-5/16	5-9/16	15-3/16	7.00	7.70
826-060x6	826-060x6C	6	3	22-3/4	7-11/16	8-5/8	16-3/4	26.50	29.15
826-080x6	826-080x6C	8	3	27-1/4	9-11/16	10-3/4	19-1/4	40.50	44.55
826-100x6	826-100x6C	10	3	35-7/8	11-13/16	12-3/4	25-7/8	67.00	73.70
826-120x6	826-120x6C	12	3	39-1/2	14-1/8	16	27-1/2	134.00	147.40
826-140x6	---	14	3	49-3/4	15-5/8	16	34-7/8	104.27	---

Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005x12	826-005x12C	1/2	6	16-11/16	1-9/32	1-23/32	14-15/16	.57	.63
826-007x12	826-007x12C	3/4	6	17-13/16	1-1/2	2-1/16	15-13/16	1.14	1.26
826-010x12	826-010x12C	1	6	18-15/16	1-23/32	2-11/32	16-11/16	1.14	1.26
826-012x12	826-012x12C	1-1/4	6	18-3/4	2-7/32	2-3/8	16-3/8	1.71	1.88
826-015x12	826-015x12C	1-1/2	6	19-1/8	2-11/32	2-7/8	16-7/16	2.28	2.51
826-020x12	826-020x12C	2	6	19-15/16	2-7/8	3-1/2	16-15/16	3.43	3.77
826-025x12	826-025x12C	2-1/2	6	21-7/8	4-3/16	4-1/2	17-7/8	6.85	7.54
826-030x12	826-030x12C	3	6	21-3/4	4-3/16	4-1/2	18-1/4	6.85	7.54
826-040x12	826-040x12C	4	6	22-3/4	5-5/16	5-9/16	18-3/16	8.00	8.80
826-060x12	826-060x12C	6	6	25-3/4	7-11/16	8-5/8	19-3/4	30.27	33.30
826-080x12	826-080x12C	8	6	30-1/4	9-11/16	10-3/4	22-1/4	46.26	50.89
826-100x12	826-100x12C	10	6	38-7/8	11-13/16	12-3/4	28-7/8	76.53	84.19
826-120x12	826-120x12C	12	6	42-1/2	14-1/8	16	30-1/2	153.07	141.22
826-140x12	---	14	6	52-3/4	15-5/8	16	37-7/8	159.00	---

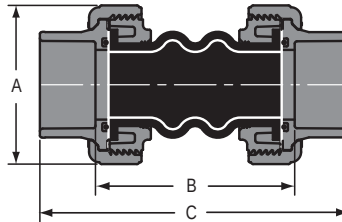
PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



ELASTOMER EXPANSION JOINT WITH NEOPRENE BELLOWS

Socket x Socket

150 psi @ 73°F

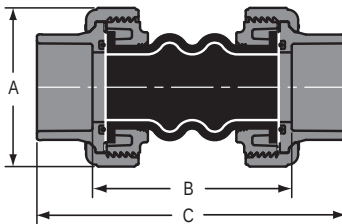


Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ02-007	---	3/4	2-1/4	6-3/8	8-3/8	7/8	1/4	7/8	35°	.50	---
EJ02-010	---	1	2-9/16	5-15/16	8-3/16	7/8	1/4	7/8	25°	.71	---
EJ02-012	---	1-1/4	3-1/8	6-1/16	8-9/16	7/8	1/4	7/8	25°	.70	---
EJ02-015	---	1-1/2	3-9/16	5-7/8	8-5/8	7/8	1/4	7/8	20°	1.07	---
EJ02-020	---	2	4-3/16	5-7/16	8-7/16	7/8	1/4	7/8	15°	1.54	---
EJ20-025	---	2-1/2	6-1/8	6-3/16	9-3/4	7/8	1/4	7/8	15°	4.49	---
EJ02-030	---	3	6-1/8	6-3/16	10	7/8	1/4	7/8	15°	4.71	---

ELASTOMER EXPANSION JOINT WITH EPDM BELLOWS

Socket x Socket

150 psi @ 73°F



Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ22-007	EJ22-007C	3/4	2-1/4	6-3/8	8-3/8	7/8	1/4	7/8	35°	.32	.39
EJ22-010	EJ22-010C	1	2-9/16	5-15/16	8-3/16	7/8	1/4	7/8	25°	.70	.81
EJ22-012	EJ22-012C	1-1/4	3-1/8	6-1/16	8-9/16	7/8	1/4	7/8	25°	.81	.84
EJ22-015	EJ22-015C	1-1/2	3-9/16	5-7/8	8-5/8	7/8	1/4	7/8	20°	1.03	1.07
EJ22-020	EJ22-020C	2	4-3/16	5-7/16	8-7/16	7/8	1/4	7/8	15°	1.54	1.61
EJ22-025	EJ22-025C	2-1/2	6-1/8	6-3/16	9-3/4	7/8	1/4	7/8	15°	4.49	4.77
EJ22-030	EJ22-030C	3	6-1/8	6-3/16	10	7/8	1/4	7/8	15°	4.81	5.04

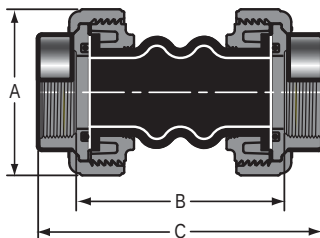


PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

ELASTOMER EXPANSION JOINT WITH NEOPRENE BELLOWS

SR Fipt x SR Fipt

150 psi @ 73°F

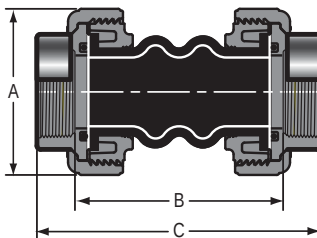


Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ01-007SR	---	3/4	2-1/4	6-3/8	7-3/16	7/8	1/4	7/8	35°	.51	---
EJ01-010SR	---	1	2-9/16	6	7-3/4	7/8	1/4	7/8	25°	.73	---
EJ01-012SR	---	1-1/4	3-1/8	6-1/16	7-15/16	7/8	1/4	7/8	25°	.73	---
EJ01-015SR	---	1-1/2	3-9/16	5-7/8	7-3/4	7/8	1/4	7/8	20°	1.15	---
EJ01-020SR	---	2	4-3/16	5-7/16	7-3/8	7/8	1/4	7/8	15°	1.58	---
EJ01-025SR	---	2-1/2	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.63	---
EJ01-030SR	---	3	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.84	---

ELASTOMER EXPANSION JOINT WITH EPDM BELLOWS

SR Fipt x SR Fipt

150 psi @ 73°F



Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ21-007SR	EJ21-007CSR	3/4	2-1/4	6-3/8	7-3/16	7/8	1/4	7/8	35°	.33	.39
EJ21-010SR	EJ21-010CSR	1	2-9/16	6	7-3/4	7/8	1/4	7/8	25°	.71	.83
EJ21-012SR	EJ21-012CSR	1-1/4	3-1/8	6-1/16	7-15/16	7/8	1/4	7/8	25°	.74	.76
EJ21-015SR	EJ21-015CSR	1-1/2	3-9/16	5-7/8	7-3/4	7/8	1/4	7/8	20°	1.15	1.19
EJ21-020SR	EJ21-020CSR	2	4-3/16	5-7/16	7-3/8	7/8	1/4	7/8	15°	1.58	1.65
EJ21-025SR	EJ21-025CSR	2-1/2	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.63	4.91
EJ21-030SR	EJ21-030CSR	3	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.85	5.19



THERMOPLASTIC FLANGES

MOLDED & FABRICATED



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



Visit our web site
www.spearsmfg.com



THERMOPLASTIC FLANGES

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

GENERAL INFORMATION

Recommendations For Installers And Users

Plastic piping systems should be ENGINEERED, INSTALLED, and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and /or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability.

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING:** SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing Company recommends the use of Spears® Blue 75™ thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturer's application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic thread connection. Unnecessary OVERTIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Thermoplastic Flanges specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

THERMOPLASTIC FLANGES



Bolt Kit Selection Guide

Bolt Hardware Kits Available
For Connection of 2-Spears® Flanges
Includes Bolts, Nuts & Flat Washers for Specified Flange Size

Order Gaskets & Bolt Kits Separately

- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 316 Stainless Steel or Type 304 Stainless Steel



Flange Size	Bolts* Per Kit	Diameter (in.-TPI)	Length (in.)	Kit Part Number		
1/2 & 3/4	4	1/2 - 13	2	Zinc HK-005	316 SS HK1-005	304 SS HK2-005
1 & 1-1/4	4	1/2 - 13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2 - 13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8 - 11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8 - 11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8 - 11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8 - 11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4 - 10	4	HK-060	HK1-060	HK2-060
8	8	3/4 - 10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8 - 9	5	HK-120	HK1-120	HK2-120

* Each Bolt Includes Nut & Two (2) Flat Washers

Bolt Torque

Recommended Bolt Torque is shown in Table 1. Threads should be clean and well lubricated. Actual field conditions may require variations in these recommendations. **CAUTION: UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.**

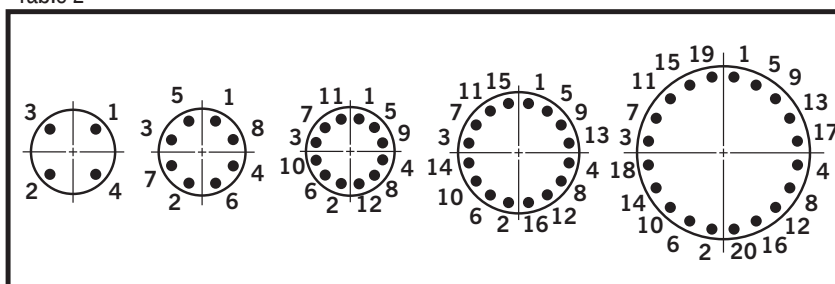
Table 1

Flange Size (in.)	Recommended Torque (ft. lbs.)
1/2 - 1-1/2	12
2 - 4	25
5	30
6 - 8	40
10	64
12	95
14 - 24	110

Torque Sequence

Bolt Torque sequence is shown Below in Table 2.

Table 2





THERMOPLASTIC FLANGES

Gaskets

Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 is recommended.

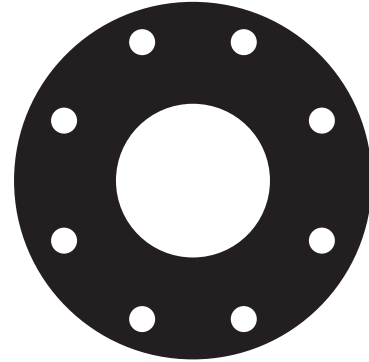
Gasket Selection Guide

Following Gasket Numbers Available from Spears®

Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolts Per Kit	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120



Flange Make-up

Once a flange is joined to pipe, the method for joining two flanges is as follows:

1. Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.
2. With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position.
3. Insert all bolts, washers (two standard flat washers per bolt), and nuts.
4. Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.
5. Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lbs. increments according to the sequence shown in Table 2 following a 180° opposing sequence.
6. Care must be taken to avoid "bending" the flange when joining a Spears® flange to a "raised face" flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Configuration Terminology

Multi-Bolt Pattern Ring — Bolt hole drilling accepts ANSI and Metric Flanges

Socket — Slip socket connection for solvent cement welding

Spigot — Pipe O.D. connection for solvent welding

Fipt — Female Iron Pipe Thread

SR Fipt — Spears® patented Special Reinforced (SR) plastic thread

IPS — Iron Pipe Size

PIP — Plastic Irrigation Pipe



Technical Information

Application

Molded CLASS 150 Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems, where frequent disassembly may be required, and can be used as a transitional fitting for joining plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

150 psi, water at 73°F.

Flange Types

One Piece — Available in socket configuration, sizes 1/2" through 8"; threaded and SR threaded (Special Reinforced) configuration sizes 1/2" through 4".

Van Stone Style — Two-piece design with rotating flange ring, available in socket configurations, sizes 1/2" through 16"; threaded configurations, sizes 1/2" through 4" and spigot configurations, sizes 1/2" through 12".

Blind — Closed ring design for capping off a mating flange, flanged fitting or flanged valve, available in sizes 1/2" through 12".

Materials

All injection molded flanges are produced from either PVC or CPVC materials approved for potable water use by the National Sanitation Foundation (NSF®).

Glass-filled PVC or CPVC materials may be used in certain Van Stone Style flange rings and large diameter Blind flanges where additional reinforcement is deemed necessary.

Conformance Standards

Socket & Spigot — ASTM D 2467 (PVC); ASTM F 439 (CPVC), as applicable.

Threads — ASTM F 1498.

Bolt Hole Pattern — ANSI B16.5; ASTM D 4024.

Material — ASTM D 1784 (PVC Cell Classification 12454-B, CPVC Cell Classification 23447-B).

Weights & Dimensions

Specified minimum bolt lengths are based on the use of two Spears® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variation. Bolts and gaskets are not supplied with flanges.

Dimension references:

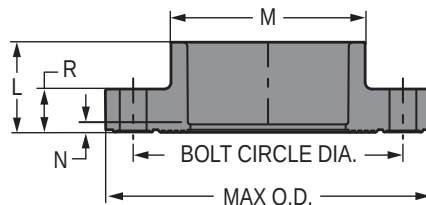
- L** = Overall length of hub, $\pm 1/16$ inch.
- M** = Outside diameter of socket hub, $\pm 1/16$ inch.
- N** = (Laying Length) socket/spigot bottom to seal-ring face of flange, $\pm 1/16$ inch.
- R** = Height (thickness) of flange ring, $\pm 1/16$ inch.
- Max O.D.** = Outside diameter of ring, $\pm 1/16$ inch.
- Bolt Circle Diameter** = ANSI B 16.5 Standard; ASTM D 4024, $\pm 1/16$ inch.



PVC & CPVC INJECTION MOLDED CLASS 150 FLANGES

Flange One Piece

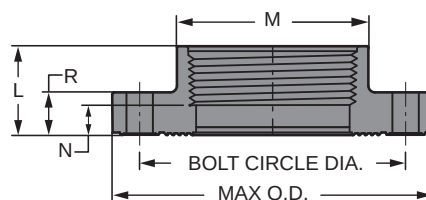
Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
851-005	851-005C	1/2	1-1/16	1-9/32	1/8	9/16	2-3/8	4	1/2	2	3-1/2	.22	.24
851-007	851-007C	3/4	1-3/16	1-1/2	1/8	5/8	2-3/4	4	1/2	2	3-7/8	.31	.31
851-010	851-010C	1	1-5/16	1-13/16	3/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.44	.47
851-012	851-012C	1-1/4	1-7/16	2-7/32	3/16	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.41	.42
851-015	851-015C	1-1/2	1-19/32	2-1/2	3/16	23/32	3-7/8	4	1/2	2-1/2	5-1/16	.58	.61
851-020	851-020C	2	1-27/32	3	5/16	27/32	4-3/4	4	5/8	3	6	.82	.95
851-025	851-025C	2-1/2	2-1/4	3-1/2	1/2	1	5-1/2	4	5/8	3-1/4	7	1.63	1.67
851-030	851-030C	3	2-5/16	4-9/32	3/8	1-1/16	6	4	5/8	3-1/4	7-1/2	1.74	1.81
851-040	851-040C	4	2-7/16	5-7/32	3/16	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.67	2.78
851-050	851-050C	5	3-1/4	6-3/8	1/4	1	8-1/2	8	3/4	3-3/4	10-1/8	3.00	3.17
851-060	851-060C	6	3-1/4	7-9/16	1/4	1-3/8	9-1/2	8	3/4	4	11	4.06	4.34
851-080	851-080C	8	4-17/32	9-3/4	1/2	1-7/16	11-11/16	8	3/4	4-1/2	13-5/8	7.67	8.02
851-100F	851-100CF	10	9-7/8	11-15/16	5-5/8	1-1/4	14-1/4	12	7/8	4	16	18.90	19.27
851-120F	851-120CF	12	10-11/16	14-1/8	4-7/16	1-3/8	17	12	7/8	4	19	26.92	30.67

Flange One Piece

Fipt



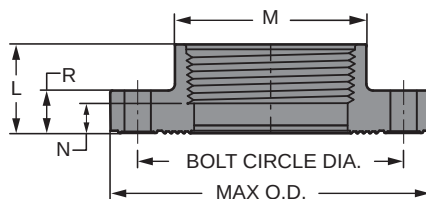
Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
852-005	852-005C	1/2	1-1/16	1-5/16	9/32	9/16	2-3/8	4	1/2	2	3-1/2	.21	.22
852-007	852-007C	3/4	1-3/16	1-17/32	15/32	5/8	2-3/4	4	1/2	2	3-7/8	.30	.32
852-010	852-010C	1	1-5/16	1-13/16	7/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.41	.48
852-012	852-012C	1-1/4	1-3/8	2-7/32	17/32	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.44	.46
852-015	852-015C	1-1/2	1-11/16	2-1/2	19/32	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.61	.64

PVC & CPVC INJECTION MOLDED CLASS 150 FLANGES



Flange One Piece (continued)

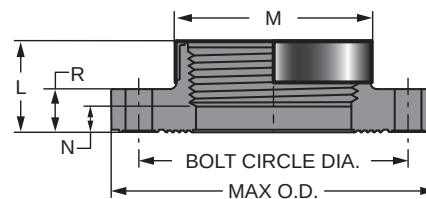
Fipt



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
852-020	852-020C	2	1-27/32	3	7/8	7/8	4-3/4	4	5/8	3	6	.96	1.00
852-025	852-025C	2-1/2	2-1/4	3-1/2	15/16	1	5-1/2	4	5/8	3-1/4	7	1.65	1.41
852-030	852-030C	3	2-5/16	4-9/32	29/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.83	1.91
852-040	852-040C	4	2-1/16	5-7/16	5/16	1-1/4	7-1/2	8	5/8	3-1/2	9	2.79	2.86
852-050F	852-050CF	5	6-5/8	6-1/8	5-1/4	1-5/16	8-1/2	8	3/4	3-3/4	10-1/8	5.25	5.51
852-060F	852-060CF	6	6-15/16	7-1/4	5-1/2	1-5/16	9-1/2	8	3/4	4	11	7.16	7.69
852-080F	852-080CF	8	8-9/16	9-7/16	6-15/16	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	13.41	13.92
852-100F	852-100CF	10	7-3/8	11-3/4	5-1/2	1-3/8	14-1/4	12	7/8	5	16	20.65	20.72
852-120F	852-120CF	12	7	13-15/16	5	1-3/8	17	12	7/8	4	19	21.79	22.59

Special Reinforced Flange One Piece

SR Fipt

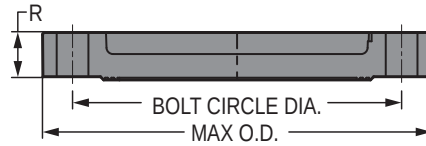


Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
852-005SR	852-005CSR	1/2	1-3/32	1-7/32	11/32	9/16	2-3/8	4	1/2	2	3-1/2	.20	.22
852-007SR	852-007CSR	3/4	1-3/16	1-3/8	7/16	5/8	2-3/4	4	1/2	2	3-7/8	.27	.30
852-010SR	852-010CSR	1	1-7/16	1-23/32	17/32	21/32	3-1/8	4	1/2	2-1/4	4-1/4	.37	.39
852-012SR	852-012CSR	1-1/4	1-9/16	2-1/16	19/32	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.49	.52
852-015SR	852-015CSR	1-1/2	1-3/4	2-7/16	3/4	3/4	3-7/8	4	1/2	2-1/2	5	.63	.67
852-020SR	852-020CSR	2	1-13/16	3-1/32	13/16	13/16	4-3/4	4	5/8	3	5-31/32	.99	1.04
852-025SR	852-025CSR	2-1/2	2-1/8	3-19/32	3/8	1	5-1/2	4	5/8	3-1/4	7	1.58	1.69
852-030SR	852-030CSR	3	2-5/16	4-9/32	27/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.79	1.97
852-040SR	852-040CSR	4	2-1/2	5-1/4	1	1-5/32	7-1/2	8	5/8	3-1/2	9	2.74	2.89



PVC & CPVC INJECTION MOLDED CLASS 150 FLANGES

BLIND FLANGE

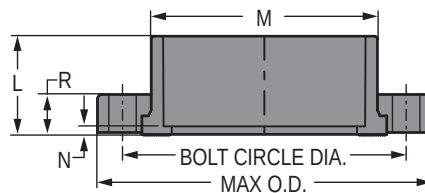


Part Number		Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
853-005	853-005C	1/2	9/16	2-3/8	4	1/2	2	3-1/2	.21	.21
853-007	853-007C	3/4	5/8	2-3/4	4	1/2	2	3-7/8	.28	.30
853-010	853-010C	1	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.41	.47
853-012	853-012C	1-1/4	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.37	.40
853-015	853-015C	1-1/2	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.50	.52
853-020	853-020C	2	27/32	4-3/4	4	5/8	3	5-31/32	.82	.88
853-025	853-025C	2-1/2	1	5-1/2	4	5/8	3-1/4	7	1.61	1.63
853-030	853-030C	3	1-1/16	6	4	5/8	3-1/4	7-1/2	1.63	1.69
853-040	853-040C	4	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.42	2.98
853-060	853-060C	6	1-3/8	9-1/2	8	3/4	4	11	4.36	4.45
853-080	853-080C	8	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	6.83	7.20
853-100	853-100C	10	1-11/16	14-1/4	12	7/8	5	16	11.32	11.80
853-120	853-120C	12	1-11/16	17	12	7/8	5	19	15.49	17.20

Flange Van Stone Style

(Two Piece)

Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
854-005	854-005C	1/2	1-1/32	1-7/32	5/32	17/32	2-3/8	4	1/2	2	3-1/2	.19	.20
854-007	854-007C	3/4	1-1/8	1-7/16	5/32	9/16	2-3/4	4	1/2	2	3-7/8	.26	.27
854-010	854-010C	1	1-9/32	1-3/4	5/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.36	.37
854-012	854-012C	1-1/4	1-13/32	2-5/32	5/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.46	.45
854-015	854-015C	1-1/2	1-17/32	2-7/16	3/16	3/4	3-7/8	4	1/2	2-1/2	5	.56	.60
854-020	854-020C	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	3	6	.85	.91

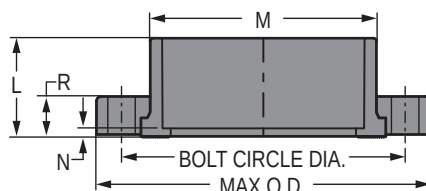
PVC & CPVC INJECTION MOLDED CLASS 150 FLANGES



Flange Van Stone Style (continued)

(Two Piece)

Socket



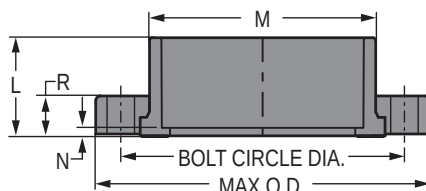
Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
854-025	854-025C	2-1/2	2	3-1/2	3/16	31/32	5-1/2	4	5/8	3-1/4	7	1.40	1.40
854-030	854-030C	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.66	1.70
854-040	854-040C	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	3-1/2	9	2.68	2.84
854-050	854-050C	5	3	6-1/4	3/8	1-1/8	8-1/2	8	3/4	3-3/4	10-1/8	3.35	3.60
854-060	854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.54	4.67
854-080	854-080C	8	4-3/8	9-5/16	9/32	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	6.69	7.06
854-100	854-100C	10	5-11/16	11-3/4	21/32	1-5/8	14-1/4	12	7/8	5	16	11.45	11.76
854-120	854-120C	12	7-1/4	13-3/4	5/8	1-1/2	17	12	7/8	5	19	16.78	18.50
854-140	854-140C	14	7-1/2	15-1/2	1/2	2	18-3/4	12	1	5-1/2	21	26.84	28.42
854-160	854-160C	16	8-3/4	17-3/4	3/4	2-3/8	21-1/4	16	1	6-1/2	23-1/2	37.64	24.81
854-180	854-180C	18	9	20	1/4	2-3/8	22-3/4	16	1-1/8	6-1/2	25	45.33	46.48

Flange Van Stone Style

with Plastic Solid Ring

(Two Piece)

Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
S854-020	---	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	3	6	.85	---
S854-030	S854-030C	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.66	1.70
S854-040	S854-040C	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	1/2	9	3.02	2.84
S854-060	S854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.54	4.67



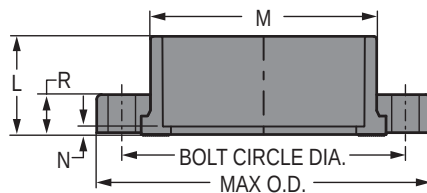
PVC & CPVC INJECTION MOLDED CLASS 150 FLANGES

Flange Van Stone Style (continued)

with Plastic Solid Ring

(Two Piece)

Socket



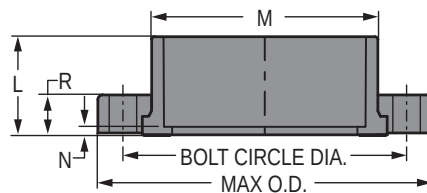
Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
S854-080	S854-080C	8	4-3/8	9-5/16	3/8	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	6.69	7.06
S854-100	S854-100C	10	5-11/16	11-3/4	11/16	1-5/8	14-1/4	12	7/8	5	16	11.69	11.76
S854-120	S854-120C	12	7-1/4	13-3/4	5/8	1-3/4	17	12	7/8	5	19	16.78	19.13

Flange Van Stone Style

with Multi-Bolt Pattern Ring

(Two Piece)

Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						Min	Max				PVC	CPVC
M854-020	M854-020C	2	1-11/16	2-15/16	3/16	13/16	4-1/2	4-15/16	4	5/8	6	.85	.93
M854-060	M854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-7/32	9-1/2	8	3/4	11	4.80	5.09
M854-080	M854-080C	8	4-3/8	9-5/16	3/8	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	6.69	7.21

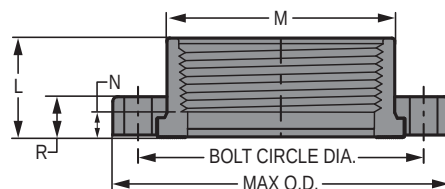
PVC & CPVC INJECTION MOLDED CLASS 150 FLANGES



Flange Van Stone Style

(Two Piece)

Fipt

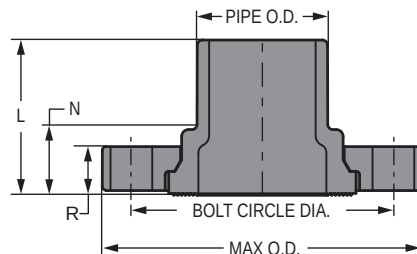


Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
855-005	855-005C	1/2	1-1/32	1-7/32	9/32	17/32	2-3/8	4	1/2	2	3-1/2	.19	.20
855-007	855-007C	3/4	1-5/32	1-3/8	13/32	9/16	2-3/4	4	1/2	2	3-7/8	.27	.28
855-010	855-010C	1	1-1/4	1-3/4	5/16	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.36	.39
855-012	855-012C	1-1/4	1-3/8	2-1/8	13/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.46	.47
855-015	855-015C	1-1/2	1-15/32	2-7/16	13/32	3/4	3-7/8	4	1/2	2-1/2	5	.55	.61
855-020	855-020C	2	1-9/16	2-31/32	1/2	13/16	4-3/4	4	5/8	3	6	.87	.94
855-025	855-025C	2-1/2	2	3-9/16	7/16	1	5-1/2	4	5/8	3-1/4	7	1.22	1.50
855-030	855-030C	3	2-1/8	4-1/4	1/2	1-1/16	6	4	5/8	3-1/4	7-1/2	1.73	1.79
855-040	855-040C	4	2-1/16	5-1/4	3/8	1-1/4	7-1/2	8	5/8	3-1/2	9	2.61	2.78
855-060F	855-060CF	6	6-3/8	7-3/16	4-15/16	1-1/4	9-1/2	8	3/4	4	11	7.62	7.69
855-080F	855-080CF	8	8-1/8	9-5/16	6-7/16	1-1/2	11-3/4	8	3/4	4-1/2	13-1/2	12.84	13.92
855-100F	855-100CF	10	10-3/8	11-9/16	8-9/16	1-11/16	14-1/4	12	7/8	5	16	20.65	20.72
855-120F	855-120CF	12	11-13/16	13-3/4	9-3/4	1-5/8	17	12	7/8	5	19	33.52	34.00

Flange Van Stone Style

(Two Piece)

Spigot



Part Number		Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
856-005	856-005C	1/2	1-3/4	29/32	17/32	2-3/8	4	1/2	2	3-1/2	.20	.21
856-007	856-007C	3/4	1-15/16	31/32	9/16	2-3/4	4	1/2	2	3-7/8	.29	.30
856-010	856-010C	1	2-3/16	1-1/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.39	.41
856-012	856-012C	1-1/4	2-11/32	1-3/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.50	.50

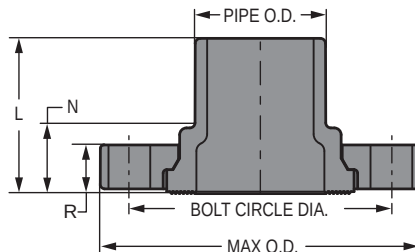


PVC & CPVC INJECTION MOLDED CLASS 150 FLANGES

Flange Van Stone Style (continued)

(Two Piece)

Spigot



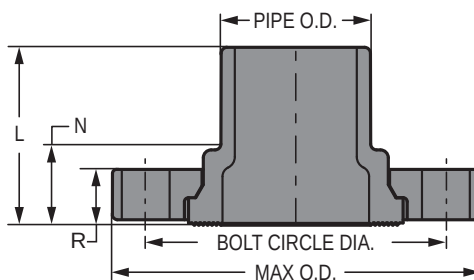
Part Number		Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
856-015	856-015C	1-1/2	2-5/8	1-9/32	3/4	3-7/8	4	1/2	2-1/2	5	.60	.65
856-020	856-020C	2	2-7/8	1-11/32	13/16	4-3/4	4	5/8	3	6	.94	1.00
856-025	856-025C	2-1/2	3-1/16	1-9/32	1	5-1/2	4	5/8	3-1/4	7	1.29	1.54
856-030	856-030C	3	3-3/8	1-7/16	1-1/16	6	4	5/8	3-1/4	7-1/2	1.82	1.88
856-040	856-040C	4	3-7/8	1-5/8	1-1/4	7-1/2	8	5/8	3-1/2	9	2.93	3.12
856-060	856-060C	6	4-3/4	1-25/32	1-9/32	9-1/2	8	3/4	4	11	4.62	4.79
856-080	856-080C	8	5-7/8	1-15/16	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	7.95	8.17
856-100	856-100C	10	8	2-1/4	1-5/8	14-1/4	12	7/8	5	16	15.61	16.09
856-120	856-120C	12	8-1/2	2-3/16	1-5/8	17	12	7/8	5	19	21.31	22.70

Flange Van Stone Style

with Multi-Bolt Pattern Ring

(Two Piece)

Spigot



Part Number		Size	L	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC					Min.	Max.				PVC	CPVC
M856-020	M856-020C	2	2-7/8	1-11/32	13/16	4-1/2	4-15/16	4	5/8	6	.94	1.00
M856-060	M856-060C	6	4-3/4	1-25/32	1-9/32	9-7/32	9-1/2	8	3/4	11	4.77	5.21
M856-080	M856-080C	8	5-7/8	1-15/16	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	7.95	8.32



Technical Information

Application

Fabricated IPS and PIP Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) or PIP (Plastic Irrigation Pipe) plastic piping systems, where frequent disassembly may be required. These flanges can be used as transitional fittings for joining IPS-to-IPS, PIP-to-PIP, IPS-to-PIP, or plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

All standard fabricated flanges are Van Stone Style (except blind flange) — two piece design with rotating flange ring.

Class 150 IPS Flanges (with steel ring): 150 psi, water at 73°F.

IPS Flanges 18" - 24" (with plastic ring): 50 psi, water at 73°F.

IPS Flanges, Class 300 Bolt Pattern (with plastic ring): 1/2" - 16" 150 psi, 18" - 24" 50 psi, water at 73°F.

Blind Flanges, 14" - 24": 50 psi, water at 73°F.

PIP Flanges, 6" - 16" (with plastic ring & molded IPS flanges w/PIP Adapters): 125 psi, water at 73°F

PIP Flanges, 18" - 24" (with steel ring): 125 psi, water at 73°F

Flange Types

Van Stone Style Class 150 IPS (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style IPS (with plastic ring) — Fabricated PVC body with PVC flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style PIP (with plastic ring) — PIP adapter fabricated to injection molded PVC Van Stone Style IPS flange, available in sizes 6" through 16", slip socket.

Van Stone Style PIP (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 14" through 24", slip socket.

Blind — Closed ring design for capping off a mating flange; fabricated PVC available in sizes 5" and 14" through 24".

Special Note On PIP Flange Sizes

In order to facilitate connections between IPS and PIP systems, all Plastic Irrigation Pipe flanges are fabricated with PIP sockets using standard IPS Flange Rings. These are indicated in dimension tables under "Size" as (nominal IPS flange size) x (actual PIP O.D.), such as: 6" x 6.140".

To better meet user needs, Spears® offers flanges for 15.300" O.D. PIP with either 14" or 16" IPS Flange Rings. In addition, both 18.360" and 18.701" O.D. PIP are offered with 18" IPS Flange Rings.

Materials

All fabricated flanges are produced from PVC & CPVC materials approved for potable water use by the National Sanitation Foundation (NSF®).

Steel flange rings are carbon steel.

Conformance Standards

Materials — ASTM D 1784 (PVC Cell Classification 12454-B, CPVC Cell Classification 23447-B).



PVC & CPVC FABRICATED IPS, PIP & CLASS 300 FLANGES

Weights & Dimensions

Specified minimum bolt lengths are based on the use of two Spears® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variations.

Note: Bolts and gaskets are not supplied with flanges.

Dimension references:

L = Overall length of hub, $\pm 1/2$ inch.

M = Outside diameter of socket hub, $\pm 1/4$ inch.

N = (Laying Length) socket bottom to seal-ring face of flange, $\pm 1/2$ inch.

R = Height (thickness) of flange ring, $\pm 1/16$ inch.

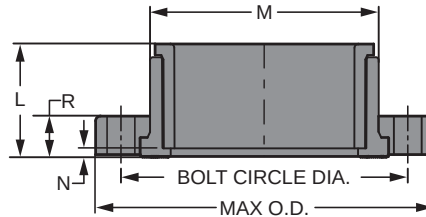
Max O.D. = Outside diameter of ring, $\pm 1/16$ inch.

Bolt Circle Diameter = ANSI B16.5 Standard; ASTM D 4024, $\pm 1/16$ inch.

Flange Van Stone Style PIP

(with Plastic Ring)

Socket

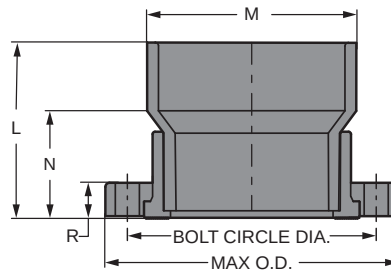


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-060F	6x6.140	4-1/16	7-9/16	11/16	1-1/4	9-1/2	8	3/4	4	11-1/2	5.53
354-080F	8x8.160	4-15/16	9-3/8	9/16	1-1/2	11-3/4	8	3/4	4-1/2	13-5/8	8.30
354-100F	10x10.200	6-1/4	11-3/4	1	1-5/8	14-1/4	12	7/8	5	16	14.49
354-120F	12x12.240	7-5/16	13-13/16	1-1/16	1-5/8	17	12	7/8	5	19	21.59
354-151F	16x15.300	8-11/16	17-3/4	11/16	2-3/8	21-1/4	16	1	6-1/2	23-1/2	66.06

Flange Van Stone Style PIP

(with Plastic Ring)

Socket



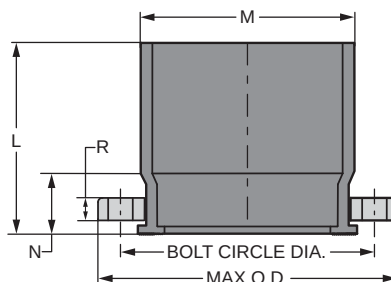
Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-150F	14x15.300	19-5/16	16-3/16	10-5/16	2	18-3/4	12	1	5-1/2	21	47.29

PVC & CPVC FABRICATED IPS, PIP & CLASS 300 FLANGES



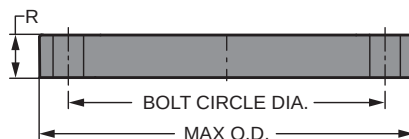
Flange Van Stone Style PIP (with Steel Ring)

Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-181F	18x18.701	15-1/8	19-9/16	6-1/8	1/2	22-3/4	16	1-1/8	3	25	53.80
354-182F	18x18.360	11-5/8	19-1/4	5-5/8	1/2	22-3/4	16	1-1/8	3	25	53.80
354-200F	20x20.400	11-3/8	21-9/16	5-3/8	1/2	25	20	1-1/8	3	27-1/2	63.06
354-201F	20x22.047	16-9/16	23-1/4	6-9/16	1/2	25	20	1-1/8	3	27-1/2	64.43
354-241F	24x24.803	19-7/8	26-3/16	7-7/8	1/2	29-1/2	20	1-1/4	3	32	90.50

Blind Flange



Part Number		Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
853-050F	853-050CF	5	1	8-1/2	8	3/4	4-1/8	10-1/16	3.63	3.90
853-140F	853-140CF	14	1-1/2	18-3/4	12	1	4-1/8	21	27.50	28.39
853-160F	853-160CF	16	1-1/2	21-1/4	16	1	4-1/8	23-1/2	33.83	37.21
853-180F	853-180CF	18	1-1/2	22-3/4	16	1-1/8	4-1/8	25	39.52	43.47
853-200F	853-200CF	20	1-1/2	25	20	1-1/8	4-1/8	27-1/2	47.67	52.43
853-240F	853-240CF	24	1-1/2	29-1/2	20	1-1/4	5-1/2	32	61.96	68.15

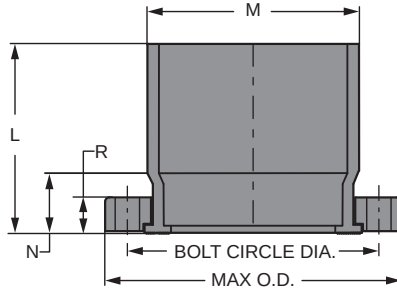


PVC & CPVC FABRICATED IPS, PIP & CLASS 300 FLANGES

Flange Van Stone Style IPS

(with Plastic Ring)

Socket

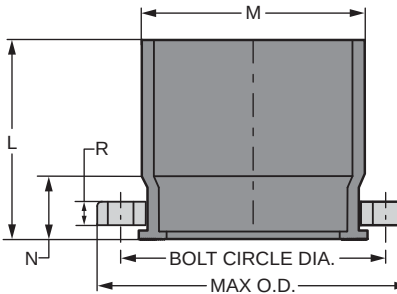


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180FP	18	15	18-7/8	6	1-1/2	22-3/4	16	1-1/8	4-1/8	25	36.09
854-200FP	20	16	21-3/16	6	1-1/2	25	20	1-1/8	5-1/2	27-1/2	43.61
854-240FP	24	19	25-3/8	7	1-1/2	29-1/2	20	1-1/4	5-1/2	32	80.93

Flange Van Stone Style IPS

(with Steel Ring)

Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180FS	18	14	18-7/8	5	1/2	22-3/4	16	1-1/8	3	25	49.30
854-200FS	20	15	21-3/16	5	1/2	25	20	1-1/8	3	27-9/16	65.00
854-240FS	24	18	25-3/8	6	1/2	29-1/2	20	1-1/4	3	32	86.15

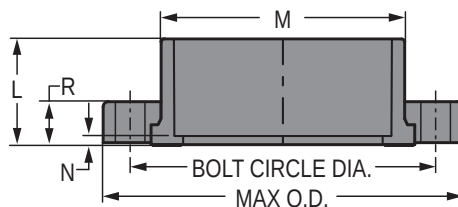
PVC & CPVC FABRICATED IPS, PIP & CLASS 300 FLANGES



Flange Van Stone Style Class 300

(with Plastic Ring)

Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.
PVC	CPVC										
854-005CL300	854-005CL300C	1/2	1	1-3/16	3/16	1/2	2-5/8	4	1/2	2	3-3/4
854-007CL300	854-007CL300C	3/4	1-1/8	1-3/8	3/16	1	3-1/4	4	5/8	3-1/2	4-5/8
854-010CL300	854-010CL300C	1	1-1/4	1-3/4	3/16	1	3-1/2	4	5/8	3-1/2	4-7/8
854-012CL300	854-012CL300C	1-1/4	1-3/8	2-1/8	1/8	1	3-7/8	4	5/8	3-1/2	5-1/4
854-015CL300	854-015CL300C	1-1/2	1-1/2	2-7/16	3/16	1	4-1/2	4	5/8	3-1/2	6-1/8
854-020CL300	854-020CL300C	2	1-11/16	2-15/16	3/16	1	5	8	5/8	3-1/2	6-1/2
854-025CL300	854-025CL300C	2-1/2	2	3-9/16	1/4	1	5-7/8	8	3/4	3-1/2	7-1/2
854-030CL300	854-030CL300C	3	2-1/8	4-1/4	1/4	1	6-5/8	8	3/4	3-1/2	8-1/4
854-040CL300	854-040CL300C	4	2-1/2	5-1/4	1/4	1-1/2	7-7/8	8	3/4	4-1/2	10
854-060CL300	854-060CL300C	6	3-7/16	7-9/16	3/8	1-1/2	10-5/8	12	3/4	4-1/2	12-1/2
854-080CL300	854-080CL300C	8	4-3/8	9-3/8	5/16	1-1/2	13	12	7/8	4-1/2	15
854-100CL300	854-100CL300C	10	5-11/16	11-3/4	5/8	1-1/2	15-1/4	16	1	4-1/2	17-1/2
854-120CL300	854-120CL300C	12	7-5/16	13-13/16	9/16	1-1/2	17-3/4	16	1-1/8	4-1/2	20-1/2
854-140CL300	854-140CL300C	14	7-9/16	15-9/16	9/16	2	20-1/4	20	1-1/8	5-1/2	23
854-160CL300	854-160CL300C	16	8-9/16	17-3/4	9/16	2	22-1/2	20	1-1/4	6	25-1/2

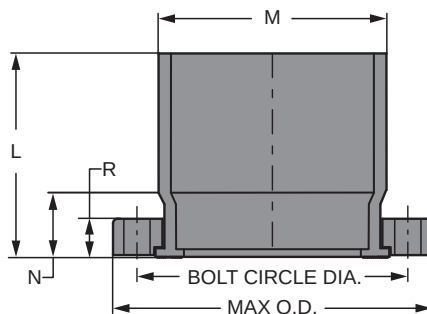


PVC & CPVC FABRICATED IPS, PIP & CLASS 300 FLANGES

Flange Van Stone Style Class 300 (continued)

(with Plastic Ring)

Socket

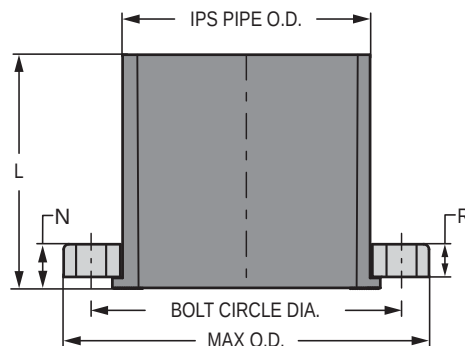


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180CL300	18	15	18-7/8	6	2	24-3/4	24	1-1/4	6	28	61.11
854-200CL300	20	15-1/4	21-3/16	5-1/4	2	27	24	1-1/4	6	30-1/2	68.38
854-240CL300	24	19	25-3/8	7	2	32	24	1-1/2	6	36	134.51

Flange Van Stone Style IPS

(with Plastic Ring)

Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
856-140FP	14	15-5/16	7-9/16	2	18-3/4	12	1	5-1/2	21	24.00
856-160FP	16	17-13/16	8-9/16	2-3/8	21-1/4	16	1	6-1/2	23-1/2	61.83
856-180FP	18	19-9/16	9-9/16	2-3/8	22-3/4	16	1-1/8	6-1/2	25	34.81
856-200FP	20	13	2-1/16	1-1/2	25	20	1-1/8	5-1/2	27-1/2	42.50
856-240FP	24	16- 3/8	2-1/8	1-1/2	29-1/2	20	1-1/4	5-1/2	32	68.00

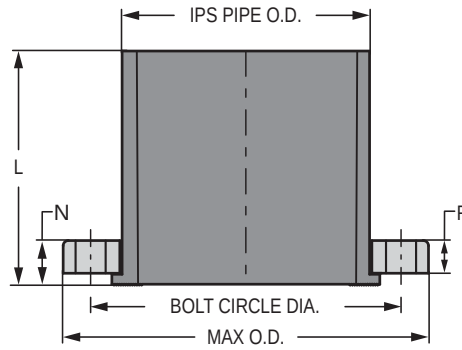
PVC & CPVC FABRICATED IPS, PIP & CLASS 300 FLANGES



Flange Van Stone Style IPS

(with Steel Ring)

Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
856-140FS	14	10	15/16	1/2	18-3/4	12	1	3	21	36.63
856-160FS	16	11	1	1/2	21-1/4	16	1	3	23-1/2	46.50
856-180FS	18	12	15/16	1/2	22-3/4	16	1-1/8	3	25	47.27
856-200FS	20	13	1-1/16	1/2	25	20	1-1/8	3	27-1/2	59.00
856-240FS	24	15-3/8	1-1/8	1/2	29-1/2	20	1-1/4	3	32	84.00



Thermoplastic Valves & Actuated Valves & Accessories



PRODUCT GUIDE & ENGINEERING SPECIFICATIONS



Visit our web site
www.spearsmfg.com



The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Since 1969, Spears® Manufacturing Company has developed high quality thermoplastic piping system components to better meet industry needs. Spears® thermoplastic valves have been developed through years of product improvement testing, combined with the latest in computer aided engineering and manufacturing technology. Today, Spears® valves are recognized for their quality, reliability and long service life. Backed by the best in customer service and product availability, Spears® valves are the first choice for use in a wide variety of applications, including Industrial & Chemical Processing, Turf & Irrigation, Pool & Spa, and numerous Original Equipment Manufacture products.

Valve Function Basics

Ball Valves

Ball valves derive their name from the on/off function accomplished by means of a flow-controlling ball located in the center of the valve body. A hole through the center of the ball (valve bore) connects the inlet and outlet sides of the valve for fluid stream transfer. The ball rotates 90° on an axis perpendicular to the fluid stream in order to block flow in the “off” position. The ball is held in place between two valve seats, which serve as a “bubble tight” seal off, while providing lubrication during valve operation. Elastomer O-rings are used in the stem and seal carrier to prevent fluid leakage. Pressure drop is virtually eliminated in the full-open position, since the valve bore is the same size as Schedule 80 system piping. The T-Style ball valve is a special configuration incorporating a Tee fitting at one end of the valve. This design maintains close proximity of the valve to the fluid mainline to minimize “dead leg” of potential fluid accumulation, where required by specific application.

3-Way Ball Valves

3-Way ball valves are “diverter” style ball valves that provide an additional port to redirect the fluid stream. Valve configurations are either vertical (bottom branch port) or horizontal (side branch port). Multiple ball-port options are available in which different hole patterns in the valve ball provide alternative paths to divert flow. These diverter style 3-Way ball valves have no shutoff on the branch ports.

Check Valves

Check valves are automatic valves that open with forward flow and close with reverse flow. Exact operation will vary depending on the type of check valve mechanism. These include a ball (Ball Check), a swinging disc (Swing Check), a “double disc” (Butterfly Check), a weighted plug (Y-Check), and spring assisted types of check devices. These include a spring assisted swinging disc (Spring Check) and a spring mounted linear disc (In-Line Spring Check). Regardless of type, a check valve has a closure device positioned in the valve body between inlet and outlet so that the fluid stream is easily transmitted in the direction of flow, but is allowed to move against the check device in the event of flow in the reverse direction. Reversed flow is stopped or held in “check” by fluid backflow pressure which seats the closure device against the valve body. Standard elastomer O-ring seals are used in all Spears® Ball Check Valves and Industrial Swing Check Valves. Utility Swing and Spring Check Valves, and Butterfly Check Valves use an elastomer membrane seal; In-Line Spring Check Valves and Y-Check valves use an elastomer seat. Spears® Check Valves have been carefully engineered to minimize pressure drop and can be installed in either horizontal or vertical positions, within the limitations of the specific type of closure device. Ball Check Valves are well suited for general applications of fluids free from debris and entrained solids. Butterfly Check Valves have minimum space requirements and, along with Swing Check Valves, are better for use with fluids containing solids or debris. Swing Check Valves additionally allow higher volume of fluid transmission. Industrial Swing Check models can be fitted with an optional counter balance device to further control closing speed. The Utility Spring Check Valve (spring assisted Swing Check) aids in valve closing, while the In-Line Spring Check can be adjusted for resistance to opening pressure.



Introduction to Spears® Valves

Swing Check Ball Valves

Swing check ball valves are a special design that combines the basic function of a ball valve and a swing check valve for use in general purpose applications where an in-line ball and check valve configuration is required.

Gate Valves

Gate valves perform an on/off function accomplished by means of a flow-controlling gate centered in the valve body between the inlet and outlet sides of the valve. The gate moves along a vertical stem axis, perpendicular to the fluid stream, thereby blocking the flow in the closed position and variably increasing the flow as the gate is moved to the full open position. Spears® gate valves use either a cylindrical plug (Plug Gate Valves) or a wedge-shaped gate and sealing surface design (regular Gate Valves). Both provide positive shut off when engaged with the valve body in the closed position and feature non-rising type stem. This provides vertical movement of the gate without extension of the stem above the valve body.

Butterfly Valves

Butterfly valves are rotary valves in which a disc is rotated 90° to open or close the flow passage. In the full closed position, the disc seals against an elastomer seat. Flow control can be accomplished by varying the degree to which the disc is opened. Spears® Standard and True Lug type Butterfly Valves utilize a special offset disc and low contact seat designed. Spears® Wafer style Butterfly Valve incorporates a special low contact, disc-mounted seat and centered disc. These designs minimize operation torque and improve sealing capabilities over conventional rubber seated valves.

Diaphragm Valves

Diaphragm valves utilize a moveable elastomeric membrane, or “diaphragm”, to constrict the flow passage through the valve, thereby controlling or throttling fluid flow. The diaphragm additionally isolates system fluids from internal moving parts of the valve. In the Weir-Type design, a raised area in the center of the waterway serves as a seal-off point for the elastomeric diaphragm. When installed in a horizontal position, this additionally facilitates drainage of fluid from the valve. From the full-open position, operation of the valve is accomplished by rotating the handle to vertically move a compressor unit on a threaded shaft. This compresses the attached elastomeric diaphragm to constrict the waterway and finally seal-off flow. Spears® diaphragm valves provide an indicator in the center of the handle for 360° visibility of valve position, and a special stop on the compressor to prevent damage from over-tightening. The T-Style “Zero Dead-Leg” Diaphragm Valve is a special configuration incorporating a Tee fitting at one end of the valve. This design maintains close proximity of the valve to the fluid mainline to minimize “dead leg” of potential fluid accumulation, where required by specific application.

Globe Valves & Y-Pattern Valves

Globe valves are characterized by a partition separating the two halves of the body with a center passage that is opened and closed by a screw-down/screw-up seat mounted at right angle to the body. The “Globe” name was derived from the original spherical body design for these valves. Globe valves offer excellent flow regulating characteristics, but have a high resistance due to the turning flow path. The Y-Pattern Valve (aka, “oblique valves”) is a hybrid globe valve incorporating an angled stem. This less restrictive flow path design improves flow while maintaining the same excellent throttling characteristics as a globe valve.

Needle Valves

Needle valves are small sizes of globe valves fitted with a tapered plug. The tapered plug or “needle” is screwed in or out of a mating orifice in the body and thus controls the effective orifice size. Needle valves are excellent for metering and other fine adjustment flow control applications. Spears® Needle Valves use PTFE stem seals and no elastomers for optimum chemical resistance. These are produced in both a conventional “globe” pattern and convenient right-angle pattern design for application versatility.



ISO 9001 Certified Design & Manufacturing Quality Program

Spears® Quality Management System is certified to the strict requirements of ISO 9001 for optimum control of product design, development, and production. Quality improvement and customer satisfaction are central to each stage of producing Spears® valves from conception through final delivery.

Development & Testing

The foundation of Spears® products is development, testing, and more testing. Spears® valve development combines proven experience with structural testing at the design level. Materials and design are correlated in computer engineering stress analysis to yield the optimum structure and function of each valve component. Resulting products are then subjected to numerous tests for performance validation of dimensional stability, sealing capability, hydrostatic burst pressure, operational torque, flow capacity, vacuum application suitability and cyclic pressure analysis. Once approved, production valves and components are routinely subjected to dimensional, functional and burst pressure verification tests.

100% Sealing Capability Verification

All Spears® ball valves are air-tested for 100% verification of positive sealing during the manufacturing process.

Hydrostatic Burst Pressure Verification

Representative valve samples are routinely subjected to an internal hydrostatic pressure of 3.2 times their designated pressure rating in a 60-70 second test per ASTM D 1599 during each production run.

Vacuum Service

Validation of Spears® valves rated for vacuum service is determined from 1-hour tests at 26 in. Hg vacuum with less than 1 in. Hg loss. A vacuum lubricant should be applied to elastomer-seated valve seats, such as Spears® Butterfly Valve or True Union Ball Check Valve, to prevent the seat from drying out in vacuum service applications.

Spears® Valve Innovations

Not all plastic valves are the same. Spears® valves incorporate several unique features not found in competitive products. The following are a few examples of Spears® innovative improvements to conventional valve designs.

Spears® Safe-T-Shear® Stem

This important SAFETY FEATURE was developed to help prevent line fluids from leaking out in the event of ball valve stem damage. Engineered for high strength, the stem incorporates a special shear point to control accidental breakage. Over-torquing breaks occur above the stem O-ring leaving the seal intact until repair or replacement can be made.

Spears® Heavy Buttress Thread Components

When it comes to handling the hydraulic force of high internal pressures, the brute strength of the buttress thread is clearly the best. Its broad bearing surface with an angular backing provide greater thrust support than conventional square-cut, ACME-type threads commonly used in similar ball valve components. All Spears® Ball Valve union nuts and seal carriers are designed with buttress threads for greater strength and pressure handling capabilities — one of the strongest in the plastic valve industry!

Low Torque, Low Wear Butterfly Valve Seats

Spears® Butterfly Valves provide the lowest operating torque available. Sealing contact between disc and seat takes place only at the close of the valve, allowing free travel through the full range of opening. This unique design eliminates seat creep, extrusion and wear typical with conventional liner-type seats. Exclusive design interlocks seat and body to prevent washout or blowout.

Flow Balanced Ball Check Valves

Improper ball check valve design can significantly restrict flow, create ball-chatter and even result in reverse ball travel and open flow shutoff! As a result of extensive design testing, Spears® has engineered the internal flow characteristics of the True Union Ball Check Valve to optimize fluid transmission and virtually eliminate ball-chatter.

Special Reinforced (SR) Female Plastic Threads

This patented Special Reinforced (SR) design is one of the most significant improvements in female plastic thread reliability. Not just an added reinforcing ring, this unique pre-compression design compensates for expansion forces generated from normal tapered pipe thread joint make-up. Radial stress is neutralized in normal installations and contained in severe over tightening situations. Spears® SR Threads are available on a variety of Spears® industrial valves using SS316 reinforcement for optimum chemical and corrosion resistance. Spears® SR Female Spigot Adapters are also available for quick conversion of any slip-socket style valve end connector.



Spears® Thermoplastic Piping System Materials

Benefits of Spears® Thermoplastic System Materials

Unlike metal, plastics never rust, scale, or pit — they virtually last forever. Thermoplastics are abrasion resistant, chemical and corrosion resistant, nonconductive, lightweight, and operate at lower friction-loss levels than metals. Moreover, plastics are nontoxic and environmentally safe. Adding these benefits with ease of installation at substantially lower costs, thermoplastic piping system components are the proven choice for years of maintenance free system operations.

Joining Methods for Spears® Thermoplastic Systems

Spears® thermoplastic piping system products are designed around primary components manufactured from PVC, CPVC or PP materials and their glass filled varieties. PVC and CPVC materials can be easily joined by solvent cement welding plus threaded, flanged or mechanical coupled connections. Spears® PP products are joined by using flanged or threaded connections featuring Spears® patented Special Reinforced (SR) female plastic threads.

Material Considerations in Application and System Design

PVC, CPVC and PP thermoplastic piping system components will give years of trouble free service with proper attention to application and system design. To avoid problems, the following key points must be considered when selecting materials for an application and in designing a system for their use.

- 1. Fluid incompatibility** of certain chemicals, especially petroleum distillates and derivatives, can cause environmental stress cracking in different thermoplastic compounds. Chemical compatibility of all valve or system components, including solvent cements, must be verified before installation. Verification of fluid compatibility is at the discretion of the user.
- 2. Temperature-pressure relationships** must be considered. Product pressure ratings are based on use of water mediums at 73°F. In general, product pressure ratings must be de-rated as temperature increases (see Temperature Pressure Table for individual valves).
- 3. Expansion and contraction** is greater in thermoplastic systems than in metal systems. As a result, system design must be flexible to allow for movement. Use of Spears® Thermoplastic Expansion Joints is recommended.
- 4. Extreme heat or cold** where internal fluids may freeze or where temperatures may exceed thermoplastic design limits must be avoided, including consideration of storage locations.
- 5. Direct sun exposure** results in high thermal heat absorption, especially in darker color thermoplastic materials. A white water-based exterior latex paint can be applied to reduce heat buildup.
- 6. Lower impact resistance** of thermoplastic system components than that of metal systems requires avoidance of sharp, pointed objects in both above and below ground installations, including mounting devices and backfilling operations.
- 7. Proper installation** is essential. Special attention must be given to technique and instructions for making solvent cemented connections, threaded connections, flanged connections, and for installation of valves and other individual system components. System design must also take into account support, thrust blocking, transition to different materials and other installation related factors.
- 8. Threaded joints** require several considerations. First, pressure capacities of threaded system components should be de-rated to 50% of the rating for corresponding type and size of thermoplastic pipe. **NOTE:** Valves have individual pressure ratings and do not require de-rating for threaded connections. Second, as with internal fluids, certain paste sealants may cause environmental stress cracking in thermoplastic materials, and compatibility should be verified before use. Finally, the leading cause of thread joint failures is from over tightening female thermoplastic threads. Use of Spears® Special Reinforced (SR) Threads is recommended.
- 9. Hydraulic Shock** (water hammer; surge pressure) in thermoplastic piping systems can burst pipe, fittings, and valves. Anticipated surge pressures should be calculated and included in maximum internal pressure ratings of system components (specified “Non-Shock” pressure rating for valves). Safeguards should be incorporated in system design to vent pressures and eliminate entrapped air. Fluid velocities should not exceed a maximum of 5 feet per second in thermoplastic systems.
- 10. Non-liquid transport** — **WARNING:** Spears® Manufacturing Company **DOES NOT RECOMMEND** the use of thermoplastic piping products for systems to distribute or store compressed air or gases. The use of Spears® products in compressed air or gas systems automatically voids Spears® warranty for such products, and their use against our recommendation is entirely the responsibility and liability of the installer. Spears® Manufacturing Company will not accept responsibility for damage or impairment from its products, or other consequential or incidental damages caused by misapplication, incorrect assembly, and/or exposure to harmful substances or conditions.

Individual Materials Overview Thermoplastics

PVC — Poly Vinyl Chloride

PVC is one of the most specified thermoplastics for piping system components, including, valves, fittings, flanges, and many specialty products. PVC has excellent chemical and corrosion resistance to a broad range of fluids including water, deionized water, most mineral acids, bases, salts and paraffinic hydrocarbon solutions. PVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® PVC materials conform to ASTM Cell Classification 12454 (formerly designated as Type I, Grade 1). The maximum recommended service temperature of PVC products is 140°F (60°C).

Glass Reinforced PVC — Fiberloc®

Fiberloc® is a registered trademark of PolyOne Corporation. Fiberloc® is a glass fiber reinforced PVC composite material. While maintaining the traditional properties of PVC, Fiberloc® increases its strength, stiffness, and dimensional stability from glass fiber reinforcement. The maximum recommended service temperature of Fiberloc® products is 140°F (60°C).

CPVC — Chlorinated Poly Vinyl Chloride

Chlorinated PVC is used for higher temperature applications than PVC, especially for handling hot corrosive liquids. With similar chemical and corrosion resistance to PVC, increased chlorine content gives CPVC superior thermal resistance. CPVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® CPVC materials conform to ASTM Cell Classification 23447 (formerly designated as Type IV, Grade 1). The maximum recommended service temperature of CPVC products is 200°F (93°C).

Glass Reinforced CPVC

This special composite compound has the basic properties of CPVC with additional strength, stiffness, and dimensional stability from glass fiber reinforcement. The maximum recommended service temperature of glass reinforced CPVC products is 200°F (93°C).

PP — Polypropylene

Polypropylene is used in a variety of Spears® valves where different chemical resistance and lower temperature impact resistance is required as compared to PVC or CPVC. The excellent impact resistance characteristics of polypropylene make this polymer the choice for Spears® valve handles. Spears® PP products carry a maximum recommended service temperature of 180°F (82°C).

Glass Reinforced PP

Glass reinforced polypropylene is used in numerous valves and valve accessories where additional strength or stiffness is required over standard PP materials while maintaining basically the same range of chemical resistance.

PTFE/PFA — Polytetrafluoroethylene/ Perfluoroalkoxy Resin

PTFE is a ram extrusion process while PFA is a melt processed fluoroplastic. These fluoroplastics are virtually inert to most chemicals, acids bases and solvents. Due to their low coefficient of friction, these materials are considered “self-lubricating” making them an excellent choice for valve seats, bearings and thrust washers. Spears® proprietary processing of PTFE with other materials allows low friction characteristics to be built into a variety of thermoplastic components used in Spears® valves. Fluoroplastics are serviceable to 500°F (260°C).

PTFE/HDPE

Spears® proprietary composition of PTFE and High Density Polyethylene is used in a variety of valve seats, bearing washers, and other valve components requiring durability and improved lubricity. The chemical resistance of HDPE is somewhat higher than that of LDPE and generally exceeds that of PVC and CPVC. HDPE has excellent resistance to acids, alcohols and bases. In comparison to PVC and CPVC, HDPE is somewhat less resistant to aliphatic hydrocarbons and has more limited resistance to oxidizing agents. HDPE is serviceable to 230°F (110°C).

Low Extractable PVC

Low Extractable PVC material developed for use in UPW (Ultra Pure Water) and other high purity applications. Independently tested, Low Extractable PVC provides superior resistance to regular PVC for leaching of anion, cation, and numerous trace metals when subjected to 18.2 megohm deionized water while maintaining ease of installation. Low Extractable PVC has the same basic chemical resistance as regular PVC.

Elastomers

EPR (EPDM) — Ethylene propylene rubber

Used in O-ring seals, EPR is recommended for water, chlorinated water, dilute acids and alkalines, alcohols, and has excellent resistance to ozone. EPR is not recommended for petroleum oils, di-ester lubricants, strong acids, or strong alkalines. The maximum recommended service temperature of EPR is 300°F (149°C).



FKM — Fluoroelastomer

Fluoroelastomers are a special purpose fluorocarbon-based synthetic rubber categorized under the ASTM designation of “FKM”. The FKM O-ring is commonly referred to as a “Viton® O-ring”. However, “Viton®” is only one of many FKM brand names and is a registered trademark of DuPont Performance Elastomers L.L.C. Spears® uses general purpose Type 1 FKM O-rings with a minimum of 66% fluorine content for the best balance of overall properties. FKM exhibits a very broad range of chemical resistance, including petroleum oils, di-ester based lubricants, silicate fluids and greases, halogenated hydrocarbons, and mineral acids. FKM is not recommended for ketones, amines, anhydrous ammonia, hot hydrofluoric or chlorosulfonic acids, or automotive brake fluids. The maximum recommended service temperature of FKM is 400°F (204°C).

Nitrile (Buna-N) — Nitrile elastomer

Used in O-ring seals, nitrile elastomers are recommended for petroleum oils and fluids, silicone oils and greases, di-ester based lubricants, ethylene glycol based fluids, and cold water. Nitrile is not recommended for phosphate ester hydraulic fluids, halogenated hydrocarbons, strong acids, ketones, ozone or automotive brake fluids. The maximum recommended service temperature of nitrile is 275°F (135°C).

FFKM (Aegis™, Kalrez®) — Perfluoroelastomer

Aegis™ is a trademark of ISC Freudenberg-NOK, Kalrez® is a registered trademark of DuPont-Dow Elastomers. These specialty materials are virtually inert and provide the greatest range of chemical resistance found in an elastomer. However, be aware that perfluoroelastomers are substantially more expensive than other elastomer compounds. Perfluoroelastomer are serviceable to 600°F (360°C) and performance is limited at very low temperatures.

CSM (Hypalon®) — Chlorosulfonated Polyethylene

Hypalon® is a registered trademark of DuPont-Dow Elastomers. CSM is a close match to neoprene, but it has improved chemical resistance. This specialty compound offers good abrasion resistance with superior resistance to weather, ozone, sunlight and oxidation. CSM has excellent resistance to alcohols, alkalis and acids, very good color stability with moderate resistance to oils and gasoline. CSM is not recommended for use with aromatic solvents. CSM has limited flexibility at low temperatures and relatively poor compression set. As a result, CSM is not generally manufactured as O-rings. CSM is serviceable to 300°F (149°C). Hypalon® is offered as an alternative diaphragm elastomer in Spears® Diaphragm Valves.

PFA/FEP Encapsulated O-rings

O-ring encapsulation places a PFA or FEP material around a FKM elastomer core to provide very high chemical resistance. However, this is not without a trade-off. The PFA/FEP encapsulation is far less resilient than an elastomer and may not perform as well in certain O-ring applications. PFA/FEP encapsulated O-rings should be used only where an elastomer O-ring cannot meet requirements.

Elastomer Backed PTFE

Used in Spears® PTFE Diaphragm Valves, this chemically bonded laminate provides the chemical resistance of PTFE with improved resilience from a thick elastomer backing for greater sealing capability than solid PTFE Diaphragms. Use of heavier, high grade EPDM or FKM backing materials eliminates the need for “gas barrier” PTFE Diaphragm designs.

Metals

Zinc Plated Steel

Zinc plated carbon steel is the standard for general purpose bolts, nuts and fasteners. Zinc plated steel provides good corrosion resistance for most dry environment applications and normal operating conditions.

Stainless Steel

Stainless Steel provides superior corrosion resistance than natural or plated carbon steels. Common grade is 18-8, which is excellent for general purpose use in nuts, bolts and fasteners. SS302 and SS304 are commonly used in a variety of sheet stock or deep drawn metal components. SS316 is the preferred choice for harsh chemical and corrosion environments and is used in the majority of Spears® industrial valves and accessories where stainless steel is required.

PTFE Coated Stainless Steel

Where very high chemical resistance is needed, Spears® offers a special PTFE coated, stainless steel Butterfly Valve stem. This tough, chemically bonded coating makes the stem virtually inert to most chemicals without loss of function or reliability.

Special Alloys (Titanium, Hastaloy®, Alloy 20, etc.)

A variety of specialty metals can be obtained on a custom order basis for use in Spears® products where specific chemical or corrosion resistance is required and specified by user. Please note that custom components generally require extended lead-time and may have significant costs.



Temperature Pressure De-rating for PVC, CPVC & PP Thermoplastic Materials

Elevated temperature fluid mediums require a de-rating of thermoplastic pipe maximum internal pressure ratings at 73°F. To determine the maximum internal pressure rating at an elevated temperature, simply multiply the pipe pressure rating at 73°F by the percentage specified for the desired temperature.

PLEASE NOTE — Valves have different elevated temperature ratings than pipe & fittings. See individual valve recommendations.

System Operating Temperature °F (°C)	73 (23)	80 (27)	90 (32)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
PVC	100%	90%	75%	62%	50%	40%	30%	22%	-0-	-0-	-0-	-0-	-0-	-0-	-0-
CPVC	100%	100%	91%	82%	73%	65%	57%	50%	45%	40%	32%	25%	22%	20%	-0-
PP	100%	90%	75%	70%	65%	50%	42%	36%	30%	25%	20%	15%	-0-	-0-	-0-

Typical Physical Properties of PVC, CPVC & PP Thermoplastic Materials

The following table lists typical physical properties of PVC, CPVC and PP thermoplastic materials. Variations may exist depending on specific compound and product.

Properties	ASTM Test Method	PVC	CPVC	PP Natural*
Mechanical Properties, 73°F				
Specific Gravity	D 792	1.41	1.55	.907
Tensile Strength, psi	D 638	7,200	8,000	5,240
Modulus of Elasticity, psi	D 638	440,000	360,000	231,000
Compressive Strength, psi	D 695	9,000	10,100	---
Flexural Strength, psi	D 790	13,200	15,100	---
Izod Impact, notched, ft-lb/in	D 256	.65	1.50	3.02
Thermal Properties				
Heat Deflection Temperature, °F				
at 66 psi	D 648	165	217	201
Thermal Conductivity, BTU/hr/sq ft/°F/in	C 177	1.02	.95	
Coefficient of Linear Expansion, in/in/°F	D 696	3.1 x 10 ⁻⁵	3.4 x 10 ⁻⁵	5.42 x 10 ⁻⁵
Flammability				
Limiting Oxygen Index, %	D 2863	43	60	
UL 94 Rating		94V-0	V-0, 5VB, 5VA	HB
Other Properties				
Water Absorption, % 24 hr.	D 570	.05	.03	.02
Industry Standard Color		Dark Gray / White	Medium Gray	Natural/Beige
Minimum ASTM Cell Classification	D 1784/D 4101	12454	23447	PP0112 B65242
NSF® Potable Water Approved		Yes	Yes	Yes

* Glass filled PP will have slightly different values with higher tensile strength.



Spears® Valve Standards

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® valves are manufactured.

Individual Standards Overview

ASTM — American Society for Testing and Materials

ASTM D 1784

Specifies compound physical requirements for PVC and CPVC materials used in the manufacture of thermoplastic valves, pipe, and fittings. The standard classifies compounds on the basis of several physical and chemical properties. Conformance to a particular material classification requires meeting the minimum requirements specified.

ASTM D 1785 and F 441

Specifies physical dimensions, test requirements, and maximum operating pressures, for Schedule 40, 80 and 120 PVC (D 1785) and CPVC (F 441) pressure pipe.

ASTM D 2466 and F 438

Specifies physical dimensions, test requirements, and workmanship for Schedule 40 PVC (D 2466) and CPVC (F 438) pressure fittings.

ASTM D 2464 and F 437

These standards have been incorporated into ASTM D 2467 and F 439, respectively.

ASTM D 2467 and F 439

Specifies physical dimensions, test requirements, and workmanship for Schedule 80 PVC (D 2467) and CPVC (F 439) pressure fittings.

ASTM D 2564, F 493, and F 656

Specifies requirements for PVC (D 2564) and CPVC (F 493) solvent cement, including component compounds, minimum resin content, viscosity, and physical performance. Standard F 656 specifies requirements for primers to be used with PVC solvent cements.

ASTM D 2846

Specifies physical dimensions, test requirements, and workmanship for CPVC Hot-and-Cold Water Distribution Systems, commonly referred to as CTS (Copper Tube Size).

ASTM D 2855

Specifies standard practice and procedures for making PVC pipe and fitting joints with solvent cement.

ASTM D 4101

Specifies classification of injection molding and extrusion grades of Polypropylene (PP) materials according to physical characteristics. Conformance to a particular material classification requires meeting the minimum requirements specified.

ASTM F 1498

Specifies dimensions and gauging of tapered pipe threads on plastic pipe and fittings.

ASTM F 1970

Specifies performance criteria testing, and end connection dimensions for products such as ball valves and check valves.

ANSI — American National Standards Institute

ANSI B1.20.1

Specifies basic thread form, taper, and tolerances of general purpose tapered pipe threads (metal).

ANSI B16.5

Specifies standard bolt hole patterns and basic dimensions for Class 150 steel pipe flanges.

NSF® — National Sanitation Foundation

NSF® is a third party product approval agency which tests manufacturer's product against a variety of health and product performance standards. They are one of the most recognized agencies for issuing approval of plastic piping system products for potable water use.

NSF® Standard 14

Certifies product suitability for potable water use, product conformance to applicable ASTM standards, and establishes minimum requirements for manufacturer's quality control programs through routine testing and facilities inspections.

NSF® Standard 14 Special Engineering Apurtenance Program (S.E.)

In addition to Standard 14 general requirements, the S.E. program establishes product performance requirements where no directly applicable ASTM specifications exist. NSF® S.E. specifications are developed from a combination of applicable portions of ASTM specifications and manufacturer's design specifications as a standard for conformance verification.

NSF® Standard 61

Developed to establish minimum requirements for the control of potential adverse health effects from products in contact with drinking water. Certifies product suitability for use in potable water systems through toxicological testing for contaminants or impurities. NSF® Standard 61 compliance is a prerequisite to NSF® Standard 14 certification.

True Union 2000 Ball Valves



One of the Most Versatile, Compact Valve Designs Available

Spears® True Union 2000 Ball Valves, 3-Way Ball Valves and Ball Check Valves provide maximum versatility with fully interchangeable valve cartridges. Provides for easier system design modifications and upgrades in multiphase projects, or anywhere changes in valve types are desired. Simply exchange any True Union 2000 valve in-line using existing union nuts. Also mates with Spears® new 2000 Pipe Unions. All True Union 2000 valves feature a low profile, compact design for minimal space requirements. Additionally, Spears® offers valve Retrofit Kits for easy in-line replacement of other valves and factory installed Actuation Packages.



**True Union 2000
Industrial Ball Valve**



**True Union 2000
Industrial Ball Check Valve**



**True Union 2000
Standard Ball Valve**



**True Union 2000
Industrial 3-Way Horizontal
Diverter Ball Valve**



**True Union 2000
Industrial 3-Way Vertical
Ball Valve**



**True Union 2000
Industrial Tee-Style
Ball Valve**



True Union 2000 Industrial Ball Valves



Features – PVC, CPVC

This multi-featured, space saving quarter-turn shutoff valve is designed to meet the demands of today's industrial and chemical processing applications. PVC and CPVC valves are available in IPS sizes 1/2" through 6" with socket/regular thread, SR (Special Reinforced) thread, flanged or spigot end connectors and 8" Venturied valve with socket or flanged ends. Also available in metric socket and BSP thread sizes 1/2" through 2".

Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 Industrial type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout mechanism. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" through 4" valves shall be pressure rated to 235 psi, all 6" and 8" Venturied and all flanged valves shall be pressure rated to 150 psi for water at 73°F.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ^{1,2}					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	1829-005	included	1821-005SR	1823-005	1827-005	235 psi Non-Shock Water @ 73°F
	FKM	1839-005	included	1831-005SR	1833-005	1837-005	
3/4	EPDM	1829-007	included	1821-007SR	1823-007	1827-007	
	FKM	1839-007	included	1831-007SR	1833-007	1837-007	
1	EPDM	1829-010	included	1821-010SR	1823-010	1827-010	
	FKM	1839-010	included	1831-010SR	1833-010	1837-010	
1-1/4	EPDM	1829-012	included	1821-012SR	1823-012	1827-012	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	1839-012	included	1831-012SR	1833-012	1837-012	
1-1/2	EPDM	1829-015	included	1821-015SR	1823-015	1827-015	
	FKM	1839-015	included	1831-015SR	1833-015	1837-015	
2	EPDM	1829-020	included	1821-020SR	1823-020	1827-020	
	FKM	1839-020	included	1831-020SR	1833-020	1837-020	
2-1/2	EPDM	1822-025	1821-025	1821-025SR	1823-025	1827-025	150 psi Non-Shock Water @ 73°F
	FKM	1832-025	1831-025	1831-025SR	1833-025	1837-025	
3	EPDM	1822-030	1821-030	1821-030SR	1823-030	1827-030	
	FKM	1832-030	1831-030	1831-030SR	1833-030	1837-030	
4	EPDM	1822-040	1821-040	1821-040SR	1823-040	1827-040	
	FKM	1832-040	1831-040	1831-040SR	1833-040	1837-040	
6	EPDM	1822-060	1821-060	1821-060SR	1823-060	1827-060	150 psi Non-Shock Water @ 73°F
	FKM	1832-060	1831-060	1831-060SR	1833-060	1837-060	
8 ³	EPDM	1822-080	—	—	1823-080	—	150 psi Non-Shock Water @ 73°F
	FKM	1832-080	—	—	1833-080	—	

- 1) For CPVC, add the letter "C" following the size code of part number listed (e.g., 1829-005C, 1821-005CSR)
- 2) For Special Ball Vent Design, add the letter "V" before the dash separator (e.g., 1829V-005, 1821V-005CSR)
- 3) 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Also Available in Spears® High Purity, Low Extractable PVC Material
- Interchangeable with all True Union 2000 Valves Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Built-in Handle Lockout
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Spears® Double O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 4" pressure rated to 235 psi @ 73°F. Sizes 6" and 8" Venturied and all Flanged to 150 psi @ 73°F.
- EPDM Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Optional Vented Ball Valves

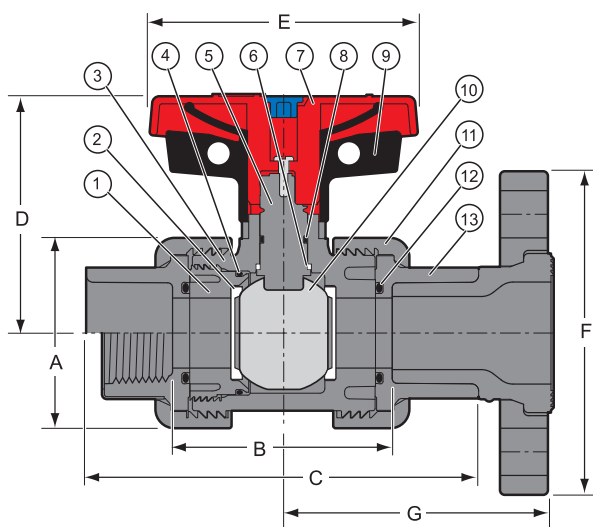
Same valve with special ball vent design for sodium hypochlorite (bleach) and other chemical applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Round Safety Handles
- Handle Lockout Ring
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See "BALL VALVE ACCESSORIES" section for details of individual products.

True Union 2000 Industrial Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Seat	2	PTFE
3	Body	1	PVC/CPVC
4	Carrier O-ring	1	EPDM/FKM
5	Stem	1	PVC/CPVC
6	Stem Bearing	1	PP
7	Handle	1	PP
8	Stem O-ring	2	EPDM/FKM
9	Handle Lock	1	PP
10	Ball	1	PVC/CPVC
11	Union Nut	2	PVC/CPVC
12	End Connector O-ring	2	EPDM/FKM
13	End Connector	2	PVC/CPVC

Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	Dimensions Reference (inches, ± 1/16)										Approx. Wt. (Lbs.)		Oper. ² Torque (in. lbs.)	Cv ³ Values		
	A	B ¹		C			D	E	F	G	PVC	CPVC		Soc/Thd	Flanged	Spigot
		Soc/Thd	Spigot	Socket	Thread	Spigot										
1/2	1-7/8	2-3/8	2-7/8	4-3/16	3-3/16	4-5/8	2-9/16	2-13/16	3-1/2	2-31/32	.36	.38	16	29	18	27
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2-7/8	3-3/8	3-7/8	3-5/16	.56	.58	17	63	39	57
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	4-1/2	3-5/8	.74	.77	22	120	73	108
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-7/8	4-5/8	3-31/32	1.13	1.19	28	243	151	223
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	5	4-3/8	1.54	1.60	61	357	223	333
2	4-5/16	4-25/32	5-3/16	7-3/4	7-13/16	8-1/4	4-1/2	5-3/32	6	5-1/4	2.72	2.85	77	599	395	571
2-1/2	5-3/8	6-7/8	7-13/16	10-7/16	9-11/16	11-3/8	5-1/8	6-1/4	7-1/2	6	7.42	7.70	132	856	579	734
3	6-3/16	7	7-13/16	10-11/16	9-7/8	11-9/16	5-7/8	7-5/8	7-1/2	6-13/16	7.46	7.81	132	1416	974	1322
4	7-3/4	7-5/16	8-1/4	11-7/8	10-1/4	12-3/4	6-3/4	9	9	7-1/2	12.35	12.48	396	2865	1952	2672
6	11-5/8	11-1/16	13	17-1/16	15-3/4	18-1/2	8-1/8	14-5/16	11-1/4	10-3/16	37.53	40.55	732	6638	4824	6149
8 ⁴	11-5/8	23-3/16	---	31-7/8	---	---	8-1/8	14-5/16	13-1/2	17-13/16	50.84	55.92	732	N/A	N/A	N/A

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual valves may vary.

3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

4: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
	6" and 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)

NOTE: Flanged Valves have a base pressure rating of 150 psi.



True Union 2000 Industrial 3-Way Ball Valves



Quick-View Valve Selection Chart 3-Way Vertical Ball Valve

Valve Size	O-ring Material	PVC Part Number ^{1, 2, 3, 4}				Pressure Rating
		Socket	SR Threaded	Flanged	Spigot	
1/2	EPDM	4722L1-005	4721L1-005SR	4723L1-005	4727L1-005	235 psi Non-Shock Water @ 73°F
	FKM	4732L1-005	4731L1-005SR	4733L1-005	4737L1-005	
3/4	EPDM	4722L1-007	4721L1-007SR	4723L1-007	4727L1-007	
	FKM	4732L1-007	4731L1-007SR	4733L1-007	4737L1-007	
1	EPDM	4722L1-010	4721L1-010SR	4723L1-010	4727L1-010	
	FKM	4732L1-010	4731L1-010SR	4733L1-010	4737L1-010	
1-1/4	EPDM	4722L1-012	4721L1-012SR	4723L1-012	4727L1-012	
	FKM	4732L1-012	4731L1-012SR	4733L1-012	4737L1-012	
1-1/2	EPDM	4722L1-015	4721L1-015SR	4723L1-015	4727L1-015	
	FKM	4732L1-015	4731L1-015SR	4733L1-015	4737L1-015	
2	EPDM	4722L1-020	4721L1-020SR	4723L1-020	4727L1-020	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	4732L1-020	4731L1-020SR	4733L1-020	4737L1-020	
2-1/2	EPDM	4722L1-025	4721L1-025SR	4723L1-025	4727L1-025	
	FKM	4732L1-025	4731L1-025SR	4733L1-025	4737L1-025	
3	EPDM	4722L1-030	4721L1-030SR	4723L1-030	4727L1-030	
	FKM	4732L1-030	4731L1-030SR	4733L1-030	4737L1-030	
4	EPDM	4722L1-040	4721L1-040SR	4723L1-040	4727L1-040	
	FKM	4732L1-040	4731L1-040SR	4733L1-040	4737L1-040	
2-1/2	EPDM	4722L1-025	4721L1-025SR	4723L1-025	4727L1-025	
	FKM	4732L1-025	4731L1-025SR	4733L1-025	4737L1-025	

- 1: For CPVC valve, add the letter "C" to the part number (e.g. 4722L1-005C)
 2: For Double L-Port, add the number "2" to the part number (e.g. 4722L2-005)
 3: For Triple L-Port, add the number "3" to the part number (e.g. 4722L3-005)
 4: For T-Port, add the letter "T1" to the part number (e.g. 4722T1-005)

Quick-View Valve Selection Chart 3-Way Horizontal Diverter Valve (no branch shutoff)

Valve Size	O-ring Material	PVC Part Number ^{1, 2}				Pressure Rating
		Socket	SR Threaded	Flanged	Spigot	
1/2	EPDM	5022L1-005	5021L1-005SR	5023L1-005	5027L1-005	235 psi Non-Shock Water @ 73°F
	FKM	5032L1-005	5031L1-005SR	5033L1-005	5037L1-005	
3/4	EPDM	5022L1-007	5021L1-007SR	5023L1-007	5027L1-007	
	FKM	5032L1-007	5031L1-007SR	5033L1-007	5037L1-007	
1	EPDM	5022L1-010	5021L1-010SR	5023L1-010	5027L1-010	
	FKM	5032L1-010	5031L1-010SR	5033L1-010	5037L1-010	
1-1/4	EPDM	5022L1-012	5021L1-012SR	5023L1-012	5027L1-012	
	FKM	5032L1-012	5031L1-012SR	5033L1-012	5037L1-012	
1-1/2	EPDM	5022L1-015	5021L1-015SR	5023L1-015	5027L1-015	
	FKM	5032L1-015	5031L1-015SR	5033L1-015	5037L1-015	
2	EPDM	5022L1-020	5021L1-020SR	5023L1-020	5027L1-020	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	5032L1-020	5031L1-020SR	5033L1-020	5037L1-020	
2-1/2	EPDM	5022L1-025	5021L1-025SR	5023L1-025	5027L1-025	
	FKM	5032L1-025	5031L1-025SR	5033L1-025	5037L1-025	
3	EPDM	5022L1-030	5021L1-030SR	5023L1-030	5027L1-030	
	FKM	5032L1-030	5031L1-030SR	5033L1-030	5037L1-030	
4	EPDM	5022L1-040	5021L1-040SR	5023L1-040	5027L1-040	
	FKM	5032L1-040	5031L1-040SR	5033L1-040	5037L1-040	
2-1/2	EPDM	5022L1-025	5021L1-025SR	5023L1-025	5027L1-025	
	FKM	5032L1-025	5031L1-025SR	5033L1-025	5037L1-025	

- 1: For CPVC valve, add the letter "C" to the part number (e.g. 5022L1-005C)
 2: For T-Port, add the letter "T1" to the part number (e.g. 5022T1-005)

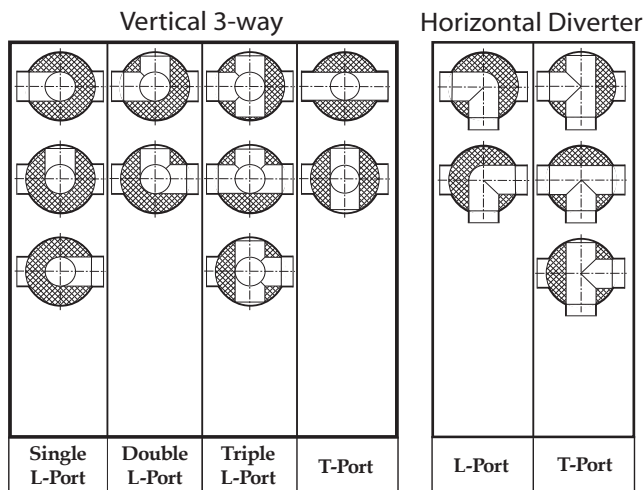
Features – PVC, CPVC

Versatile design provides multiple port and configuration options for controlling flow distribution in industrial and chemical processing applications. Choose Vertical 3-Way (L-Port Diverter, T-Port Off) or Horizontal Diverter configurations with open branch (no shutoff) design. Valves are available in IPS sizes 1/2" through 4" with socket, SR threaded (Special Reinforced), flanged or spigot end connectors. Venturied 6" (4" valves with 4 x 6 reducers) are also available with socket or flanged valve end connections.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Vertical 3-Way or Horizontal Diverter Design (no branch shutoff)
- L-Port, Multi L-Port & T-Port Ball Configuration Options
- Interchangeable with all True Union 2000 Valves, Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Built-in Handle Lockout
- Strong, Buttress Thread Union Nuts
- Spears® Double O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73°F
Sizes 2-1/2" - 4" and all Flanged to 150 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970
- Metric Socket and BSP Thread Available

3-Way Port Options

Diverter Valves have no shut-off on branch.



Ball Port Options viewed from top of valve.

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits

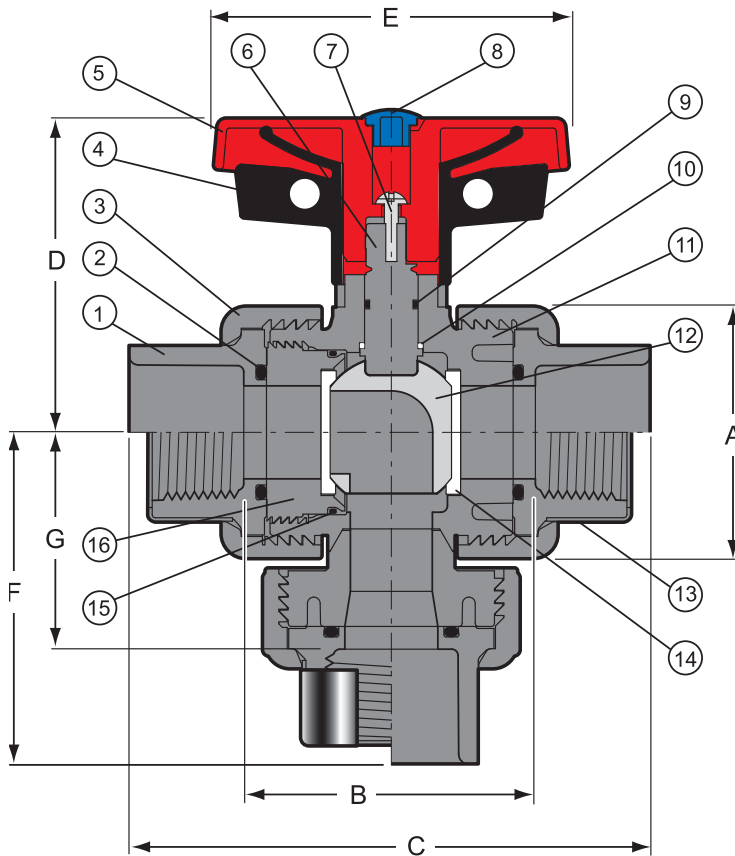
* See "BALL VALVE ACCESSORIES" section for details of individual products.

Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 3-Way [specify horizontal or vertical] type with [specify port option] manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454, or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout mechanism. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All PVC and CPVC 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" and all flanged valves shall be pressure rated to 150 psi for water at 73°F as manufactured by Spears® Manufacturing Company.



True Union 2000 Industrial 3-Way Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	End Connector	3	PVC/CPVC
2	End Connector O-ring	3	EPDM/FKM
3	Union Nut	3	PVC/CPVC
4	Handle Lock	1	PP
5	Handle	1	PP
6	Stem	1	PVC/CPVC
7	Screw	1	Stainless Steel
8	Handle Cover	1	PP
9	Stem O-ring	2	EPDM/FKM
10	Stem Bearing*	1	PTFE
11	Body	1	PVC/CPVC
12	Ball	1	PVC/CPVC
13	End Connector Collar	3	Stainless Steel
14	Seat	2	PTFE
15	Carrier O-ring	1	EPDM/FKM
16	Seal Carrier	1	PVC/CPVC

Note: Applies to both Vertical and Horizontal configurations.

* For sizes 2-1/2, 3 & 4 only.

NOTE: Diverter style valve has no shutoff on branch.

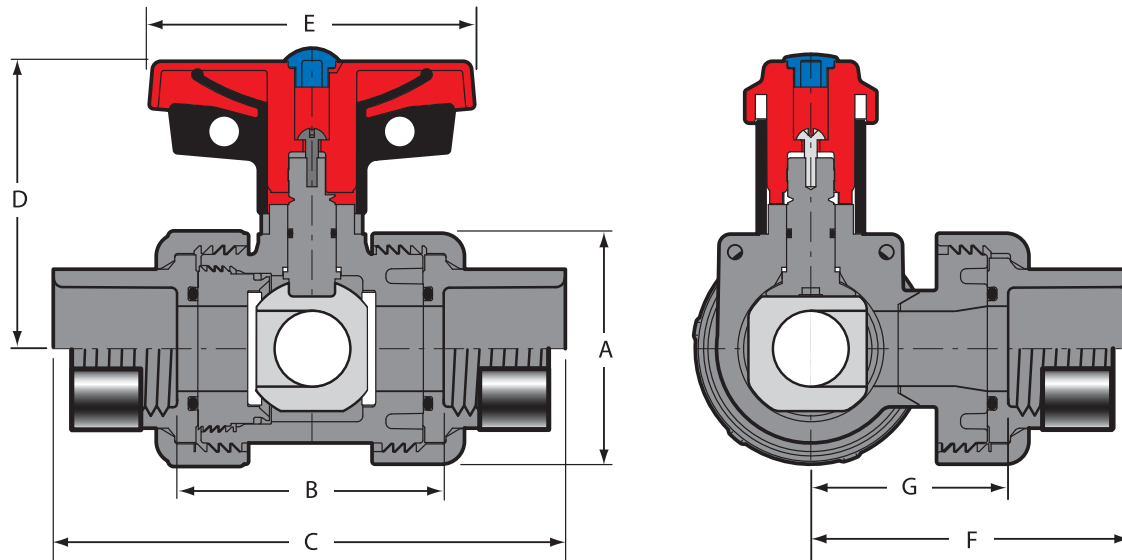
Vertical 3-Way Ball Valves — Dimensions & Operating Torque

Vertical 3-Way Ball Valve														Oper. ² Torque (in. lbs.)
Nominal Size	A	B ¹		C			D	E	F			G		
		Soc/SR Thd	Spigot	Socket	SR Thd	Spigot			Socket	SR Thread	Spigot	Soc/SR Thd	Spigot	
1/2	1-7/8	2-7/16	2-15/16	4-1/4	3-27/32	4-3/4	2-9/16	2-13/16	2-3/4	2-9/16	2-13/16	1-11/16	2	12
3/4	2-1/4	2-3/4	3-5/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	336

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.

True Union 2000 Industrial 3-Way Ball Valves



NOTE: Diverter style valve has no shutoff on branch

Horizontal Diverter 3-Way Ball Valves Dimensions & Operating Torque

Nominal Size	A	B ¹		C			D	E	F			G		Oper. ² Torque (in. lbs.)
		Soc/SR Thread	Spigot	Socket	SR Thread	Spigot			Socket	SR Thread	Spigot	Soc/SR Thread	Spigot	
1/2	1-3/16	2-7/16	2-15/16	4-3/16	3-13/16	4-3/4	2-9/16	2-13/16	2-9/16	2-3/8	2-13/16	1-11/16	2	12
3/4	2-1/4	2-3/4	3-15/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	336

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.



True Union 2000 Industrial Tee-Style Ball Valves



Tee x Socket

Features – PVC, CPVC

Spears® True Union 2000 Industrial Tee-Style Ball Valve design integrates valve and Tee-fitting for direct branch take-off laterals. The “Tee-Valve” provides a stronger, more compact connection by eliminating the need for a reducer, additional length of pipe, and one of the end connections on the ball valve. Close proximity of valve to mainline emulates a “zero dead-leg” design to minimize any areas of fluid stagnation. Custom produced to specified Tee and Valve connection sizes. Also available in metric sizes.

- Chemical & Corrosion Resistant PVC, CPVC or Low Extractable PVC materials
- Multi-featured Industrial Grade
- Built-in Handle Lockout
- Fully Serviceable, Replaceable Components
- Seal Carrier Adjustment Tool included
- ISO Pattern Actuation Mounting Option
- Spears® Dual O-ring Safe-T-Shear® Stem
- Self Adjusting PTFE Floating Seat
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water Use

Sample Engineering Specification

All lateral branch valve connections shall be made using integrated Tee-style ball valve and Tee fitting. Tee-style ball valves shall be True Union 2000 Industrial type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447; or Low Extractable PVC, ASTM D 1784 Cell Classification 12343. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout. All valve union nuts shall have Buttruss threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. Mainline Tee fittings shall be Schedule 80 manufactured in accordance with ASTM D 2467 for PVC or F 439 for CPVC. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" through 2" valves shall be pressure rated to 235 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

True Union 2000 Industrial Tee-Style Ball Valves



Quick-View Valve Selection Chart

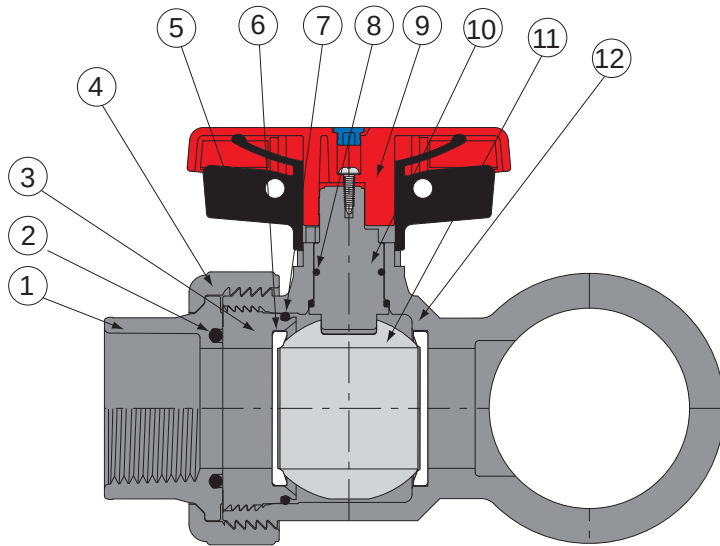
T-Valves can be custom produced in any standard Tee and Valve size combination

Size (Tee x Valve Outlet)	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
1/2	182901-005	183901-005	182901-005C	183901-005C
3/4	182901-007	183901-007	182901-007C	183901-007C
1	182901-010	183901-010	182901-010C	183901-010C
1-1/4	182901-012	183901-012	182901-012C	182901-012C
1-1/2	182901-015	183901-015	182901-015C	183901-015C
2	182901-020	183901-020	182901-020C	183901-020C
3/4x1/2	182901-101	183901-101	182901-101C	183901-101C
1x1/2	182901-130	183901-130	182901-130C	183901-130C
1x3/4	182901-131	183901-131	182901-131C	183901-131C
1-1/4x1/2	182901-166	183901-166	182901-166C	182901-166C
1-1/4x3/4	182901-167	183901-167	182901-167C	183901-167C
1-1/4x1	182901-168	183901-168	182901-168C	183901-168C
1-1/2x1/2	182901-209	183901-209	182901-209C	183901-209C
1-1/2x3/4	182901-210	183901-210	182901-210C	183901-210C
1-1/2x1	182901-211	183901-211	182901-211C	183901-211C
2x1/2	182901-247	183901-247	182901-247C	183901-247C
2x3/4	182901-248	183901-248	182901-248C	183901-248C
2x1	182901-249	183901-249	182901-249C	183901-249C
2x1-1/2	182901-251	183901-251	182901-251C	183901-251C
3x1/2	182901-333	183901-333	182901-333C	183901-333C
3x1	182901-335	183901-335	182901-335C	183901-335C
3x1-1/2	182901-337	183901-337	182901-337C	183901-337C
3x2	182901-338	183901-338	182901-338C	183901-338C
4x1	182901-417	183901-417	182901-417C	183901-417C
4x1-1/2	182901-419	183901-419	182901-419C	183901-419C
4x2	182901-420	183901-420	182901-420C	183901-420C
6x2	182901-528	183901-528	182901-528C	183901-528C
8x2	182901-578	183901-578	182901-578C	183901-578C

Additional Notes: For Low Extractable PVC valves, add the letters BL to the part number (e.g. 182901-005BL)
Valve assembly includes debris plug in valve socket end (to be removed on installation) and cable-tie affixed spare end connector.



True Union 2000 Industrial Tee-Style Ball Valves



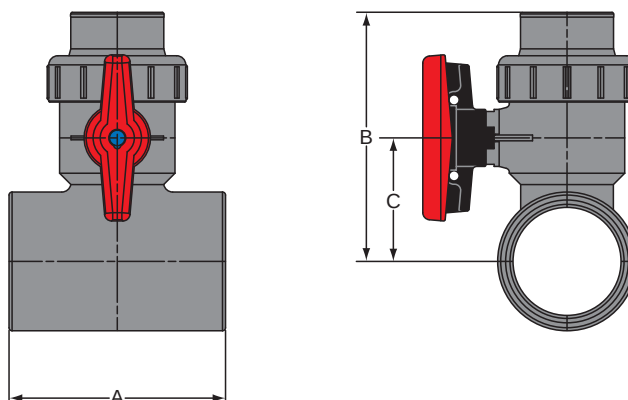
Replacement Parts

No.	Component	Qty.	Material
1	End Connector	1	PVC/CPVC
2	End Connector O-ring	1	EPDM/FKM
3	Seal Carrier	1	PVC/CPVC
4	Union Nut	3	PVC/CPVC
5	Handle Lock	1	PP
6	Seat	2	PTFE
7	Carrier O-ring	1	EPDM/FKM
8	Stem O-ring	2	EPDM/FKM
9	Handle	1	PP
10	Stem	1	PVC/CPVC
11	Ball	1	PVC/CPVC
12	Body	1	PVC/CPVC

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

True Union 2000 Industrial Tee-Style Ball Valves



Dimensions, Operating Torque & Cv Values

Nominal Size	Dimensions Reference (inches, ± 1/16)				Approx. Wt. (Lbs.)		Oper. ¹ Torque (in. lbs.)	Cv ² (Value only)
	A	B		C	PVC	CPVC		
		Socket	Threaded					
1/2	2-5/16	3-3/4	3-9/16	1-5/8	.48	.52	16	29
3/4	3-7/16	4-1/4	4	1-7/8	.70	.77	17	63
1	4	4-11/16	4-7/16	2-1/16	1.10	1.15	22	120
1-1/4	4-1/4	5-5/16	5	2-7/16	1.64	1.73	28	243
1-1/2	5-1/8	6-1/8	5-11/16	3	2.26	2.37	61	357
2	5-7/8	7-5/16	6-13/16	3-7/16	3.72	3.82	77	599
3/4x1/2	4	3-7/8	3-11/16	1-3/4	.51	.54	16	29
1x1/2	3-7/16	4	3-13/16	1-7/8	.58	.61	16	29
1x3/4	3-11/16	4-3/8	4-1/2	2	.78	.80	17	63
1-1/4x1/2	4-1/4	4	3-13/16	1-7/8	.77	.80	16	29
1-1/4x3/4	4-1/4	4-1/4	4	1-7/8	.90	.94	17	63
1-1/4x1	4-1/4	4-13/16	4-5/8	2-3/16	1.78	1.96	22	120
1-1/2x1/2	4-3/8	4-1/4	4-1/16	2-1/8	.86	.89	16	29
1-1/2x3/4	4-1/8	4-5/8	4-3/8	2-3/16	.91	.94	16	63
1-1/2x1	4-1/2	5	4-13/16	2-3/8	1.37	1.51	16	120
2x1/2	4-3/16	4-9/16	4-3/8	2-7/16	1.06	1.17	16	29
2x3/4	4-3/8	4-15/16	4-11/16	2-9/16	1.23	1.28	17	63
2x1	4-3/4	5-1/4	5-1/16	2-5/8	1.38	1.45	22	120
2x1-1/2	5-7/8	6-1/16	5-7/8	2-15/16	2.33	2.63	61	29
3x1/2	5-1/2	5-1/8	4-15/16	3	1.60	1.66	16	29
3x1	5-1/2	5-7/8	5-11/16	3-1/4	2.19	2.25	22	120
3x1-1/2	7-1/4	6-9/16	6-3/8	3-7/16	3.66	3.87	61	357
3x2	6-11/16	7-11/16	7-3/16	3-13/16	4.61	4.86	77	599
4x1	7-7/16	6-5/16	6-1/8	3-11/16	3.25	3.52	22	120
4x1-1/2	7-3/8	7-5/16	7-1/8	4-3/16	4.01	4.37	61	357
4x2	7-3/4	8-5/16	7-3/4	4-7/16	5.20	5.68	77	599
6x2	10-3/16	9-5/8	9-1/8	5-3/4	9.26	11.68	77	599
8x2	15-5/8	12-5/8	12-1/8	8-3/4	17.42	18.70	77	599

1: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual valves may vary.

2: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150. Cv values are for basic Ball Valve only, excluding Tee end connection.



True Union 2000 Industrial Ball Check Valves



Features – PVC, CPVC

Flow tested design provides quick response with positive seal for prevention of system back flow in industrial and chemical processing applications. Valves are available in IPS sizes 1/2" through 6" with socket/regular thread, SR threaded (Special Reinforced), flanged or spigot end connectors and 8" venturied valve with socket or flanged ends. Also available in metric socket and BSP thread sizes 1/2" through 2".

Sample Engineering Specification

All thermoplastic check valves shall be True Union 2000 Industrial Ball Check type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784, Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valve union nuts shall have Buttress threads. All valve seats shall be a standard O-ring type. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be listed by NSF® for use in potable water service. All PVC and CPVC 1/2" through 4" valves shall be pressure rated to 235 psi, all 6" and 8" Venturied and all flanged valves shall be pressure rated to 150 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ¹					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	4529-005	included	4521-005SR	4523-005	4527-005	235 psi Non-Shock Water @ 73°F
	FKM	4539-005	included	4531-005SR	4533-005	4537-005	
3/4	EPDM	4529-007	included	4521-007SR	4523-007	4527-007	
	FKM	4539-007	included	4531-007SR	4533-007	4537-007	
1	EPDM	4529-010	included	4521-010SR	4523-010	4527-010	
	FKM	4539-010	included	4531-010SR	4533-010	4537-010	
1-1/4	EPDM	4529-012	included	4521-012SR	4523-012	4527-012	
	FKM	4539-012	included	4531-012SR	4533-012	4537-012	
1-1/2	EPDM	4529-015	included	4521-015SR	4523-015	4527-015	
	FKM	4539-015	included	4531-015SR	4533-015	4537-015	
2	EPDM	4529-020	included	4521-020SR	4523-020	4527-020	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	4539-020	included	4531-020SR	4533-020	4537-020	
2-1/2	EPDM	4522-025	4521-025	4521-025SR	4523-025	4527-025	
	FKM	4532-025	4531-025	4531-025SR	4533-025	4537-025	
3	EPDM	4522-030	4521-030	4521-030SR	4523-030	4527-030	
	FKM	4532-030	4531-030	4531-030SR	4533-030	4537-030	
4	EPDM	4522-040	4521-040	4521-040SR	4523-040	4527-040	
	FKM	4532-040	4531-040	4531-040SR	4533-040	4537-040	
6	EPDM	4522-060	4521-060	4521-060SR	4523-060	4527-060	
	FKM	4532-060	4531-060	4531-060SR	4533-060	4537-060	
8"	EPDM	4522-080	—	—	4523-080	—	150 psi Non-Shock Water @ 73°F
	FKM	4532-080	—	—	4533-080	—	

1: For CPVC valve, add the letter "C" to the part number (e.g., 4529-005C, 4521-005CSR)

2: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Also Available in Spears® High Purity, Low Extractable PVC Material
- Strong, Buttress Thread Union Nuts
- Spears® Safe-T-Blocked® Seal Carrier
- Uses Standard O-ring Seat
- EPDM or FKM O-rings
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 4" Pressure Rated to 235 psi @ 73°F, Sizes 6" and 8" Venturied and all Flanged Pressure Rated to 150 psi @ 73°F
- Suitable for Either Horizontal or Vertical Installations
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors

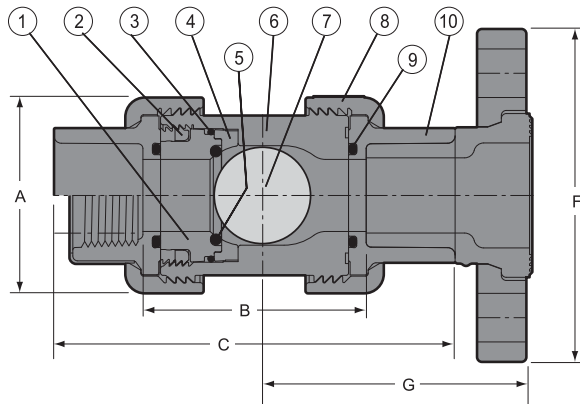
* See "BALL VALVE ACCESSORIES" section for details of individual products.

Ball Check Foot Valves



Spears® Ball Check Valves easily convert to foot valves utilizing optional Foot Valve Screen adapters found in Ball Valve Accessories section.

True Union 2000 Industrial Ball Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Seal Carrier Nut	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Seat Plate	1	PVC/CPVC
5	Seat O-ring	1	EPDM/FKM
6	Body	1	PVC/CPVC
7	Ball	1	PVC/CPVC
8	Union Nut	2	PVC/CPVC
9	End Connector O-ring	2	EPDM/FKM
10	End Connector	2	PVC/CPVC

Dimensions, Weights, & Cv Values

Nominal Size	Dimensions Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)		Cv Values			Horizontal Closing	
	A	B ¹		C			F	G	PVC	CPVC	Soc/Thd	Flange	Spigot	Feet of Head (water)	GPM (minimum)
		Soc/Thd	Spigot	Socket	Thread	Spigot									
1/2	1-7/8	2-7/16	2-7/8	4-3/16	3-13/16	4-5/8	3-1/2	2-31/32	.30	.33	6.3	6	6.3	1.6	.10
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	3-7/8	3-5/16	.46	.50	17	16	17	1.6	.10
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	4-1/4	3-5/8	.70	.74	25	24	25	1.6	.25
1-1/4	3-1/16	3-1/4	3-3/16	5-3/4	5-3/16	6-5/16	4-5/8	3-31/32	1.04	1.09	65	61	65	1.6	.40
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	5	4-3/8	1.37	1.45	86	82	86	1.6	.75
2	4-5/16	4-25/32	5-3/16	7-3/4	7-27/32	8-1/4	6	5-1/4	2.47	2.62	130	125	130	1.6	.75
2-1/2	6-3/16	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	7-1/2	6	6.80	7.25	200	193	200	1.0	1.50
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	7-1/2	6-13/16	6.98	7.35	275	268	275	1.0	4.00
4	7-3/4	7-5/16	8-1/4	11-13/16	10-1/4	12-3/4	9	7-1/2	12.13	12.96	500	489	500	1.0	5.50
6	11-5/8	11-1/6	13	17-1/16	15-3/4	18-1/2	11-1/4	10-3/16	37.07	39.98	800	794	800	N/A	N/A
8 ³	11-5/8	23-3/16	---	31-7/8	---	---	13-1/2	17-13/16	50.84	55.92	N/A	N/A	N/A	N/A	N/A

1: Valve Lay Length

2: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

3: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	6" and 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged valves have a base pressure rating of 150 psi

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters distance maintained from any pump or other source of turbulence. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow.



True Union 2000 Standard Ball Valves



Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 Standard type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with O-ring stem seal. All handles shall be polypropylene. All union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All EPDM valves shall be certified by NSF International for use with potable water. All 1/2" - 2" valves shall be pressure rated to 235 psi, all 2-1/2" - 4" and all flanged valves to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Economical, low profile quarter-turn shutoff valve is excellent for general purpose and many O.E.M applications. PVC and CPVC valves are available in IPS sizes 1/2" through 4" with socket, regular thread, SR threaded (Special Reinforced), flanged or spigot end connectors.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Interchangeable with all True Union 2000 Valves, Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Spears® Single O-ring Safe-T-Shear® Stem Design
- Spears® Safe-T-Blocked® Seal Carrier
- Replaceable PTFE/HDPE Floating Seat Design
- EPDM or FKM O-rings
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73°F
- Sizes 2-1/2" - 4" and all flanged pressure rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ¹					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	3629-005	included	3621-005SR	3623-005	3627-005	235 psi Non-Shock Water @ 73°F
	FKM	3639-005	included	3631-005SR	3633-005	3637-005	
3/4	EPDM	3629-007	included	3621-007SR	3623-007	3627-007	
	FKM	3639-007	included	3631-007SR	3633-007	3637-007	
1	EPDM	3629-010	included	3621-010SR	3623-010	3627-010	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	3639-010	included	3631-010SR	3633-010	3637-010	
1-1/4	EPDM	3629-012	included	3621-012SR	3623-012	3627-012	
	FKM	3639-012	included	3631-012SR	3633-012	3637-012	
1-1/2	EPDM	3629-015	included	3621-015SR	3623-015	3627-015	150 psi Non-Shock Water @ 73°F
	FKM	3639-015	included	3631-015SR	3633-015	3637-015	
2	EPDM	3629-020	included	3621-020SR	3623-020	3627-020	
	FKM	3639-020	included	3631-020SR	3633-020	3637-020	
2-1/2	EPDM	3622-025	3621-025	3621-025SR	3623-025	3627-025	150 psi Non-Shock Water @ 73°F
	FKM	3632-025	3631-025	3631-025SR	3633-025	3637-025	
3	EPDM	3622-030	3621-030	3621-030SR	3623-030	3627-030	
	FKM	3632-030	3631-030	3631-030SR	3633-030	3637-030	
4	EPDM	3622-040	3621-040	3621-040SR	3623-040	3627-040	
	FKM	3632-040	3631-040	3631-040SR	3633-040	3637-040	

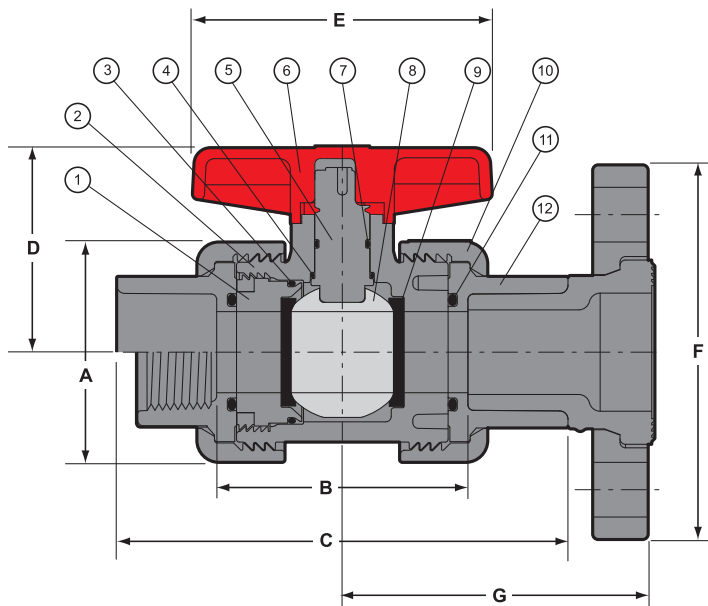
1: For CPVC valve, add the letter "C" to the part number (e.g., 3629-005C, 3621-005CSR)

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Round Safety Handles
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/ Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See "BALL VALVE ACCESSORIES" section for details of individual products.

True Union 2000 Standard Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Body	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Stem Bearing ^{1,2}	1	PP
5	Stem	1	PVC/CPVC
6	Handle	1	PP
7	Stem O-ring	1	EPDM/FKM
8	Ball	1	PVC/CPVC
9	Seat	2	PTFE/HDPE
10	Union Nut	2	PVC/CPVC
11	End Connector O-ring	2	EPDM/FKM
12	End Connector	2	PVC/CPVC

1: O-Ring up to 2"

2: PTFE Thrust Bearing: 2-1/2", 3" & 4"

Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	A	B ¹		C			D	E	F	G	Approx. Wt. (Lbs.)		Oper. ² Torque (in. lbs.)	Cv Values ³	
		Soc/Thd	Spigot	Socket	Thread	Spigot					PVC	CPVC		Soc/Thd/Spig	Flanged
1/2	1-7/8	2-7/16	2-7/8	4-3/16	3-13/16	4-5/8	1-5/8	2-1/2	3-1/2	2-31/32	.33	.35	12	29	18
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2	3	3-7/8	3-5/16	.51	.54	20	63	39
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	2-5/16	3-7/16	4-1/4	3-5/8	.71	.75	25	120	73
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	2-13/16	3-9/16	4-5/8	3-31/32	1.12	1.17	35	243	151
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	3-1/16	3-7/8	5	4-3/8	1.47	1.53	45	357	223
2	4-1/4	4-3/4	5-13/16	7-3/4	6-3/4	8-1/4	3-3/4	5	6	5-1/4	2.62	2.75	94	599	395
2-1/2	6-3/16	7	7-13/16	10-1/2	8-1/2	11-3/8	5-7/8	7-5/8	7	6	7.42	7.70	120	856	579
3	6-3/16	7	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	7-1/2	6-13/16	7.46	7.81	120	1416	974
4	7-5/8	7-1/2	8-1/4	12-1/16	10-1/4	12-3/4	6-3/4	6-3/4	9-1/16	7-1/2	12.35	12.48	336	2865	1952

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual valves may vary.

3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating (psi) (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



True Union Ball Valves (Regular Style)



Sample Engineering Specification

All thermoplastic ball valves shall be True Union type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double stop Polypropylene handle. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 2-1/2" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

This versatile, quarter-turn shutoff valve is well suited for industrial and chemical processing applications. Available in IPS Sizes 1/2" - 4" with socket, threaded or flanged end connectors. 6" Venturied valve (4" valve with 4 x 6 adapter) available with either socket or flanged end connection. Also available with metric 20mm - 110mm or 1/2" - 4" BSP threaded end connectors.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Fully Serviceable, Replaceable Components
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- EPDM or FKM O-rings
- High Impact Polypropylene Handle
- Spears® Safe-T-Shear® Stem Design
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 6" and all flanged Pressure Rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ¹			Pressure Rating
		Threaded	Socket	Flanged	
1/2	EPDM	2329-005	included	2323-005	235 psi Non-Shock Water @ 73°F
	FKM	2339-005	included	2333-005	
3/4	EPDM	2329-007	included	2323-007	
	FKM	2339-007	included	2333-007	
1	EPDM	2329-010	included	2323-010	
	FKM	2339-010	included	2333-010	
1-1/4	EPDM	2329-012	included	2323-012	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2339-012	included	2333-012	
1-1/2	EPDM	2329-015	included	2323-015	
	FKM	2339-015	included	2333-015	
2	EPDM	2329-020	included	2323-020	
	FKM	2339-020	included	2333-020	
2-1/2	EPDM	2321-025	2322-025	2323-025	150 psi Non-Shock Water @ 73°F
	FKM	2331-025	2332-025	2333-025	
3	EPDM	2321-030	2322-030	2323-030	
	FKM	2331-030	2332-030	2333-030	
4	EPDM	2321-040	2322-040	2323-040	
	FKM	2331-040	2332-040	2333-040	
6 ² venturied	EPDM	---	2322-060	2323-060	
	FKM	---	2332-060	2333-060	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2339-005C).

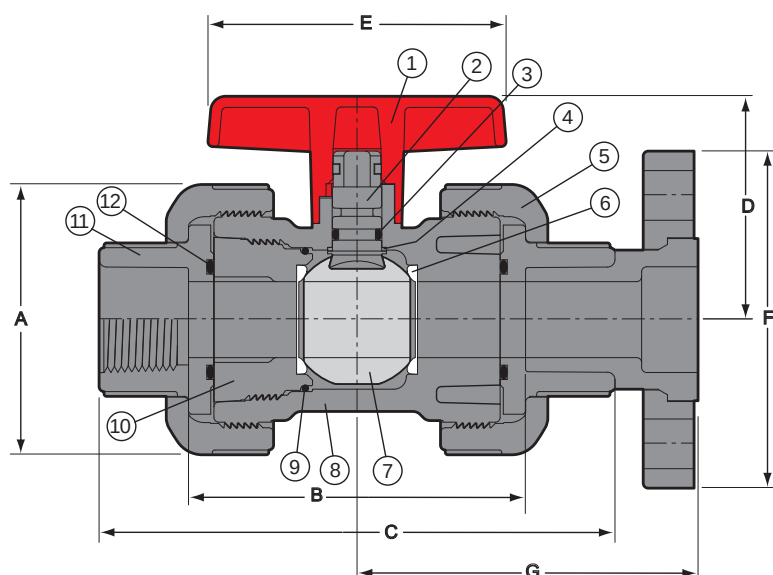
2: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- 2" Square / T-Style Operator Nut

* See "BALL VALVE ACCESSORIES" section for details of individual products.

True Union Ball Valves (Regular Style)



Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	EPDM/FKM
4	Stem Bearing*	1	PP
5	Union Nut	2	PVC/CPVC
6	Seat**	2	PTFE
7	Ball	1	PVC/CPVC
8	Body	1	PVC/CPVC
9	Carrier O-ring	1	EPDM/FKM
10	Seal Carrier	1	PVC/CPVC
11	End Connector	2	PVC/CPVC
12	End Connector O-ring	2	EPDM/FKM

* Sizes 1-1/4" and larger.

** Seat O-ring (not shown) on sizes 2-1/2" and larger.

Dimensions, Weights, Operating Torque & C_v Values

Nominal Size	Dimension Reference (inches, ± 1/16)							Approx. Wt. (Lbs.)				Oper. ² Torque (in.-lb.)	C _v ⁴ Values	
	A	B ¹	C	D	E	F	G	PVC		CPVC				
								Soc/Thd	Flanged	Soc/Thd	Flanged		Soc/Thd	Flanged
1/2	2-9/16	3-7/16	5-3/16	2-13/32	2-23/32	3-1/2	3-15/32	1.05	1.23	.95	1.14	20	25	18
3/4	3-1/32	4-1/16	6-3/16	2-5/8	3-3/16	3-7/8	4	1.44	1.64	1.50	1.73	30	51	36
1	3-13/32	4-5/16	6-9/16	2-13/16	3-23/32	4-1/4	4-5/16	1.91	2.22	2.08	2.43	40	97	67
1-1/4	3-11/16	4-1/2	7-1/16	2-31/32	4-1/8	4-5/8	4-19/32	2.38	2.78	2.52	2.91	60	204	142
1-1/2	4-3/8	5-5/16	8-1/32	3-9/32	4-15/32	5	5-9/32	3.63	4.00	3.82	4.26	80	285	201
2	5-3/16	5-13/16	8-13/16	4-13/32	5-1/4	6	5-23/32	5.40	6.14	5.70	6.54	90	540	381
2-1/2	7-7/16	8-3/8	11-7/8	4-29/32	9-7/8	7	7-3/16	12.87	14.26	13.44	15.85	300	712	512
3	7-7/16	8-3/16	11-15/16	4-29/32	9-7/8	7-1/2	7-11/32	13.24	15.67	13.85	16.96	300	1294	925
4	8-15/16	8-11/16	13-3/16	5-19/32	10-13/16	9-1/16	8-5/32	19.58	24.32	20.49	25.83	400	2629	1868
6 Socket ³	8-15/16	19-5/8	26-1/16	6-3/4	10-13/16	11-1/4	14-11/16	22.66	30.98	26.11	34.78	400	N/A	N/A
6 Flanged ³	11-3/16	29-3/8	N/A	6-3/4	10-13/16	11-1/4	14-11/16	N/A	N/A	N/A	N/A	400	N/A	N/A

1: Valve Lay Lengths.

2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity.

3: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.

4: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150. C_v Values for 6" venturied flange and socket valves are not available.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.



True Union Ball Check Valves (Regular Style)



Sample Engineering Specification

All thermoplastic check valves shall be True Union Ball type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valve union nuts shall have Buttress threads. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 2-1/2" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ¹			Pressure Rating
		Threaded	Socket	Flanged	
1/2	EPDM	2229-005	included	2223-005	235 psi Non-Shock Water @ 73°F
	FKM	2239-005	included	2233-005	
3/4	EPDM	2229-007	included	2223-007	
	FKM	2239-007	included	2233-007	
1	EPDM	2229-010	included	2223-010	
	FKM	2239-010	included	2233-010	
1-1/4	EPDM	2229-012	included	2223-012	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2239-012	included	2233-012	
1-1/2	EPDM	2229-015	included	2223-015	
	FKM	2239-015	included	2233-015	
2	EPDM	2229-020	included	2223-020	
	FKM	2239-020	included	2233-020	
2-1/2	EPDM	2221-025	2222-025	2223-025	150 psi Non-Shock Water @ 73°F
	FKM	2231-025	2232-025	2233-025	
3	EPDM	2221-030	2222-030	2223-030	
	FKM	2231-030	2232-030	2233-030	
4	EPDM	2221-040	2222-040	2223-040	
	FKM	2231-040	2232-040	2233-040	
6 ² venturied	EPDM	---	2222-060	2223-060	
	FKM	---	2232-060	2233-060	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2239-005C).

2: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.

Features – PVC, CPVC

Flow tested design provides quick response with positive seal for prevention of system back flow in industrial and chemical processing applications. Available in IPS Sizes 1/2"- 4" with socket, threaded or flanged end connectors. 6" Venturied valve (4" valve with 4 x 6 adapters) available with either socket or flanged end connection. Also available with metric 20mm - 110mm or 1/2" - 4" BSP thread end connectors. **Note:** Seal carrier is **NOT** blocked (for Safe-T-Blocked® seal carrier design, see True Union 2000 Industrial Ball Check Valve).

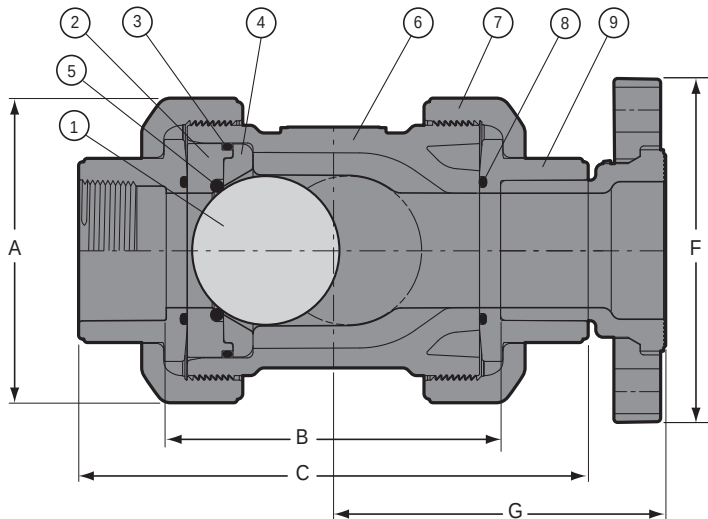
- Chemical & Corrosion Resistant PVC or CPVC Construction
- Strong, Buttress Thread Union Nuts
- Fully Serviceable, Replaceable Components
- Uses Standard O-ring Seat
- EPDM or FKM O-rings
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 6" and all Flanged Pressure Rated to 150 psi @ 73°F
- Suitable for Either Horizontal or Vertical Installations
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Ball Check Foot Valves

Spears® Ball Check Valves easily convert to foot valves utilizing optional Foot Valve Screen adapters found in Ball Valve Accessories section.



True Union Ball Check Valves (Regular Style)



Replacement Parts

No.	Component	Qty.	Material
1	Ball	1	PVC/CPVC
2	Seal Carrier	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Seat Plate	1	PVC/CPVC
5	Seat O-ring	1	EPDM/FKM
6	Body	1	PVC/CPVC
7	Union Nut	2	PVC/CPVC
8	End Connector O-ring	2	EPDM/FKM
9	End Connector	2	PVC/CPVC

Dimensions, Weights, C_v Values & Horizontal Closing Requirements

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)		C _v ³ Values		Horizontal Closing	
	A	B ¹	C	F	G	PVC	CPVC	Threaded/Socket	Flanged	Feet of Head (water)	GPM (minimum)
1/2	2-9/16	3-5/16	5-1/8	3-1/2	3-7/16	.56	.61	11	10	1.6	.10
3/4	3	4	6-1/8	3-7/8	3-15/16	.91	.99	18	17	1.6	.10
1	3-7/16	4-1/4	6-1/2	4-1/4	4-3/8	1.20	1.30	32	30	1.6	.25
1-1/4	3-11/16	4-1/2	7	4-5/8	4-9/16	1.50	1.60	58	55	1.6	.40
1-1/2	4-3/8	5-5/16	8-1/16	5	5-1/4	2.50	2.70	94	89	1.6	.75
2	5-1/8	5-3/4	8-3/4	6	5-5/8	3.70	4.00	153	146	1.6	.75
2-1/2	7-3/8	8-5/16	11-7/8	7	7-1/4	11.10	12.21	159	155	1.0	1.50
3	7-3/8	8-1/8	11-7/8	7-1/2	7-1/2	10.84	11.91	378	361	1.0	4.00
4	8-15/16	8-1/4	12-15/16	9-1/16	8-1/8	17.60	19.36	551	537	1.0	5.50
6 Socket ²	8-15/16	19-5/8	26-1/16	N/A	N/A	22.45	27.61	N/A	N/A	N/A	N/A
6 Flanged ²	11-3/16	29-3/8	N/A	11-1/4	14-3/4	31.21	37.07	N/A	N/A	N/A	N/A

- 1: Valve Lay Length
2: Consists of 4" True Union Ball Check Valve with two 4" x 6" Adapters.
3: Gallons per minute at 1 psi pressure drop.
C_v Values for 6" venturied flange and socket valves are not available.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
	2-1/2" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters distance maintained from any pump or other source of turbulence. Ball Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow.



Compact 2000 Ball Valves



Sample Engineering Specification

All thermoplastic ball valves shall be 2000 Compact sealed unit type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with O-ring stem seal. All handles shall be polypropylene. All EPDM valves shall be certified by NSF International for use with potable water. All 1/2" - 2" valves shall be pressure rated to 235 psi, for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Economical, low profile quarter-turn shutoff valve is excellent for general purpose and many O.E.M applications. PVC and CPVC valves are available in IPS sizes 1/2" through 2" with socket and regular thread.

- Industrial Grade, Maintenance-Free Sealed Unit
- New Actuator-Ready Body – Accepts Spears® Improved Mini-Mount Actuator Mounting Kits
- New Double O-ring Stem Seal
- Spears® Safe-T-Shear Stem
- PTFE Self Adjusting Floating Seats
- EPDM or FKM O-ring Seals
- Full 235 psi Pressure Rating @ 73°F
- EPDM valves NSF® Certified for Use with Potable Water
- Suitable for Vacuum Service
- Produced in ASTM IPS sizes 1/2" - 2" with Socket or Threaded End Connectors.

Optional Accessories*

- Round Safety Handles
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

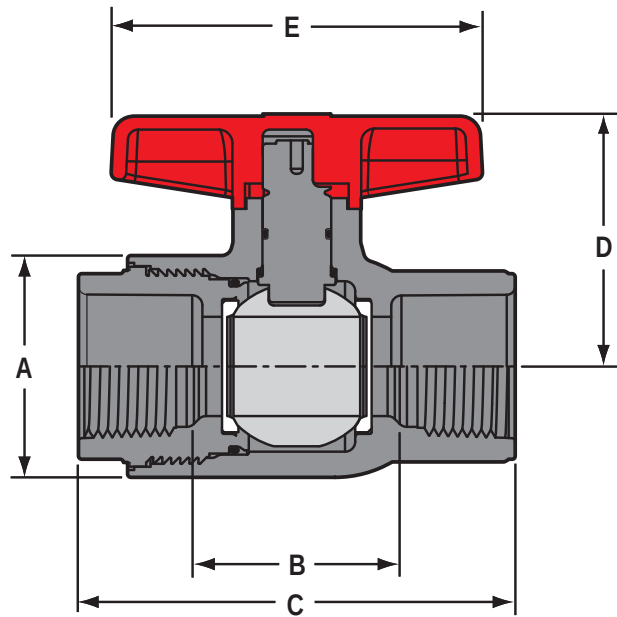
* See "BALL VALVE ACCESSORIES" section for details of individual products.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ¹		Pressure Rating
		Socket	Threaded	
1/2	EPDM	6622-005	6621-005	235 psi Non-Shock Water @ 73°F
	FKM	6632-005	6631-005	
3/4	EPDM	6622-007	6621-007	
	FKM	6632-007	6631-007	
1	EPDM	6622-010	6621-010	
	FKM	6632-010	6631-010	
1-1/4	EPDM	6622-012	6621-012	
	FKM	6632-012	6631-012	
1-1/2	EPDM	6622-015	6621-015	
	FKM	6632-015	6631-015	
2	EPDM	6622-020	6621-020	
	FKM	6632-020	6631-020	

1: For CPVC Valves, add the letter "C" to part numbers listed. (e.g., 6622-005C)

Compact 2000 Ball Valves



Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)		Oper. ² Torque (in.-lb.)	Cv ³ Values
	A	B ¹		C	D	E				
		Socket	Threaded				PVC	CPVC		
1/2	1-7/16	1-1/4	1-5/8	3-1/16	1-5/8	1-5/8	.18	.20	10	42
3/4	1-13/16	1-1/2	2-1/16	3-9/16	2	2	.29	.31	20	87
1	2-1/16	1-3/4	2-3/16	4	2-5/16	2-5/16	.44	.46	25	157
1-1/4	2-5/8	2-1/6	2-3/4	4-5/8	2-13/16	2-13/16	.68	.70	30	311
1-1/2	3	2-1/2	3-3/8	5-5/16	3-1/16	3-1/16	.99	1.03	50	429
2	3-5/8	3	4	6	3-3/4	3-3/4	1.64	1.70	90	768

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity.

3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



Compact Ball Valves



Sample Engineering Specification

All thermoplastic ball valves shall be Compact sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear[®] stem and Polypropylene handle. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi, all 3" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears[®] Manufacturing Company.

Features – PVC, CPVC

This industrial grade, quarter turn shutoff valve is popular where maintenance-free installations are desired for a variety of chemical processing, industrial and OEM applications. IPS Sizes 1/2" - 4" available with socket, threaded or flanged end connectors, 6" size available with socket or flanged end connectors. 6" valve uses high-efficiency lever style handle for easier operation.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Maintenance-Free Sealed Unit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- Spears[®] Single O-ring Safe-T-Shear[®] Stem Design
- EPDM or FKM O-rings
- Self Adjusting PTFE Floating Seat Design
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 3" - 6" and all Flanged Pressure Rated to 150 psi @ 73°F
- EPDM valves NSF[®] Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Note: Valve size 6" uses Lever Handle (not shown)

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers ¹			Pressure Rating
		Socket	Threaded	Flanged	
1/2	EPDM	2122-005	2121-005	2123-005	235 psi Non-Shock Water @ 73°F
	FKM	2132-005	2131-005	2133-005	
3/4	EPDM	2122-007	2121-007	2123-007	
	FKM	2132-007	2131-007	2133-007	
1	EPDM	2122-010	2121-010	2123-010	
	FKM	2132-010	2131-010	2133-010	
1-1/4	EPDM	2122-012	2121-012	2123-012	(Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2132-012	2131-012	2133-012	
1-1/2	EPDM	2122-015	2121-015	2123-015	
	FKM	2132-015	2131-015	2133-015	
2	EPDM	2122-020	2121-020	2123-020	
	FKM	2132-020	2131-020	2133-020	
3	EPDM	2122-030	2121-030	2123-030	150 psi Non-Shock Water @ 73°F
	FKM	2132-030	2131-030	2133-030	
4	EPDM	2122-040	2121-040	2123-040	
	FKM	2132-040	2131-040	2133-040	
6	EPDM	2122-060	---	2123-060	
	FKM	2132-060	---	2133-060	

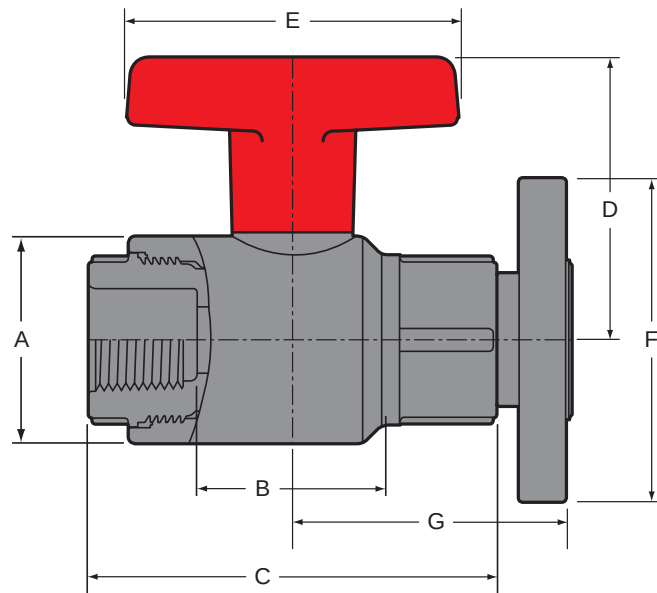
1: For CPVC valves, add the letter "C" to the part numbers listed (e.g., 2131-005C).

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- Mini-Mount Actuation Mounting Kit
- 2" Square/T-Style Operator Nut

*See "BALL VALVE ACCESSORIES" section for details of individual products.

Compact Ball Valves



Dimensions, Weights, Operating Torque & C_v Values

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)		Oper. ² Torque (in.-lb.)	Cv ³ Values	
	A	B ¹		C	D	E ⁴	F	G					
		Socket	Threaded						PVC	CPVC		Soc/Thd	Flanged
1/2	1-11/16	1-5/8	1-7/8	3-3/8	2-5/16	2-3/4	3-1/2	2-17/32	.31	.32	20	36	20
3/4	2-1/8	1-15/16	2-7/16	4-1/16	2-11/16	3-1/4	3-7/8	2-27/32	.49	.52	30	74	42
1	2-7/16	2-1/16	2-3/8	4-7/16	2-7/8	3-3/4	4-1/4	3-1/16	.64	.69	40	141	80
1-1/4	2-13/16	2-3/8	3	4-15/16	3-5/16	4-1/8	4-5/8	3-13/32	.93	.98	60	284	163
1-1/2	3-1/4	2-13/16	3-1/2	5-5/8	3-11/16	4-1/2	5	4	1.39	1.45	80	402	229
2	4-1/16	3-3/8	4-7/16	6-1/2	4-3/8	5-1/4	5-7/8	4-13/32	2.33	2.45	90	706	429
3	5-5/16	4-9/16	5-1/2	8-5/16	5-1/2	7-21/32	7-1/2	5-7/16	4.49	5.02	300	1660	1079
4	7-3/8	6-3/16	7-3/16	10-5/32	6-5/8	10-27/32	9-1/16	6-7/8	9.50	10.24	400	3104	2028
6 ⁴	10-3/16	8	10-3/4	14-1/8	8-1/16	14-5/16	11-1/4	8-21/32	21.48	23.41	900	7942	5268

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity.

3: Gallons per minutes at 1 psi pressure loss. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C =150.

4: 6" valve has lever handle, dimension is from valve centerline (not illustrated)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	3" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



Single Entry Ball Valves



Sample Engineering Specification

All thermoplastic ball valves shall be Single Entry type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All O-rings shall be Buna-N, EPDM or FKM. All valves shall have Safe-T-Shear[®] stem and double stop Polypropylene handle. All valve union nuts shall have Buttress threads. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 3" - 4" valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears[®] Manufacturing Company.

Features – PVC Gray & PVC White

This quarter-turn shutoff valve is widely chosen for industrial and chemical processing, turf and irrigation, plus pool and spa applications. Available in PVC Gray or PVC White, IPS Sizes 1/2" - 4" with socket or threaded end connectors. **Note:** Seal carrier is **NOT** blocked (see True Union 2000 Valves).

- Chemical & Corrosion Resistant PVC Gray or PVC White Construction
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nut
- High Impact Polypropylene Handle
- Spears[®] Single O-ring Safe-T-Shear[®] Stem Design
- Buna-N, EPDM or FKM O-rings
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 3" - 4" Pressure Rated to 150 psi @ 73°F
- Valves with EPDM O-rings NSF[®] Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Gray Part Numbers ¹		Pressure Rating
		Socket	Threaded	
1/2	Buna-N	2412-005G	2411-005G	235 psi Non-Shock Water @ 73°F
	EPDM	2422-005G	2421-005G	
	FKM	2432-005G	2431-005G	
3/4	Buna-N	2412-007G	2411-007G	
	EPDM	2422-007G	2421-007G	
	FKM	2432-007G	2431-007G	
1	Buna-N	2412-010G	2411-010G	
	EPDM	2422-010G	2421-010G	
	FKM	2432-010G	2431-010G	
1-1/4	Buna-N	2412-012G	2411-012G	
	EPDM	2422-012G	2421-012G	
	FKM	2432-012G	2431-012G	
1-1/2	Buna-N	2412-015G	2411-015G	
	EPDM	2422-015G	2421-015G	
	FKM	2432-015G	2431-015G	
2	Buna-N	2412-020G	2411-020G	
	EPDM	2422-020G	2421-020G	
	FKM	2432-020G	2431-020G	
3	Buna-N	2412-030G	2411-030G	150 psi Non-Shock Water @ 73°F
	EPDM	2422-030G	2421-030G	
	FKM	2432-030G	2431-030G	
4	Buna-N	2412-040G	2411-040G	
	EPDM	2422-040G	2421-040G	
	FKM	2432-040G	2431-040G	

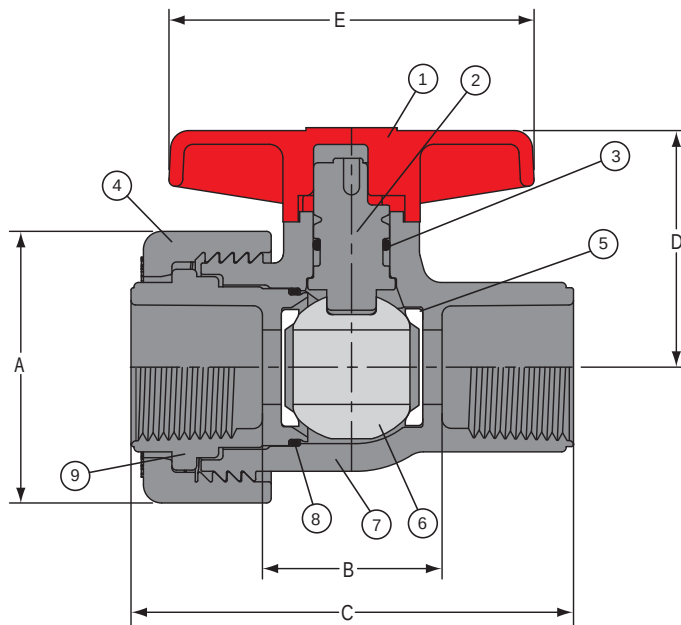
1: For PVC White valves, replace the letter "G" with the letter "W" at the end of the part number listed (e.g., 2421-005W).

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- 2" Square / T-Style Operator Nut

*See "**BALL VALVE ACCESSORIES**" section for details of individual products.

Single Entry Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Union Nut	1	PVC
5	Seat	2	PTFE
6	Ball	1	PVC
7	Body	1	PVC
8	Carrier O-ring	1	Buna-N/EPDM/FKM
9	End Connector	1	PVC

Seat O-rings (not shown) on sizes 3" and larger.

Dimensions, Weights, Operating Torque & C_v Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	Oper. ² Torque (in.-lb.)	C _v ³ Values
	A	B ¹		C	D	E			
		Socket	Threaded						
1/2	1-15/16	1-1/4	1-5/8	3-1/16	1-5/8	2-1/2	.22	20	38
3/4	2-3/8	1-7/16	2-1/8	3-9/16	2	3	.36	30	76
1	2-5/8	1-5/8	2-1/8	3-7/8	2-5/16	3-15/16	.50	40	146
1-1/4	3-1/8	1-15/16	2-1/4	4-1/8	2-13/16	3-1/2	.75	60	292
1-1/2	3-9/16	2-3/8	2-3/4	4-5/8	3-1/16	3-7/8	1.00	80	412
2	4-5/16	3-1/16	3-5/8	5-1/2	3-3/4	5	2.00	90	720
3	6-3/16	4-3/8	5-3/8	8-1/8	5-1/2	7-5/8	7.00	300	1660
4	7-3/4	5-11/16	6-7/8	9-3/4	6-1/8	9-1/16	12.00	400	3104

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity; due to adjustment differences during installation, actual values may vary.

3: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	146 (1.01)	118 (.81)	94 (.65)	71 (.49)	52 (.36)	-0- (-0-)
	3" - 4"	PVC	150 (1.03)	93 (.64)	75 (.52)	60 (.41)	45 (.31)	33 (.23)	-0- (-0-)



Utility Ball Valves



PVC



CPVC

Features - PVC White, PVC Gray & CPVC

A high quality, economical quarter-turn shutoff valve designed for irrigation, pool and spa, and general purpose applications. IPS sizes 1/2" - 2" available in PVC White, PVC Gray or CPVC with socket or threaded end connectors. Sizes 3" - 4" available in PVC White with socket or threaded end connectors. 6" size available in PVC White with socket end connectors and high-efficiency lever style handle for easier operation.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Economical Sealed Unit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Sizes 1/2" - 6" Pressure Rated to 150 psi @ 73°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble lubricant

Note: Valve sizes 2-1/2", 3", 4" and 6" are not available in CPVC.
Refer to Compact Ball Valve
Valve size 6" uses Lever Handle (not shown)

Sample Engineering Specification

All thermoplastic ball valves shall be Utility sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

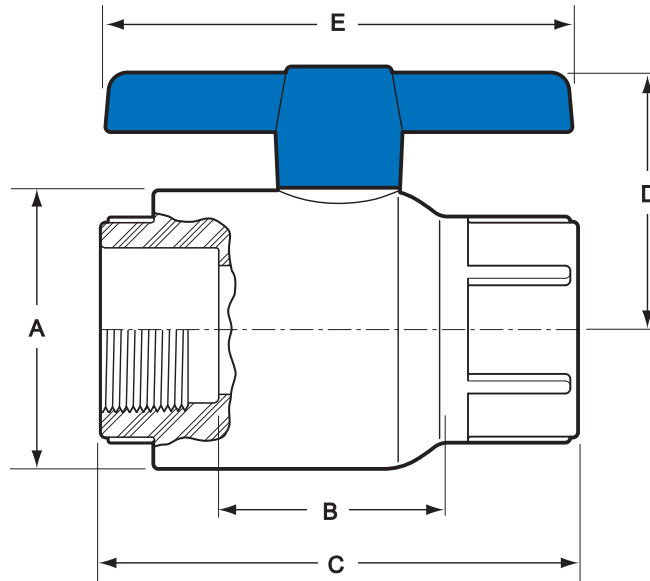
Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ^{1, 2}		Pressure Rating
		Socket	Threaded	
1/2	EPDM	2622-005	2621-005	150 psi Non-Shock Water @ 73°F
3/4	EPDM	2622-007	2621-007	
1	EPDM	2622-010	2621-010	
1-1/4	EPDM	2622-012	2621-012	
1-1/2	EPDM	2622-015	2621-015	
2	EPDM	2622-020	2621-020	
2-1/2	EPDM	2622-025	2621-025	
3	EPDM	2622-030	2621-030	
4	EPDM	2622-040	2621-040	
6	EPDM	2622-060	---	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2621-005C).

2: For PVC Gray, add the letter "G" to part numbers listed (e.g. 2621-005G).

Utility Ball Valves



Dimensions, Weights & C_v Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)		C _v ² Values
	A	B ¹		C	D	E ³	PVC	CPVC	
		Socket	Threaded						
1/2	1-7/16	1-1/4	1-1/4	2-11/16	1-11/16	2-3/4	.16	.17	46
3/4	1-25/32	1-7/16	1-7/16	2-31/32	1-29/32	3-7/32	.25	.27	91
1	2-1/32	1-5/8	1-5/8	3-3/8	2-7/16	3-1/2	.34	.36	160
1-1/4	2-9/16	1-31/32	1-31/32	3-7/8	2-13/16	3-3/4	.57	.60	306
1-1/2	2-15/16	2-1/2	2-3/4	4-11/16	2-15/16	4-1/4	.88	.90	429
2	3-9/16	2-27/32	3-3/16	5-5/32	3-13/16	4-31/32	1.34	1.34	755
2-1/2	4-5/16	3-17/32	4-7/16	7-1/32	4-5/32	5-9/16	2.31	N/A	1126
3	5-5/16	4-5/32	5-1/8	7-15/16	5-9/16	7-21/32	4.78	N/A	1660
4	6-11/16	5-1/8	6-7/32	9-3/16	6-3/32	10-27/32	8.00	N/A	3129
6 ³	10-3/16	8-3/32	---	14-3/16	8-5/32	14-3/32	23.24	N/A	7942

1: Valve Lay Length

2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

3: 6" valve has lever handle, dimension is from valve stem centerline (not illustrated)

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	93 (.64)	75 (.52)	60 (.41)	45 (.31)	33 (.23)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	123 (.85)	110 (.76)	98 (.68)	86 (.58)	75 (.52)	68 (.47)	60 (.41)	48 (.33)	38 (.26)	-0- (-0-)

CWV Ball Valves



Features - PVC White

A high quality, economical quarter-turn shutoff valve designed for irrigation, pool and spa, and general purpose applications. IPS sizes 1/2" - 2" available in PVC White.

- Chemical & Corrosion Resistant PVC Construction
- Economical Sealed Unit
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- Sizes 1/2" - 2" Pressure Rated to 125 psi @ 73°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble lubricant

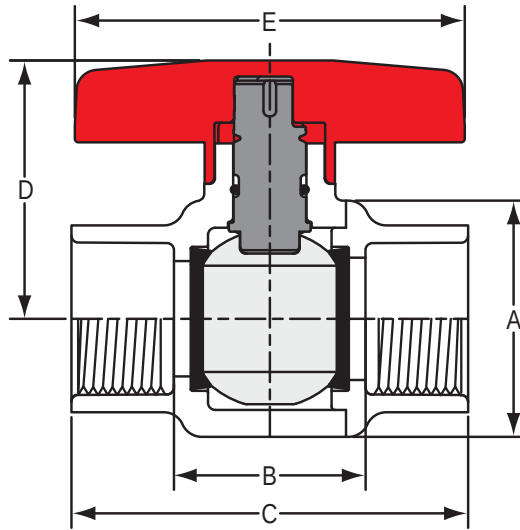
Sample Engineering Specification

All thermoplastic ball valves shall be CWV sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All O-rings shall be EPDM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 125 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number		Pressure Rating
		Socket	Threaded	
1/2	EPDM	8722-005	8721-005	125 psi Non-Shock Water @ 73°F
3/4	EPDM	8722-007	8721-007	
1	EPDM	8722-010	8721-010	
1-1/4	EPDM	8722-012	8721-012	
1-1/2	EPDM	8722-015	8721-015	
2	EPDM	8722-020	8721-020	

CWV Ball Valves



Dimensions

Size	A	B		C	D	E
		Socket	Threaded			
1/2	1-5/16	1-7/32	1-7/32	2-5/8	1-9/16	2-5/8
3/4	1-5/8	1-15/32	1-7/16	2-15/16	1-15/16	2-7/8
1	1-7/8	1-5/8	1-5/8	3-7/16	2-1/4	3-3/8
1-1/4	2-3/8	2	2	3-7/8	2-3/4	3-7/8
1-1/2	2-3/4	2-7/16	2-3/4	4-5/8	3-1/8	4-1/2
2	3-11/32	2-25/32	2-25/32	5-1/8	3-23/32	4-31/32

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	93 (.64)	75 (.52)	60 (.41)	45 (.31)	33 (.23)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)

CTS 1/4-Turn Angle Supply Stop



Features – CPVC

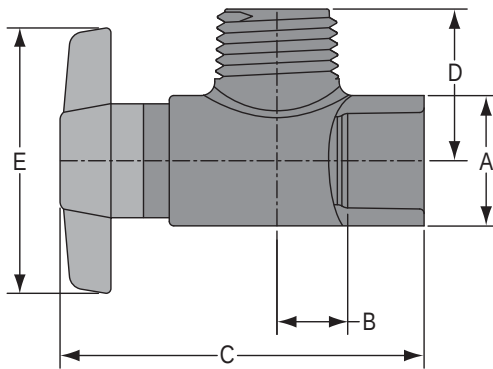
Used at plumbing fixtures to terminate and control hot and cold water, this all-plastic quarter-turn shutoff valve is specially designed for use with CTS (Copper Tube Size) CPVC Hot & Cold Water Distribution Systems. Available in 1/2" CTS Socket or Spears® patented Special Reinforced (SR) 1/2" FIPT female thread inlet x 1/2" straight male thread outlet for connection to conventional 1/2" FPT faucet or toilet supply lines with captive seals.

- Easy 1/4-Turn Shutoff
- All Plastic Corrosion Proof Construction
- CTS CPVC Tan Body with Tan Colored High Impact Polypropylene Handle
- High Quality EPDM Seals
- NSF® Certified to ASTM F 1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F

Sample Engineering Specification

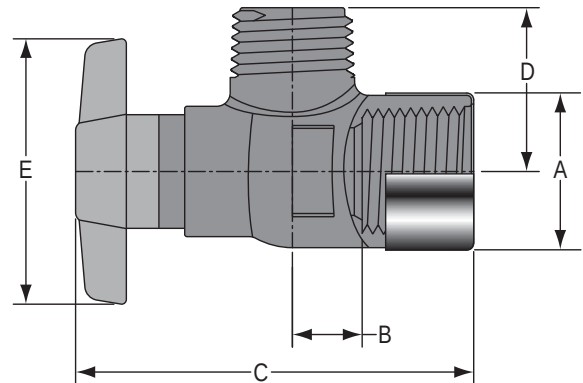
All thermoplastic Angle Supply Stops shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have Polypropylene handle. All Angle Supply Stops shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Dimensions



1/4-Turn Angle Supply Stop
Socket x NPT

Nominal Size	A	B	C	D	E
1/2	27/32	7/16	2-13/32	1	1-3/4
1/2 x 3/8	7/8	7/16	2-3/8	7/8	1-3/4



1/4-Turn Angle Supply Stop
SR FIPT x NPT

Nominal Size	A	B	C	D	E
1/2	1	15/32	2-21/32	1	1-3/4
1/2 x 3/8	1-1/32	15/32	2-5/8	31/32	1-3/4

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number		Pressure Rating
		Socket	SR Threaded	
1/2	EPDM	7722-005	7721-005SR	100 psi Non-Shock Water @ 180°F
1/2 x 3/8	EPDM	7722-073	7721-073SR	100 psi Non-Shock Water @ 180°F

CTS Ball Valves



Sample Engineering Specification

All thermoplastic ball valves shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have double stop Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

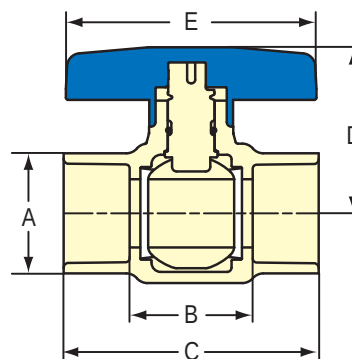
Features – CPVC

A high quality, quarter-turn shutoff valve designed for line-stop use in Copper Tube Size (CTS) CPVC hot and cold water distribution systems as specified in ASTM D 2846. Approved by national, state and most municipal building codes for use in residential and commercial structures, as well as recreational vehicles, modular homes and mobile home applications. Check local codes for acceptability and restrictions. Available in CTS sizes 1/2" - 2" with socket end connectors.

- Chemical & Corrosion Resistant CPVC Construction
- Maintenance-Free Sealed Unit
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Suitable for Commercial Hot Water Systems
- Sizes 1/2" - 2" Pressure Rated to 100 psi @ 180°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number Socket	Pressure Rating
1/2	EPDM	1922-005	100 psi Non-Shock Water @ 180°F
3/4	EPDM	1922-007	
1	EPDM	1922-010	
1-1/4	EPDM	1922-012	
1-1/2	EPDM	1922-015	
2	EPDM	1922-020	



Dimensions, Weights & C_v Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)	C _v ² Values
	A	B ¹	C	D	E		
1/2	1-7/32	1-1/16	2-3/32	1-11/32	2	.09	37
3/4	1-9/16	1-11/32	2-25/32	1-3/4	2-23/32	.16	84
1	1-7/8	1-9/16	3-3/8	2-3/8	3-1/2	.27	151
1-1/4	2-13/32	1-15/16	4-3/16	2-25/32	3-3/4	.47	229
1-1/2	2-27/32	2-3/8	5-1/32	3-5/32	4-9/32	1.05	330
2	3-17/32	2-3/4	6-3/16	3-27/32	5	1.38	598

1: Valve Lay Length

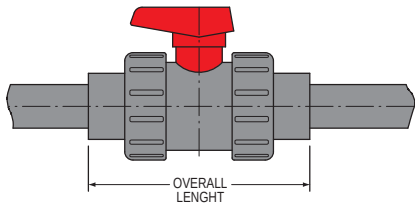
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with roughness factor of C=150.

Ball Valve Accessories

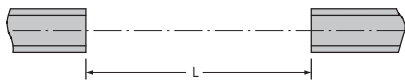


True Union 2000 Retrofit Kits

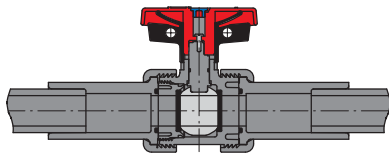
Easily converts any system over to all True Union 2000 style valves for consistent valve type and uniform maintenance. Special extended socket style End Connectors (2) allow retrofit replacement of older Spears® and other brand valves in existing piping systems with a new True Union 2000 valve. Simply cut out old valve according to specified dimension and install retrofit end connectors. End connectors are provided with either EPDM or FKM O-rings.



Ball Valve for Replacement



Pipe Laying Length After Cutting



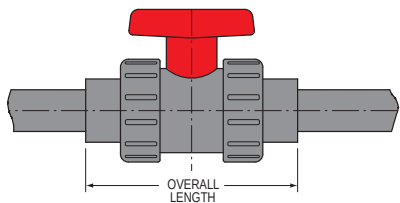
True Union 2000 Ball Valve Installed with Retrofit Kit

True Union Retrofit Kits - Other Brand Valves (Socket Style Only)

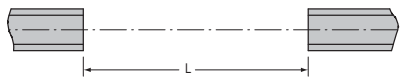
Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFK2-005	RFK2-005C	RFK3-005	RFK3-005C
3/4	RFK2-007	RFK2-007C	RFK3-007	RFK3-007C
1	RFK2-010	RFK2-010C	RFK3-010	RFK3-010C
1-1/4	RFK2-012	RFK2-012C	RFK3-012	RFK3-012C
1-1/2	RFK2-015	RFK2-015C	RFK3-015	RFK3-015C
2	RFK2-020	RFK2-020C	RFK3-020	RFK3-020C
2-1/2	RFK2-025	RFK2-025C	RFK3-025	RFK3-025C
3	RFK2-030	RFK2-030C	RFK3-030	RFK3-030C
4	RFK2-040	RFK2-040C	RFK3-040	RFK3-040C

Cut-Out Dimensions

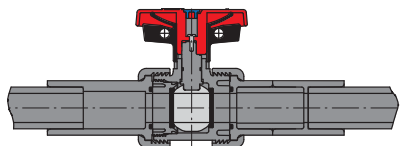
Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16



Ball Valve for Replacement



Pipe Laying Length After Cutting



True Union Ball Valve Installed with Retrofit Kit

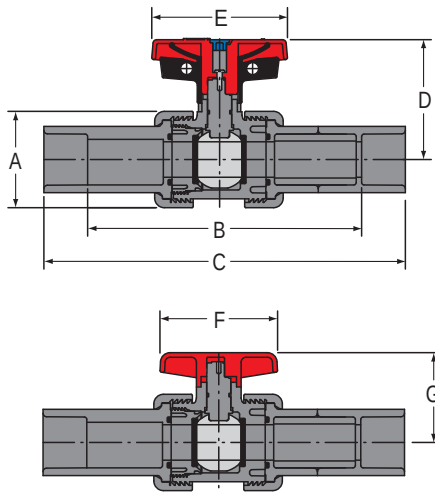
True Union Retrofit Kits - Older (Regular Style) Spears® Valves (Socket Style Only)

Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFKS2-005	RFKS2-005C	RFKS3-005	RFKS3-005C
3/4	RFKS2-007	RFKS2-007C	RFKS3-007	RFKS3-007C
1	RFKS2-010	RFKS2-010C	RFKS3-010	RFKS3-010C
1-1/4	RFKS2-012	RFKS2-012C	RFKS3-012	RFKS3-012C
1-1/2	RFKS2-015	RFKS2-015C	RFKS3-015	RFKS3-015C
2	RFKS2-020	RFKS2-020C	RFKS3-020	RFKS3-020C
2-1/2	RFKS2-025	RFKS2-025C	RFKS3-025	RFKS3-025C
3	RFKS2-030	RFKS2-030C	RFKS3-030	RFKS3-030C
4	RFKS2-040	RFKS2-040C	RFKS3-040	RFKS3-040C

Cut-Out Dimensions

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

Ball Valve Accessories



True Union 2000 Retrofit Ball Valve Complete replacement valve for older Spears® 2300 series Regular True Union Ball Valves.

Retrofit valve consists of either Spears® Standard or Industrial True Union 2000 Ball Valve supplied with factory installed extended socket end connectors. Simply cut out old valve to specified dimensions (see cut-out dimensions, page 40) and install Retrofit Valve end connectors.

Dimensions

Size	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	F ± 1/16	G ± 1/16
1/2	1-7/8	5-5/16	7-1/16	2-9/16	2-13/16	2-1/2	1-5/8
3/4	2-1/4	6-1/4	8-1/4	2-7/8	3-5/16	3	2
1	2-1/2	6-11/16	8-15/16	3-1/8	3-7/16	3-7/16	2-5/16
1-1/4	3-1/16	7-1/8	9-3/4	3-5/8	3-13/16	3-9/16	2-13/16
1-1/2	3-1/2	8-3/16	10-15/16	4	4-3/16	3-7/8	3-1/16
2	4-1/4	8-15/16	11-15/16	4-1/2	5-1/8	5	3-3/4
2-1/2	6-3/16	12	15-1/2	5-1/8	6-1/4	7-5/16	5-7/8
3	6-3/16	12-1/16	15-7/8	5-7/8	7-5/8	7-5/16	5-7/8
4	7-5/8	13-3/16	19	6-3/4	9-3/16	8-3/8	6-3/4

True Union 2000 Retrofit Ball Valve - Replaces Older (Regular Style) Spears® Valves

Size	TU 2000 Industrial Retrofit Ball Valves				TU 2000 Standard Retrofit Ball Valves			
	EPDM		FKM		EPDM		FKM	
	PVC	CPVC	PVC	CPVC	PVC	CPVC	PVC	CPVC
1/2	1822RS-005	1822RS-005C	1832RS-005	1832RS-005C	3622RS-005	3622RS-005C	3632RS-005	3632RS-005C
3/4	1822RS-007	1822RS-007C	1832RS-007	1832RS-007C	3622RS-007	3622RS-007C	3632RS-007	3632RS-007C
1	1822RS-010	1822RS-010C	1832RS-010	1832RS-010C	3622RS-010	3622RS-010C	3632RS-010	3632RS-010C
1-1/4	1822RS-012	1822RS-012C	1832RS-012	1832RS-012C	3622RS-012	3622RS-012C	3632RS-012	3632RS-012C
1-1/2	1822RS-015	1822RS-015C	1832RS-015	1832RS-015C	3622RS-015	3622RS-015C	3632RS-015	3632RS-015C
2	1822RS-020	1822RS-020C	1832RS-020	1832RS-020C	3622RS-020	3622RS-020C	3632RS-020	3632RS-020C
2-1/2	1822RS-025	1822RS-025C	1832RS-025	1832RS-025C	3622RS-025	3622RS-025C	3632RS-025	3632RS-025C
3	1822RS-030	1822RS-030C	1832RS-030	1832RS-030C	3622RS-030	3622RS-030C	3632RS-030	3632RS-030C
4	1822RS-040	1822RS-040C	1832RS-040	1832RS-040C	3622RS-040	3622RS-040C	3632RS-040	3632RS-040C

True Union 2000 Check Valve Seal Carrier Tool

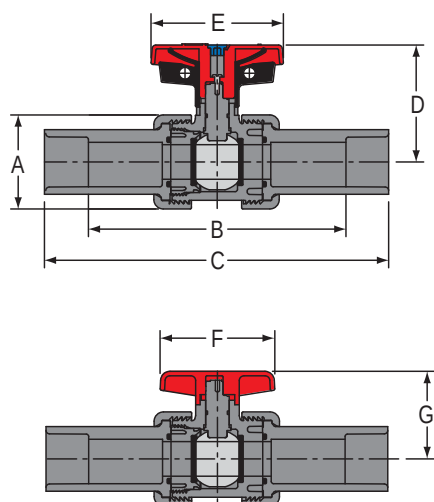
Size	Part Number
1/2	TSK-00503
3/4	TSK-00703
1	TSK-01003
1-1/4	TSK-01203
1-1/2	TSK-01503
2	TSK-02003
3	TSK-03003
4	TSK-04003
6	TSK-06003



True Union 2000 Ball Valve Seal Carrier Tool

Size	Part Number
1/2	TSK1-00503
3/4	TSK1-00703
1	TSK1-01003
1-1/4	TSK1-01203
1-1/2	TSK1-01503
2	TSK1-02003
3	TSK1-03003
4	TSK1-04003
6	TSK1-06003

Ball Valve Accessories



True Union 2000 Retrofit Ball Valve Complete universal replacement valve for domestic and import PVC or CPVC valve.

Retrofit consists of either Spears® Standard or Industrial True Union 2000 Ball Valve supplied with factory installed extended socket end connectors. Simply cut out old valve to specified dimensions (see cut-out dimensions, page 40) and install Retrofit Valve end connectors.

Dimensions

Size	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	F ± 1/16	G ± 1/16
1/2	1-7/8	4-15/16	6-11/16	2-9/16	2-13/16	2-1/2	1-5/8
3/4	2-1/4	5-7/16	7-1/2	2-7/8	3-3/8	3	2
1	2-1/2	6-1/16	8-5/16	3-1/8	3-7/16	3-7/16	2-5/16
1-1/4	3-1/16	7-5/16	9-7/8	3-5/8	3-7/8	3-9/16	2-13/16
1-1/2	3-1/2	7-1/2	10-5/16	4	4-3/16	3-7/8	3-1/16
2	4-1/4	8-1/2	11-1/2	4-1/2	5-1/8	5	3-3/4
2-1/2	6-3/16	10-7/8	14-3/8	5-7/8	7-5/8	7-5/16	5-7/8
3	6-3/16	11-1/2	15-3/16	5-7/8	7-5/8	7-5/16	5-7/8
4	7-5/8	14-3/8	18-15/16	6-3/4	9	8-3/8	6-3/4

True Union 2000 Retrofit Ball Valve - Replaces Other Brand Valves

Size	TU 2000 Industrial Retrofit Ball Valves				TU 2000 Standard Retrofit Ball Valves			
	EPDM		FKM		EPDM		FKM	
	PVC	CPVC	PVC	CPVC	PVC	CPVC	PVC	CPVC
1/2	1822R-005	1822R-005C	1832R-005	1832R-005C	3622R-005	3622R-005C	3632R-005	3632R-005C
3/4	1822R-007	1822R-007C	1832R-007	1832R-007C	3622R-007	3622R-007C	3632R-007	3632R-007C
1	1822R-010	1822R-010C	1832R-010	1832R-010C	3622R-010	3622R-010C	3632R-010	3632R-010C
1-1/4	1822R-012	1822R-012C	1832R-012	1832R-012C	3622R-012	3622R-012C	3632R-012	3632R-012C
1-1/2	1822R-015	1822R-015C	1832R-015	1832R-015C	3622R-015	3622R-015C	3632R-015	3632R-015C
2	1822R-020	1822R-020C	1832R-020	1832R-020C	3622R-020	3622R-020C	3632R-020	3632R-020C
2-1/2	1822R-025	1822R-025C	1832R-025	1832R-025C	3622R-025	3622R-025C	3632R-025	3632R-025C
3	1822R-030	1822R-030C	1832R-030	1832R-030C	3622R-030	3622R-030C	3632R-030	3632R-030C
4	1822R-040	1822R-040C	1832R-040	1832R-040C	3622R-040	3622R-040C	3632R-040	3632R-040C

Split-Nut Repair Kits for All True Union 2000 Valves, Union 2000 Pipe Unions and True Union Diaphragm Valves

- Allows replacement of broken Union Nuts
- No Reduction in Valve Operating Pressure
- Kit includes 2-piece Split Nut and SS 316 Gear Clamp
- Simply cut or remove broken nut, align Split-Nut halves around end connector and secure with Gear Clamp. Thread nut onto valve to complete repair.

Note: Split-Nut Repair Kit does **NOT** fit Regular Style True Union Valves



Valve Size	PVC Kit	CPVC Kit
1/2	SNK-005	SNK-005C
3/4	SNK-007	SNK-007C
1	SNK-010	SNK-010C
1-1/4	SNK-012	SNK-012C
1-1/2	SNK-015	SNK-015C
2	SNK-020	SNK-020C
2-1/2	SNK-025	SNK-025C
3	SNK-030	SNK-030C
4	SNK-040	SNK-040C

Ball Valve Accessories



**Socket
End
Connector
Set (2)**

Supplemental End Connector Sets for All True Union 2000 Valves, Union 2000 Pipe Unions and True Union Diaphragm Valves

- Allows easy conversion of valve end connections due to system change, modification, or inadvertent misorder of product.
- Each set includes 2 each of either Socket, SR Threaded or Spigot End connectors with either EPDM or FKM O-rings installed.

Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECS2-005	ECS3-005	ECS2-005C	ECS3-005C
3/4	ECS2-007	ECS3-007	ECS2-007C	ECS3-007C
1	ECS2-010	ECS3-010	ECS2-010C	ECS3-010C
1-1/4	ECS2-012	ECS3-012	ECS2-012C	ECS3-012C
1-1/2	ECS2-015	ECS3-015	ECS2-015C	ECS3-015C
2	ECS2-020	ECS3-020	ECS2-020C	ECS3-020C
2-1/2	ECS2-025	ECS3-025	ECS2-025C	ECS3-025C
3	ECS2-030	ECS3-030	ECS2-030C	ECS3-030C
4	ECS2-040	ECS3-040	ECS2-040C	ECS3-040C
6	ECS2-060	ECS3-060	ECS2-060C	ECS3-060C

Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECSRT2-005	ECSRT3-005	ECSRT2-005C	ECSRT3-005C
3/4	ECSRT2-007	ECSRT3-007	ECSRT2-007C	ECSRT3-007C
1	ECSRT2-010	ECSRT3-010	ECSRT2-010C	ECSRT3-010C
1-1/4	ECSRT2-012	ECSRT3-012	ECSRT2-012C	ECSRT3-012C
1-1/2	ECSRT2-015	ECSRT3-015	ECSRT2-015C	ECSRT3-015C
2	ECSRT2-020	ECSRT3-020	ECSRT2-020C	ECSRT3-020C
2-1/2	ECSRT2-025	ECSRT3-025	ECSRT2-025C	ECSRT3-025C
3	ECSRT2-030	ECSRT3-030	ECSRT2-030C	ECSRT3-030C
4	ECSRT2-040	ECSRT3-040	ECSRT2-040C	ECSRT3-040C
6	ECSRT2-060	ECSRT3-060	ECSRT2-060C	ECSRT3-060C

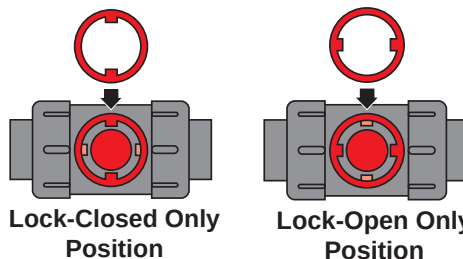
Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECSP2-005	ECSP3-005	ECSP2-005C	ECSP3-005C
3/4	ECSP2-007	ECSP3-007	ECSP2-007C	ECSP3-007C
1	ECSP2-010	ECSP3-010	ECSP2-010C	ECSP3-010C
1-1/4	ECSP2-012	ECSP3-012	ECSP2-012C	ECSP3-012C
1-1/2	ECSP2-015	ECSP3-015	ECSP2-015C	ECSP3-015C
2	ECSP2-020	ECSP3-020	ECSP2-020C	ECSP3-020C
2-1/2	ECSP2-025	ECSP3-025	ECSP2-025C	ECSP3-025C
3	ECSP2-030	ECSP3-030	ECSP2-030C	ECSP3-030C
4	ECSP2-040	ECSP3-040	ECSP2-040C	ECSP3-040C
6	ECSP2-060	ECSP3-060	ECSP2-060C	ECSP3-060C

**SR Threaded
End
Connector
Set (2)**

**Spigot
End
Connector
Set (2)**

Handle Lockout Ring for True Union 2000 Industrial Ball Valves

- Use with Built-in Handle Lockout Device
- Allows selective lockout position of Lock-Open Only or Lock-Closed Only
- Simply remove valve handle and install ring below handle lockout mechanism



Valve Size	Part Number
1/2	TU2LR-005
3/4	TU2LR-007
1	TU2LR-010
1-1/4	TU2LR-012
1-1/2	TU2LR-015
2	TU2LR-020
2-1/2 & 3	TU2LR-030
4	TU2LR-040

Ball Valve Accessories



Stem Extension Kits

- Kits for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Simple 2-Piece Kit for use with existing Valve Handle and Schedule 80 pipe, or can be ordered factory assembled to desired length as 1-piece unit.
- Kit includes 1 - Stem Adapter and 1 - Handle Adapter
- Corrosion resistant PVC construction

2-Piece Stem Extension Kit

Valve Size	Part Numbers ¹	
	For True Union 2000, Compact 2000 & Single Entry Ball Valves ²	For Regular True Union & Compact Ball Valves
1/2	BVSE2-005-000	BVSE-005-000
3/4	BVSE2-007-000	BVSE-007-000
1	BVSE2-010-000	BVSE-010-000
1-1/4	BVSE2-012-000	BVSE-012-000
1-1/2	BVSE2-015-000	BVSE-015-000
2	BVSE2-020-000	BVSE-020-000
2-1/2 & 3	BVSE2-030-000	BVSE-030-000
4	BVSE2-040-000	BVSE-040-000
6	BVSE2-060-000	N/A

1: For factory assembled units replace last 3 zeros with length code. See **Thermoplastic Valves, Strainers & Accessories**, Price Schedule V-1 for length codes.

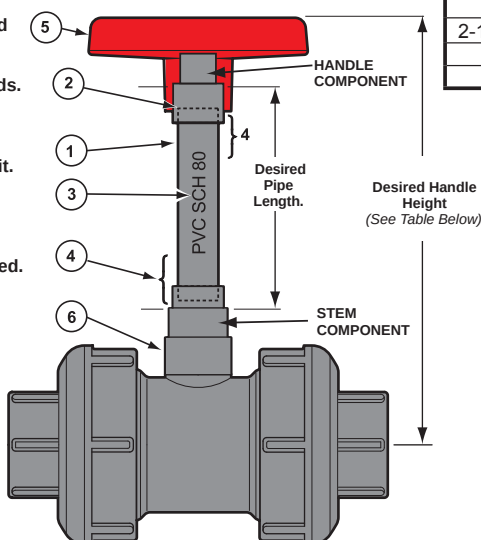
2: Not for use on True Union 2000 Industrial 3-Way Ball Valves

Required for Assembly:

- Two-Piece Stem Extension Kit
- Desired Length of PVC Schedule 80 Pipe*
- Saw & Miter Box or Wheel-Type Cutter
- PVC Solvent Cement & Primer
- Black Marker
- Ruler

* NOT INCLUDED

1. Cut pipe square to desired length (See Table Below).
2. Bevel and deburr pipe ends.
3. Align edge of print string or mark each end of pipe for alignment; check dry fit.
4. Solvent cement components to pipe making sure alignment marks are properly matched.
5. Push valve handle onto extension assembly.
6. Position assembly over valve stem and rotate into place.



Use the Schedule 80 pipe size listed for the appropriate valve size										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
Required Sch 80 Pipe Size	3/4			1				1-1/2		
To calculate the length of Schedule 80 pipe needed, subtract the appropriate figure shown below from the desired handle height										
For True Union 2000 Industrial Ball Valves ¹										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
Subtract (in.)	3-7/8	4	4-5/16	5	5-5/8	6-1/4	8-1/16	8-1/16	9-5/8	10-11/16
Minimum Height (in.)	4-9/16	5-3/16	5-1/2	6-3/4	7-3/8	8	9-13/16	9-13/16	11-5/8	12-3/4
For True Union 2000 Standard, Compact 2000 & Single Entry Ball Valves										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	N/A
Subtract (in.)	2-1/2	3-1/16	3-9/16	4-1/4	4-5/8	5-11/16	7-11/16	7-11/16	9	N/A
Minimum Height (in.)	3-5/8	4-1/4	4-3/4	6	6-3/8	7-7/16	9-1/2	9-1/2	11	N/A
For Regular True Union & Compact Ball Valves										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	N/A
Subtract (in.)	3-5/16	4	4-5/16	5-1/8	5-5/8	6-1/16	7-1/8	7-1/8	8-3/8	N/A
Minimum Height (in.)	4-1/2	5-1/4	5-1/2	7	7-1/2	8	9	9	10-1/2	N/A

1: Stem Extension does not permit use of Handle Lockout on True Union 2000 Industrial Ball Valves.

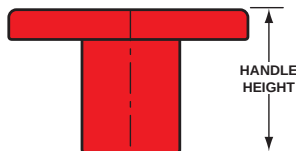
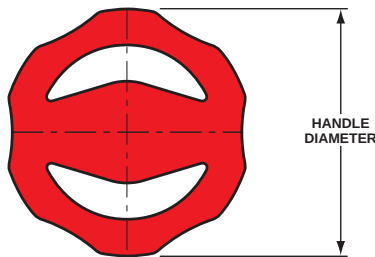
Ball Valve Accessories



Round Safety Handles

- Handles for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Helps prevent accidental operation of valve
- Special design provides positive hand grip
- Impact and corrosion resistant Polypropylene construction

Note: Round Handle does not allow use of Handle Lockout on True Union 2000 Industrial Ball Valve. Not for use on True Union 2000 Industrial 3-Way Ball Valve.



*Typical Application
(VALVE NOT INCLUDED)*

Valve Size	Part Numbers					Handle Height	Handle Diameter
	For TU 2000, Compact 2000, & Single Entry, & Utility Ball Valves		For Regular True Union & Compact Ball Valves				
	3-Slot Stem	1-Slot Stem	3-Slot Stem	1-Slot Stem	Flat/2-D Stem		
1/2	RSH2-005	RSH5-005	RSH-005	RSH6-005	RSH4-005	1-13/32	2-1/2
3/4	RSH2-007	RSH5-007	RSH-007	RSH6-007	RSH4-007	1-9/16	2-7/8
1	RSH2-010	RSH5-010	RSH-010	RSH6-010	RSH4-010	1-9/16	3-1/4
1-1/4	RSH2-012	RSH5-012	RSH-012	RSH6-012	RSH4-012	1-13/16	3-9/16
1-1/2	RSH2-015	RSH5-015	RSH-015	RSH6-015	RSH4-015	1-15/16	4-3/16
2	RSH2-020	RSH5-020	RSH-020	RSH6-020	RSH4-020	2-1/4	5-1/16
2-1/2 & 3	RSH2-030	RSH5-030	NA	NA	RSH-030	2-3/4	6-11/16
4	RSH2-040	RSH5-040	NA	NA	RSH-040	3	8-1/8

2" Square / T-Style Operator Nuts

- Operator Nuts for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Designed for use with standard 2" square drive or conventional "T" drive operators

Note: Not for use on True Union 2000 Industrial 3-Way Ball Valves

Valve Size	Part Numbers		
	All True Union (Reg./2000) Compact, Compact 2000 & Single Entry Ball Valves	For True Union 2000 Industrial, Standard & Single Entry Ball Valves	For Regular True Union & Compact Ball Valves
1/2	VTN2-005	N/A	N/A
3/4	VTN2-007		
1	VTN2-007		
1-1/4	VTN2-012		
1-1/2	VTN2-015		
2	VTN2-020		
2-1/2 & 3	N/A	VTN2-030	VTN-030
4		VTN2-040	VTN-040



Ball Valve Accessories

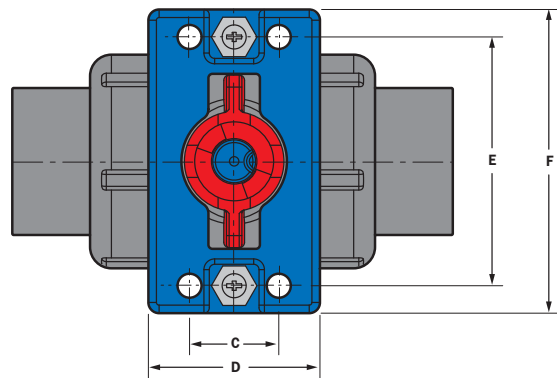
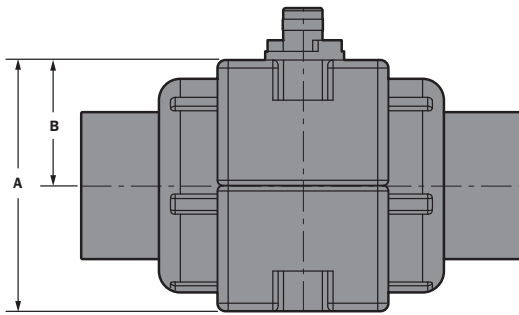


Multi-Mount Valve Mounting Brackets

- Separate Brackets for True Union 2000 Industrial & Standard Ball Valves and for Regular True Union Ball Valves.
- Provides solid, versatile valve mounting to machinery supports, panels, etc.
- Simple 2-piece clamp-on unit allows quick removal of valve for maintenance or servicing without altering position.
- Includes mounting hardware.
- Impact and corrosion resistant Polypropylene construction.
- Easily adapts to actuator mount using optional Multi-Mount Actuator Mounting Platform.

Notes:

- 1) Bracket does not fit True Union 2000 Industrial 3-Way Ball Valves.
- 2) True Union 2000 Valve brackets come with Stainless Steel hardware, Regular True Union brackets come with zinc-plated steel hardware.
- 3) Will not fit with Low Profile Actuation Mounting Kit.



Multi-Mount Valve Mounting Brackets

True Union 2000 Industrial Ball Valve

Valve Size	Part Number	Dimensions					
		A	B	C	D	E	F
1/2	TUMB2-005	2.38	1.19	1.04	1.72	2.46	3.54
3/4	TUMB2-007	2.82	1.41	1.10	1.81	2.75	3.54
1	TUMB2-010	2.98	1.49	1.04	2.00	2.90	3.54
1-1/4	TUMB2-012	3.60	1.80	1.25	2.00	3.50	4.13
1-1/2	TUMB2-015	4.00	2.00	1.38	2.15	3.90	4.53
2	TUMB2-020	5.00	2.50	1.50	2.50	4.50	5.10
2-1/2 & 3	TUMB2-030	6.30	3.15	2.00	3.25	6.25	7.00
4	TUMB2-040	8.25	4.12	2.00	4.10	7.72	8.50

Regular True Union Ball Valve

Valve Size	Part Number	Dimensions					
		A	B	C	D	E	F
1/2	TUMB-005	2.92	1.46	0.68	1.55	2.25	4.44
3/4	TUMB-007	3.54	1.77	0.94	1.87	2.55	4.87
1	TUMB-010	3.56	1.78	1.05	2.00	2.87	5.12
1-1/4	TUMB-012	3.98	1.99	1.19	2.09	3.25	5.31
1-1/2	TUMB-015	4.54	2.27	1.47	2.47	3.84	5.90
2	TUMB-020	5.56	2.78	1.81	2.75	4.75	7.00
2-1/2 & 3	TUMB-030	7.54	3.77	2.47	3.75	6.87	9.47
4	TUMB-040	9.16	4.58	2.72	4.19	8.28	11.41

Ball Valve Accessories



Multi-Mount Actuator Mounting Platforms

- Separate Platforms for True Union 2000 Valves and for Regular True Union Ball Valves.
- Add-on actuator adapter for use with Multi-Mount Valve Mounting Bracket (may also be purchased with bracket as complete kit).
- Universal actuator mounting accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes hardware for mounting Platform to Bracket

Notes:

- 1) True Union 2000 Valve platforms come with Stainless Steel hardware, Regular True Union platform come with zinc-plated steel hardware.
- 2) See Complete Multi-Mount Actuation Mounting Kit for applicable dimensions.

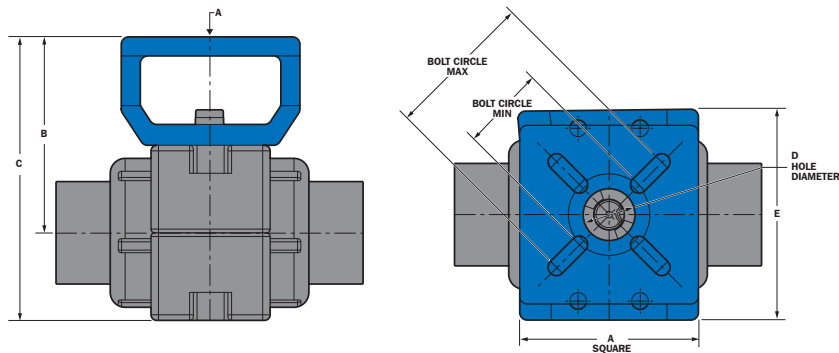
Valve Size	Part Numbers	
	For True Union 2000 Ball Valves	For Regular True Union Ball Valves
1/2	MMP1-005	MMP-005
3/4	MMP1-007	MMP-007
1	MMP1-010	MMP-010
1-1/4	MMP1-012	MMP-012
1-1/2	MMP1-015	MMP-015
2	MMP1-020	MMP-020
2-1/2 & 3	MMP1-030	MMP-030
4	MMP1-040	MMP-040

Complete Multi-Mount Actuation Mounting Kits



- Separate Platforms for True Union 2000 Industrial Ball Valves & for True Union 2000 Standard Ball Valves and for Regular True Union Ball Valves.
- Combines Multi-Mount Valve Mounting Bracket and Multi-Mount Actuator Mounting Platform into one complete kit.
- Provides solid, fully supported valve and actuator mounting.
- Impact and corrosion resistant Polypropylene construction.
- Bracket and platform hardware included

- NOTES:**
- 1) True Union 2000 Valve kits come with Stainless Steel hardware, Regular True Union kits come with zinc-plated steel hardware.
 - 2) Does not fit True Union 2000 Industrial 3-way Ball Valves
 - 3) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).



Valve Size	True Union 2000 Ball Valves	Regular True Union Ball Valves	Dimensions									
			A	TU 2000 B	Reg. TU B	TU 2000 C	Reg. TU C	D	TU 2000 E	Reg. TU E	Bolt Circle Max	Bolt Circle Min.
1/2	TUAK1-005	TUAK-005	3.00	3.00	3.24	4.19	4.67	.87	3.54	4.44	2.50	1.41
3/4	TUAK1-007	TUAK-007	3.00	3.13	3.46	4.54	5.20	.87	3.54	4.87	2.50	1.41
1	TUAK1-010	TUAK-010	3.00	3.31	3.60	4.88	5.38	.87	3.54	5.12	2.50	1.41
1-1/4	TUAK1-012	TUAK-012	3.75	4.64	4.80	6.44	6.76	.90	4.13	5.31	3.00	1.41
1-1/2	TUAK1-015	TUAK-015	3.75	5.02	5.27	7.02	7.52	.90	4.53	5.90	3.00	1.41
2	TUAK1-020	TUAK-020	3.75	5.52	5.77	8.02	8.52	1.12	5.10	7.00	3.12	1.75
2-1/2 & 3	TUAK1-030	TUAK-030	5.25	6.34	6.91	9.49	10.63	1.37	7.00	9.47	5.00	2.20
4	TUAK1-040	TUAK-040	5.25	7.99	8.36	12.11	12.86	1.37	8.50	11.41	5.00	2.20

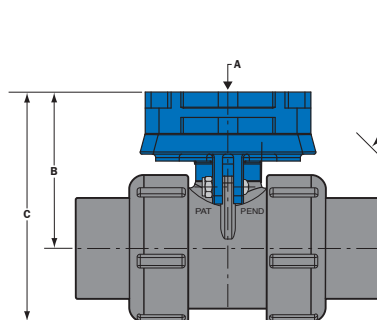
Ball Valve Accessories



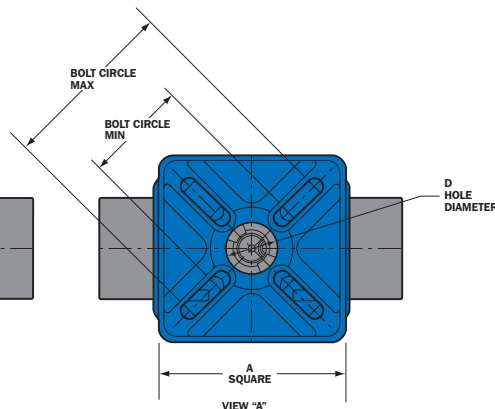
Low Profile Actuation Mounting Kits

- Separate kits for True Union 2000 Industrial & Industrial 3-Way Ball Valves and for True Union 2000 Standard Ball Valves.
- Compact bolt-on mount provides positive actuator support and alignment.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Notes: 1) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).
2) Will not assemble with Multi-Mount Valve mounting bracket – See Mini-Mount Actuation Mounting Kit or Mini-Mount Combo Actuation Mounting Kit.



Industrial Ball Valve



Compact Ball Valve

Dimensions

Valve Size	True Union 2000 Ind Ball Valves	True Union 2000 Std Ball Valves	Compact 66-Series	Dimensions							
				A	TU 2000 B	66 Series B	TU 2000 C	66 Series C	D	Bolt Circle Max.	Bolt Circle Min.
1/2	AMB5-005	AMB6-005		3.18	2.45	2.45	3.38	3.16	0.87	3.00	1.62
3/4	AMB5-007	AMB6-007		3.18	2.61	2.61	3.78	3.50	0.87	3.00	1.75
1	AMB5-010	AMB6-010		3.18	2.77	2.77	4.10	3.79	0.87	3.00	1.75
1-1/4	AMB5-012	AMB6-012		3.68	3.40	3.40	4.97	4.68	0.87	3.75	2.00
1-1/2	AMB5-015	AMB6-015		3.68	3.64	3.64	5.42	5.12	0.87	3.75	2.00
2	AMB5-020	AMB6-020		3.68	4.31	4.31	6.45	6.10	1.12	3.75	2.50
2-1/2 & 3	AMB5-030	AMB6-030	N/A	5.25	5.56	N/A	8.64	N/A	1.96	5.62	4.50
4	AMB5-040	AMB6-040	N/A	5.75	6.11	N/A	9.97	N/A	2.68	5.88	4.80
6	AMB5-060	N/A	N/A	5.75	7.92	N/A	13.73	N/A	2.88	5.88	4.80

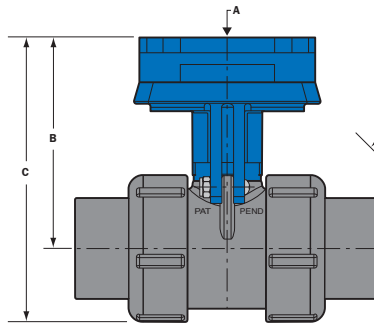
Ball Valve Accessories



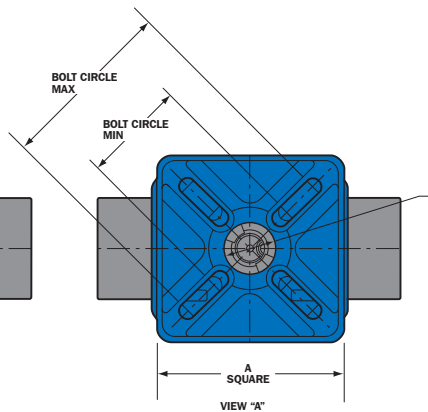
Mini-Mount Actuation Mounting Kits

- Separate kits for True Union 2000 Industrial & Industrial 3-Way Ball Valves and for True Union 2000 Standard Ball Valves.
- Simple bolt-on mount provides positive actuator support and alignment.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Note: 1) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).



Industrial Ball Valve



Compact Ball Valve

Dimensions

Valve Size	TU 2000 Ind Ball Valves	TU 2000 Std Ball Valves	Compact 66-Series	Compact 21-Series	Dimensions									
					A	TU 2000 B	66 Series B	21 Series B	TU 2000 C	66 Series C	21 Series C	D	Bolt Circle Max.	Bolt Circle Min.
1/2	AMB2-005	AMB3-005		AMB4-005	3.18	2.95	2.95	2.90	3.88	3.66	3.75	0.87	3.00	1.62
3/4	AMB2-007	AMB3-007		AMB4-007	3.18	3.36	3.36	3.47	4.53	4.25	4.51	0.87	3.00	1.75
1	AMB2-010	AMB3-010		AMB4-010	3.18	3.60	3.60	3.61	4.93	4.62	4.80	0.87	3.00	1.75
1-1/4	AMB2-012	AMB3-012		AMB4-012	3.68	4.37	4.37	4.30	5.94	5.65	5.71	0.87	3.75	2.00
1-1/2	AMB2-015	AMB3-015		AMB4-015	3.68	4.64	4.64	4.60	6.42	6.12	6.22	0.87	3.75	2.00
2	AMB2-020	AMB3-020		AMB4-020	3.68	5.47	5.47	5.32	7.61	7.26	7.38	1.12	3.75	2.50
2-1/2 & 3	AMB2-030	AMB3-030	N/A	AMB4-030	5.25	6.15	N/A	5.87	9.23	N/A	8.87	1.96	5.62	4.50
4	AMB2-040	AMB3-040	N/A	AMB4-040	5.75	6.92	N/A	6.91	10.78	N/A	10.59	2.68	5.88	4.80
6	AMB2-060	N/A	N/A	AMB2-060	5.75	8.31	N/A	8.31	14.12	N/A	13.39	2.88	5.88	4.85

Ball Valve Accessories

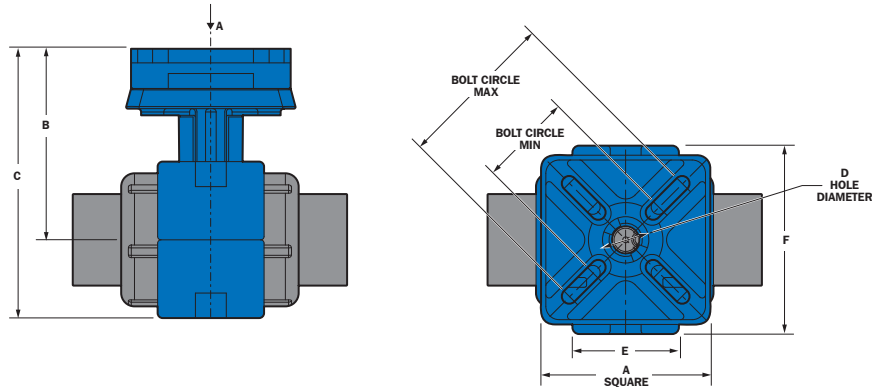
Mini-Mount Combo Actuation Mounting Kits



- Separate, complete actuation mounting kit specially designed for True Union 2000 Industrial Ball Valve and for True Union 2000 Standard Ball Valve.
- Combines Multi-Mount Bracket with Mini-Mount Actuation Mounting Kit for additional mounting support.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Notes: 1) Does not fit True Union 2000 Industrial 3-way Ball Valves

2) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).



Dimensions

Valve Size	True Union 2000 Industrial Ball Valves	True Union 2000 Standard Ball Valves	Dimensions							
			A	B	C	D	E	F	Bolt Circle Max.	Bolt Circle Min.
1/2	TUAK2-005	TUAK3-005	3.18	2.95	4.14	.87	1.72	3.54	3.00	1.62
3/4	TUAK2-007	TUAK3-007	3.18	3.36	4.77	.87	1.81	3.54	3.00	1.75
1	TUAK2-010	TUAK3-010	3.18	3.60	5.09	.87	2.00	3.54	3.00	1.75
1-1/4	TUAK2-012	TUAK3-012	3.68	4.37	6.17	.87	2.00	4.13	3.75	2.00
1-1/2	TUAK2-015	TUAK3-015	3.68	4.64	6.64	.87	2.15	4.53	3.75	2.00
2	TUAK2-020	TUAK3-020	3.68	5.47	7.97	1.12	2.50	5.10	3.75	2.50
2-1/2 & 3	TUAK2-030	TUAK3-030	5.75	6.15	9.30	1.96	3.25	7.00	5.62	4.50
4	TUAK2-040	TUAK3-040	5.75	6.92	11.05	2.68	4.10	8.50	5.88	4.80

Standard and Compact Foot Valve Screens



- Easily converts Ball Check Valve to a Foot Valve.
- Standard IPS spigot connection fits slip-socket valve end connector.
- Enlarged screen provides open area equivalent to valve for optimum flow characteristics.
- Chemical and corrosion resistant PVC, CPVC or Compact HDPE threaded construction.
- Compact fits any IPS socket or threaded Ball Check Valve

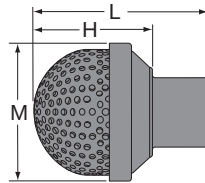


*Typical Application
(VALVE NOT INCLUDED)*

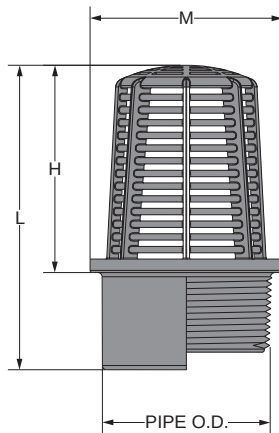
Ball Valve Accessories



Standard Dimensions



Size	Part Number		L	H	M
	PVC	CPVC	±1/16	±1/32	±1/16
1/2	FVS-005	FVS-005C	3-7/16	2-1/2	2-1/4
3/4	FVS-007	FVS-007C	3-1/2	2-7/16	2-5/16
1	FVS-010	FVS-010C	3-5/8	2-9/16	2-5/8
1-1/4	FVS-012	FVS-012C	3-7/8	2-9/16	2-5/8
1-1/2	FVS-015	FVS-015C	5-15/32	4-1/64	4-7/16
2	FVS-020	FVS-020C	5-1/2	4-1/64	4-7/16
2-1/2	FVS-025	FVS-025C	6-7/16	4-3/4	5-5/8
3	FVS-030	FVS-030C	6-5/8	4-3/4	5-11/16
4	FVS-040	FVS-040C	6-29/32	4-3/4	5-3/4
6	FVS-060	FVS-060C	7-3/8	4-11/16	7-3/16



Compact Dimensions

Size	Part Number			H	L		M	
	Threaded		Spigot	±1/32	±1/16		±1/16	
	PVC	HDPE	PVC		Threaded	Spigot	Threaded	Spigot
1/2	CFVS1-005	CFVS1-005P	CFVS7-005	1-9/16	2-7/32	2-5/16	31/32	1-3/32
3/4	CFVS1-007	CFVS1-007P	CFVS7-007	1-27/32	2-1/2	2-25/32	1-7/32	1-5/16
1	CFVS1-010	CFVS1-010P	CFVS7-010	2-1/16	2-7/8	3-3/32	1-7/16	1-5/8
1-1/4	CFVS1-012	CFVS1-012P	CFVS7-012	2-7/32	3-1/4	3-15/32	1-27/32	2
1-1/2	CFVS1-015	CFVS1-015P	CFVS7-015	2-19/32	3-5/8	3-29/32	2-1/8	2-1/4
2	CFVS1-020	CFVS1-020P	CFVS7-020	2-15/16	4	4-5/16	2-5/8	2-3/4

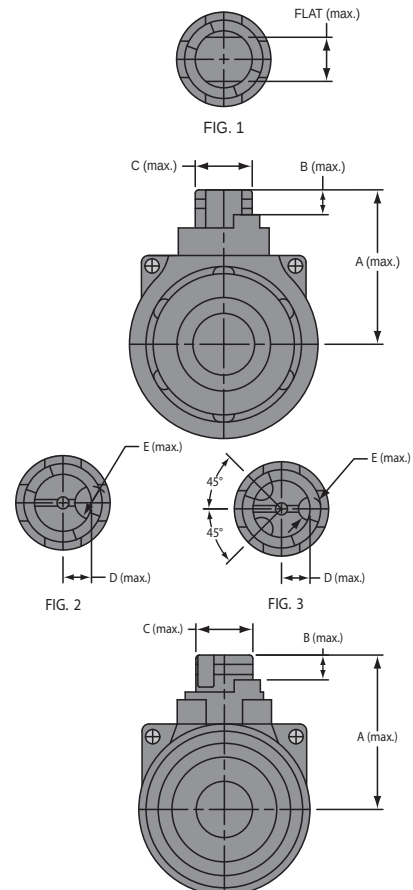
Valve Stem Output Detail

For All True Union 2000, Compact 2000, & Single Entry Ball Valves

Size	A (max.)	B (max.)	C (max.)	D (max.)	E (max.)		Flat (max.)	Fig
					1-PIN SLOT	3-PIN SLOT		
1/2	1.43	.26	.52	.26	.30	.21	N/A	3
3/4	1.79	.33	.56	.28	.30	.21		
1	2.10	.41	.62	.31	.33	.23		
1-1/4	2.61	.55	.56	.28	.32	.19		
1-1/2	2.87	.62	.75	.37	.38	.27		
2	3.52	.65	.95	.47	.44	.31		
2-1/2 & 3	5.28	1.16	1.28	.63	.56	.44	1.92	2
4	5.81	.91	1.86	.93	.75	.63		
6	7.53	1.33	2.12	N/A	N/A	N/A		

For Regular True Union & Compact Ball Valves

Size	A (max.)	B (max.)	C (max.)	D (max.)	E (max.)	Flat (max.)	Fig.
1/2	1.48	.31	.52	.26	.21	N/A	3
3/4	1.88	.35	.56	.28	.21		
1	2.18	.48	.62	.31	.23		
1-1/4	2.66	.66	.56	.28	.19		
1-1/2	2.87	.67	.75	.37	.27		
2	3.60	.89	.95	.47	.31		
2-1/2 & 3	4.86	1.01	1.48	N/A	N/A	1.21	1
4	6.24	1.33	2.12			1.92	
6	7.53	1.33	2.12			1.92	



Lab Ball Valves



Sample Engineering Specification

All thermoplastic valves shall be sealed unit Lab type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have double stop Polypropylene handle. All 1/4" valves shall have optional field installable male thread and tubing end connector adapters. All EPDM valves shall be certified by NSF International for use in potable water service. All EPDM valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ^{1,2}			Pressure Rating
		Socket	Threaded	Threaded with Kit	
1/4	EPDM	1522-002	1521-002	1529-002	150 psi Non-Shock Water @ 73°F
	FKM	1532-002	1531-002	1539-002	
3/8	EPDM	1522-003	1521-003	N/A	
	FKM	1532-003	1531-003	N/A	

1: For CPVC Valves, add the letter "C" to part number listed (e.g., 1521-002C)

2: For valves with 1/4" I.D. tubing adapters, add the letter "A" to the part number listed (e.g., 1529-002A)

Features – PVC, CPVC

This versatile quarter-turn shutoff valve is ideally suited for a variety of laboratory, system monitoring and OEM applications. Available in IPS sizes 1/4" - 3/8" with socket or threaded end connectors, plus 1/4" threaded Valve & Adapter Kit to provide multiple connection options.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Maintenance-Free Sealed Unit
- Individual Valve or Multi-functional Valve & Adapter Kit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- EPDM or FKM O-rings
- PTFE Floating Seat Design
- Sizes 1/4" - 3/8" Pressure Rated to 150 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant



LAB BALL VALVE WITH ADAPTER KIT

Valve & Adapter Kit

Kit allows multiple connection options. Adapters use O-ring seals for easy connection to threaded valve. Complete Kit includes:

- 1 – Threaded 1/4" Valve
- 2 – O-ring Sealed 1/4" MPT x Mipt Adapters
- 2 – EPDM or FKM O-rings (AS568-013 size)
- 1 – End Connector Wrench
- 2 – O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters - OR -
- 2 – O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters (Must Add "A" to Valve/Kit Part No.)

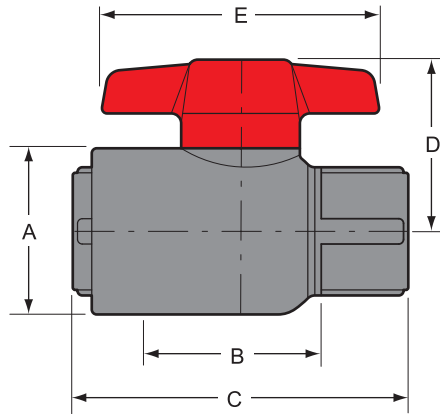
Lab Ball Valve Adapter Kit Only

Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

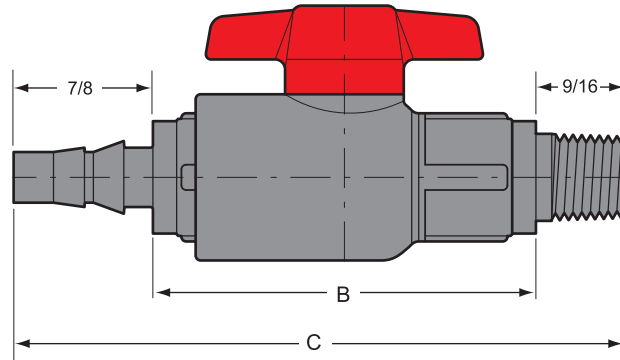
Kit Includes:

- 2 – O-rings
- 1 – End Connector Wrench
- 2 – 1/4" MPT x Mipt Adapters
- 2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters

Lab Ball Valves



Basic Valve



Valve with Adapter Kit

Dimensions, Weights & C_v Values

Nominal Size	Dimension Reference (inches, $\pm 1/16$)					Approx. Wt. (Lbs.)		C _v ² Values
	A	B ¹	C	D	E	PVC	CPVC	
1/4	1-1/16	15/16	2-1/8	1-1/16	1-3/4	.10	.11	10
1/4 w/Kit	1-1/16	2-7/16	3-7/8	1-1/16	1-3/4	.14	.15	6
3/8	1-5/16	1	2-3/16	1-1/4	2	.12	.13	24

1: Valve Lay Length

2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	124 (.85)	100 (.69)	75 (.52)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0- (-0-)

Needle Valves



Features – PVC, CPVC & PP

Needle Valves provide proportional opening to needle travel for more accurate metering applications and other fine adjustment flow control applications. Special design PTFE seal eliminates elastomer type seals or O-rings that can contribute to chemical compatibility problems. PVC, CPVC and Polypropylene valves are available with 1/4", 3/8" and 1/2" NPT female threaded ends in either standard Globe Pattern or special Angle Pattern configuration that eliminates need for additional elbow in various system setups.

- Chemical & Corrosion Resistant PVC, CPVC or PP Construction
- Precision Metering Chamber
- Globe & Angle Body Configurations
- Removable Bonnet For Easy Disassembly & Cleaning
- Solid PTFE Stem Seal - No Elastomer Seal or Lubricants Used
- Built-in Panel or Bracket Mounting Nut
- Easy-Grip Polypropylene Handle
- PVC & CPVC Pressure Rated to 235 psi @ 73°F
Polypropylene Pressure Rated to 150 psi @ 73°F

Sample Engineering Specification

All thermoplastic Needle Valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454, CPVC, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All valves shall be globe pattern or angle pattern body configuration with 1/4", 3/8" or 1/2" female NPT end connections. All valves shall have removable bonnet cap with replaceable PTFE seal. No elastomer seals shall be used. All valves shall have built-in panel mounting nut and high impact polypropylene handles. All PVC and CPVC valves shall be pressure rated to 235 psi and all Polypropylene valves to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Cv Values

Size	Globe Pattern	Angle Pattern
1/4" - 3/8"	.310	.426
1/2"	.62	.78

Gallons per minute at 1 psi pressure drop.

Quick-View Needle Valve Selection Chart

Valve Size	PVC Part Numbers ^{1,2}						Pressure Rating
	Globe Pattern			Angle Pattern			
	Socket	SR Threaded	Threaded	Socket	SR Threaded	Threaded	
1/4"	5592-002	N/A	5591-002	5692-002	N/A	5691-002	PVC & CPVC 235 psi, PP 150 psi Non-Shock Water @ 73°F
3/8"	5592-003	5591-003SR	5591-003	5692-003	N/A	5691-003	
1/2"	5592-005	5591-005SR	5591-005	5692-005	5691-005SR	5691-005	

1: For CPVC Valve, add the letter "C" to the part number (e.g. 5591-002C)

2: For threaded Polypropylene Valve, add the letter "P" to the part number (e.g. 5591-002P, 5591-005PSR)

Temperature Pressure Rating

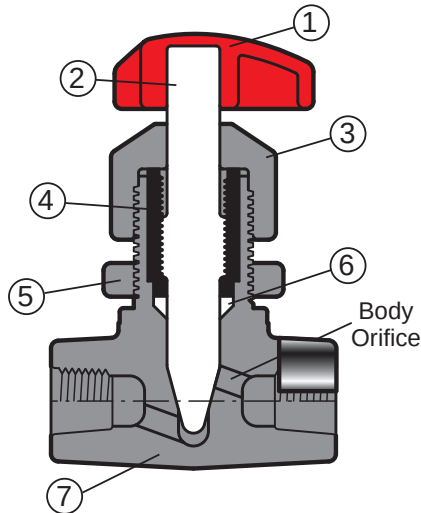
System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/4"-1/2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
		PP	150	105	90	80	65	50	45	30	20	-0-	-0-

Needle Valves



Panel Mounting Instructions

Spears® Needle Valves may be easily mounted to panel or bracket ranging from 3/16" to 1/2" in thickness using the accompanying template. Prepare mounting hole to panel opening dimensions. Slots may be cut in various positions to allow more versatile orientation. Open valve partially. Remove Bonnet Cap with needle assembly (do not fully disassemble) and Panel Nut from valve body. Insert valve body through mounting hole and seat lugs. Reinstall Panel Nut and tighten snug. Carefully reinstall Bonnet Cap and needle assembly, tighten snug. **Caution:** Failure to partially open the valve or back the needle off prior to re-assembly may damage needle when tightening Bonnet Cap.



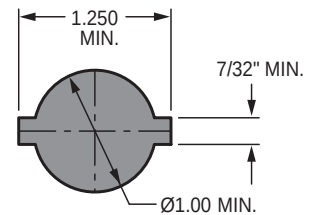
Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Needle Stem	1	PVC/CPVC/PP
3	Bonnet Cap	1	PVC/CPVC/PP
4	Stem Nut	1	GFPP
5	Panel Nut	1	PVC/CPVC/PP
6	Seal	1	PTFE
7	Body	1	PVC/CPVC/PP

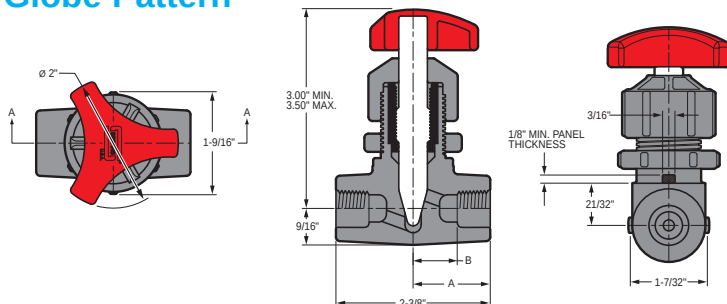
Body Orifice Dimensions

Valve Size	Body Orifice Ø
1/4	3/16"
3/8	3/16"
1/2	1/4"

Panel Opening



Globe Pattern

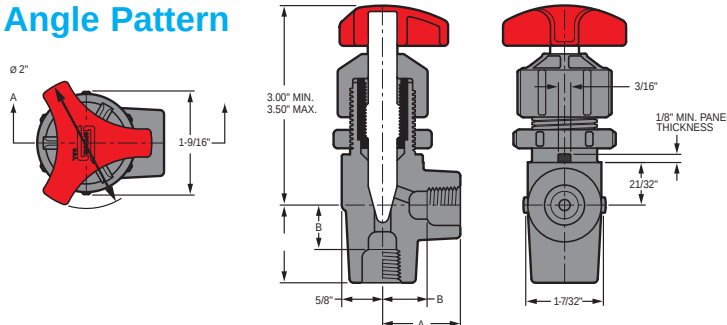


Dimensions

Valve Size	End Connection	A	B
1/4	Threaded	1-3/16	21/32
	Socket		9/16
3/8	Threaded	1-3/8	9/16
	Socket		7/16
1/2	Threaded	1-3/8	21/32
	Socket		1/2

Threaded Valve Dimensions apply to both Standard and SR Threads.

Angle Pattern



Needle Valve Adapter Kit

Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

Kit Includes:

- 2 – O-rings
- 1 – End Connector Wrench
- 2 – 1/4" MPT x Mipt Adapters
- 2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters

Plug Gate Valves



Sample Engineering Specification

All thermoplastic valves shall be Plug Gate style constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, with Polypropylene bonnets and high impact Polypropylene hand wheel. All valves shall have non-rising stem and Plug-style Polyethylene gate with Strain-Equalizing thread. All valve components shall be replaceable. All 1/2" - 2" valves shall be pressure rated to 235 psi and all flanged valves 1/2" - 8" to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers ¹			Pressure Rating
		Socket	SR Threaded	Flanged	
1/2	Buna-N	5212-005	5211-005SR	5213-005	235 psi Non-Shock Water @ 73°F
	EPDM	5222-005	5221-005SR	5223-005	
	FKM	5232-005	5231-005SR	5233-005	
3/4	Buna-N	5212-007	5211-007SR	5213-007	
	EPDM	5222-007	5221-007SR	5223-007	
	FKM	5232-007	5231-007SR	5233-007	
1	Buna-N	5212-010	5211-010SR	5213-010	
	EPDM	5222-010	5221-010SR	5223-010	
	FKM	5232-010	5231-010SR	5233-010	
1-1/4	Buna-N	5212-012	5211-012SR	5213-012	
	EPDM	5222-012	5221-012SR	5223-012	
	FKM	5232-012	5231-012SR	5233-012	
1-1/2	Buna-N	5212-015	5211-015SR	5213-015	
	EPDM	5222-015	5221-015SR	5223-015	
	FKM	5232-015	5231-015SR	5233-015	
2	Buna-N	5212-020	5211-020SR	5213-020	
	EPDM	5222-020	5221-020SR	5223-020	
	FKM	5232-020	5231-020SR	5233-020	
6	EPDM	---	---	5223-060	
	FKM	---	---	5233-060	
8	EPDM	---	---	5223-080	
	FKM	---	---	5233-080	

1: For CPVC valves, add the letter "C" to the part number (e.g: 5222-005C, 5211-005CSR)

Features – PVC, CPVC

Spears® Plug Gate Valve utilizes a cylindrical “plug-style” gate for more uniform sealing and positive shutoff. Low-profile, compact design and non-rising stem saves space for the most demanding applications. Spears® Strain-Equalizing stem/wedge design combined with improved Polypropylene bonnet makes this one of the most reliable thermoplastic gate valves available. Valves are produced from PVC or CPVC bodies in IPS sizes of 1/2" - 2" with Socket & SR Threaded or 1/2" - 8" Flanged end connections.

- Chemical & Corrosion Resistant PVC or CPVC Construction with Polypropylene Bonnet
- Polyethylene Plug-Style Gate Provides Cylindrical Internal Seal
- Non-Rising Stem with Patented Strain-Equalizing Threads
- 6" and 8" Valves Features Built-in Position Indicator
- High-Impact Polypropylene Hand Wheel
- Fully Serviceable In-line with Repair Kits or Full Internal Replacement Cartridges
- Buna-N, EPDM or FKM O-ring Seals
- Sizes 1/2" – 2" Pressure Rated to 235 psi @ 73°F Flanged through 8" to 150 psi @ 73°F
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Optional 2" Square/T-Style Operator Nut available.

Plug Gate Valve O-ring Repair Kit

All kits include Stem O-ring (2), Bonnet O-ring (1).

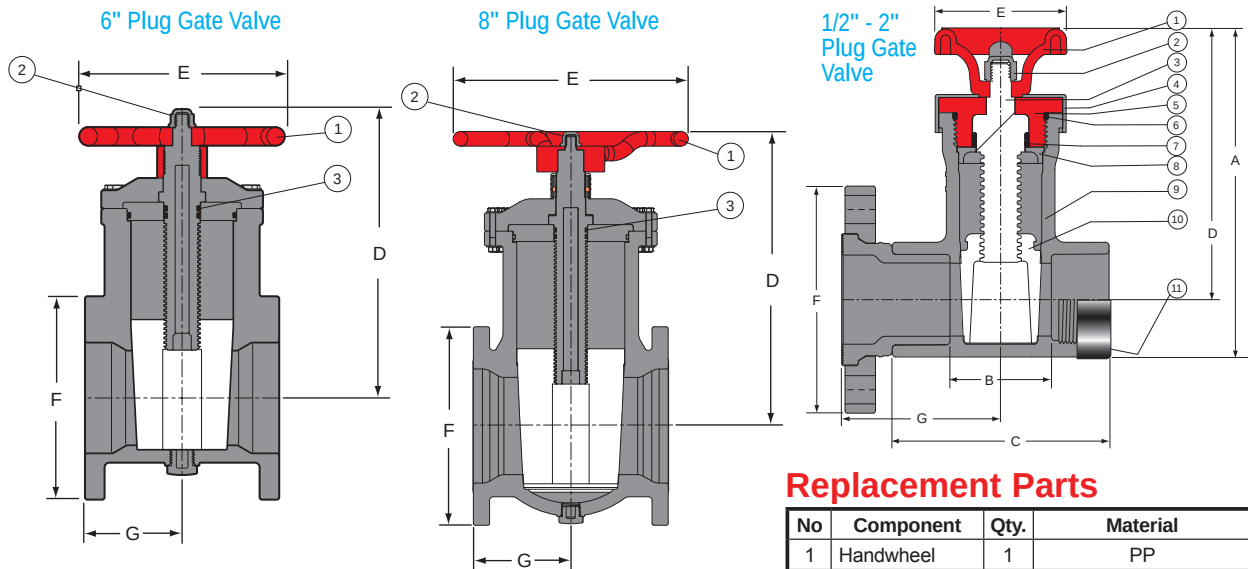
Valve Size	Part Number		
	Buna-N O-ring	EPDM O-ring	FKM O-ring
1/2, 3/4 & 1	PGT-BRK-010	PGT-ERK-010	PGT-VRK-010
1-1/4, 1-1/2 & 2	PGT-BRK-020	PGT-ERK-020	PGT-VRK-020
6	---	PGT-ERK-060	PGT-VRK-060
8	---	PGT-ERK-080	PGT-VRK-080

Plug Gate Valve Internal Replacement Cartridge

Internal Replacement Cartridge includes complete, fully assembled Handle Nut, Stem O-ring, Bonnet O-ring, and Gate for direct insertion into existing valve body.

Valve Size	Part Number					
	Buna-N O-rings	CPVC w/ Buna-N O-rings	EPDM O-rings	CPVC w/ EPDM O-rings	FKM O-rings	CPVC w/ FKM O-rings
1/2, 3/4 & 1	5210-010	5210-010C	5220-010	5220-010C	5230-010	5230-010C
1-1/4, 1-1/2 & 2	5210-020	5210-020C	5220-020	5220-020C	5230-020	5230-020C
6	---	---	5220-060	5220-060C	5230-060	5230-060C
8	---	---	5220-080	5220-080C	5230-080	5230-080C

Plug Gate Valves



Replacement Parts

No	Component	Qty.	Material
1	Handwheel	1	PP
2	Nut	1	PVC
3	Stem O-Ring	2	EPDM, FKM

Replacement Parts

No	Component	Qty.	Material
1	Handwheel	1	PP
2	Nut	1	PVC
3	Stem	1	PP
4	Bonnet Retainer	1	PVC
5	Bonnet	1	PP
6	Bonnet O-ring	1	Buna-N, EPDM, FKM
7	Stem O-ring	2	Buna-N, EPDM, FKM
8	Stem Support	1	PVC/CPVC
9	Body	1	PVC/CPVC
10	Gate	1	PE
11	SS Collar	2	SS 316

Dimensions & Weights

Nominal Size	Dimension Reference (inches)								Approx. Wt. (Lbs.)			
	A	B		C	D	E	F	G	PVC		CPVC	
		Socket	SR Thread						Soc/Thd	Flanged	Soc/Thd	Flanged
1/2	5	1-1/4	1-11/16	3-1/16	4-1/8	2-5/8	3-1/2	2-11/32	.38	.77	.39	.80
3/4	5	1-1/4	1-15/16	3-5/16	4-1/8	2-5/8	3-7/8	2-1/2	.40	.95	.41	.99
1	5	1-1/4	1-3/4	3-1/2	4-1/8	2-5/8	4-1/4	2-21/32	.43	1.21	.44	1.27
1-1/4	8-5/8	2-21/32	3-7/16	5-1/4	7-1/8	3-7/16	4-5/8	3-5/8	1.84	2.83	1.85	2.89
1-1/2	8-5/8	2-21/32	3-5/8	5-15/32	7-1/8	3-7/16	5	3-15/16	1.94	3.15	1.98	3.27
2	8-5/8	2-21/32	3-27/32	5-23/32	7-1/8	3-7/16	5-15/16	4-5/32	2.11	3.99	2.17	4.18
6	---	---	---	---	15-5/8	10-7/8	11	5-1/4	---	35.53	---	43.56
8	---	---	---	---	20-1/16	16	13-1/2	6-5/8	---	54.59	---	74.55

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	140 (.97)	130 (.90)	90 (.62)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	95 (.66)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
	6" - 8"	PVC	150 (1.03)	130 (.90)	110 (.76)	60 (.41)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)

Gate Valves

Features – PVC, CPVC

This solid, proven design is well suited for a variety of chemical, industrial and irrigation applications. Spears® Gate Valves are feature-packed with a variety of end connector options. Individual special features are found in each size range 1/2" through 2", 2-1/2" & 3", and in the full featured Heavy Industrial 4" valve. See Spears® Plug Gate Valves for 6" size.

- Heavy Bodied PVC & CPVC Construction
- Tapered Wedge with Specially Designed Sealing Surface
- Non-Rising Stem Design
- Patented Strain-Equalizing Stem/Wedge Thread
- O-ring Stem Seals Instead of Packing - No Retightening Required
- Buna-N, EPDM, or FKM O-ring Seals
- Positive Grip, High Impact Polypropylene Handwheel Operator
- Fully Serviceable, Replaceable Components - Accessible Without Valve Removal
- EPDM Gate Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Metric Socket and BSP Thread Available, 1/2" - 2"



1/2" - 2" PVC & CPVC Heavy Duty Gate Valves

- Available with socket, threaded or flanged end connectors.
- Pressure rated to 200 psi @ 73°F. Flanged Valve Pressure Rated to 150 psi @ 73°F



2-1/2" & 3" PVC & CPVC Heavy Duty Gate Valves

- Available with socket, SR Threaded (Special Reinforced) threaded or flanged end connectors.
- Pressure rated to 150 psi @ 73°F.
- Optional 2" Square/T-Style Operator Nut available.

Note: 2-1/2" size is a bushed down 3" valve.



4" PVC & CPVC Heavy Industrial Gate Valves

- Available with socket, SR Threaded (Special Reinforced) threaded or flanged end connectors.
- Pressure rated to 235 psi @ 73°F. Flanged Valve Pressure Rated to 150 psi @ 73°F
- SS 316 Exterior Bonnet & Hardware
- Built-in Quick-View Position Indicator
- Optional 2" Square/T-Style Operator Nut available.

Sample Engineering Specification

All thermoplastic Gate Valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be Buna-N, EPDM or FKM. All EPDM valves shall be NSF® certified for potable water use. All valves shall have non-rising stem and Polypropylene handwheel. All valve gate wedges shall have Strain-Equalizing threads. PVC valves shall have Polypropylene wedge and CPVC valves shall have CPVC wedge. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated at 200 psi, all 2-1/2" through 3" and all flanged valves shall be pressure rated at 150 psi, and all 4" valves shall be pressure rated at 235 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Gate Valves



Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers ¹			Pressure Rating
		Socket	Threaded	Flanged	
1/2	Buna-N	2012-005	2011-005	2013-005	200 psi Non-Shock Water @ 73°F
	EPDM	2022-005	2021-005	2023-005	
	FKM	2032-007	2031-005	2033-005	
3/4	Buna-N	2012-007	2011-007	2013-007	
	EPDM	2022-007	2021-007	2023-007	
	FKM	2032-007	2031-007	2033-007	
1	Buna-N	2012-010	2011-010	2013-010	
	EPDM	2022-010	2021-010	2023-010	
	FKM	2032-010	2031-010	2033-010	
1-1/4	Buna-N	2012-012	2011-012	2013-012	(Flanged 150 psi Non-Shock Water @ 73°F)
	EPDM	2022-012	2021-012	2023-012	
	FKM	2032-012	2031-012	2033-012	
1-1/2	Buna-N	2012-015	2011-015	2013-015	
	EPDM	2022-015	2021-015	2023-015	
	FKM	2032-015	2031-015	2033-015	
2	Buna-N	2012-020	2011-020	2013-020	
	EPDM	2022-020	2021-020	2023-020	
	FKM	2032-020	2031-020	2033-020	
2-1/2	Buna-N	2012-025 ³	2011-025 ³	2013-025 ³	150 psi Non-Shock Water @ 73°F
	EPDM	2022-025 ³	2021-025 ³	2023-025 ³	
	FKM	2032-025 ³	2031-025 ³	2033-025 ³	
3	Buna-N	2012-030	2011-030SR	2013-030	
	EPDM	2022-030	2021-030SR	2023-030	
	FKM	2032-030	2031-030SR	2033-030	
4	Buna-N	2012-040	2011-040SR	2013-040	235 ² psi Non-Shock Water @ 73°F
	EPDM	2022-040	2021-040SR	2023-040	
	FKM	2032-040	2031-040SR	2033-040	

1: For CPVC valves, add the letter "C" to the part numbers (e.g., 2031-005C).

2: Flanged end connectors have a Maximum Internal Pressure Rating of 150 psi @ 73°F.

3: Outlet sized with bushing.

Cv Values

Nominal Size	Cv ¹ Gallons/Minute	
	Socket/Threaded	Flanged
1/2	19	15
3/4	37	29
1	44	39
1-1/4	128	105
1-1/2	144	127
2	333	279
2-1/2	See Note 2	
3	335	323
4	583	566

Flanged valves calculated for additional laying length of flanged valve.

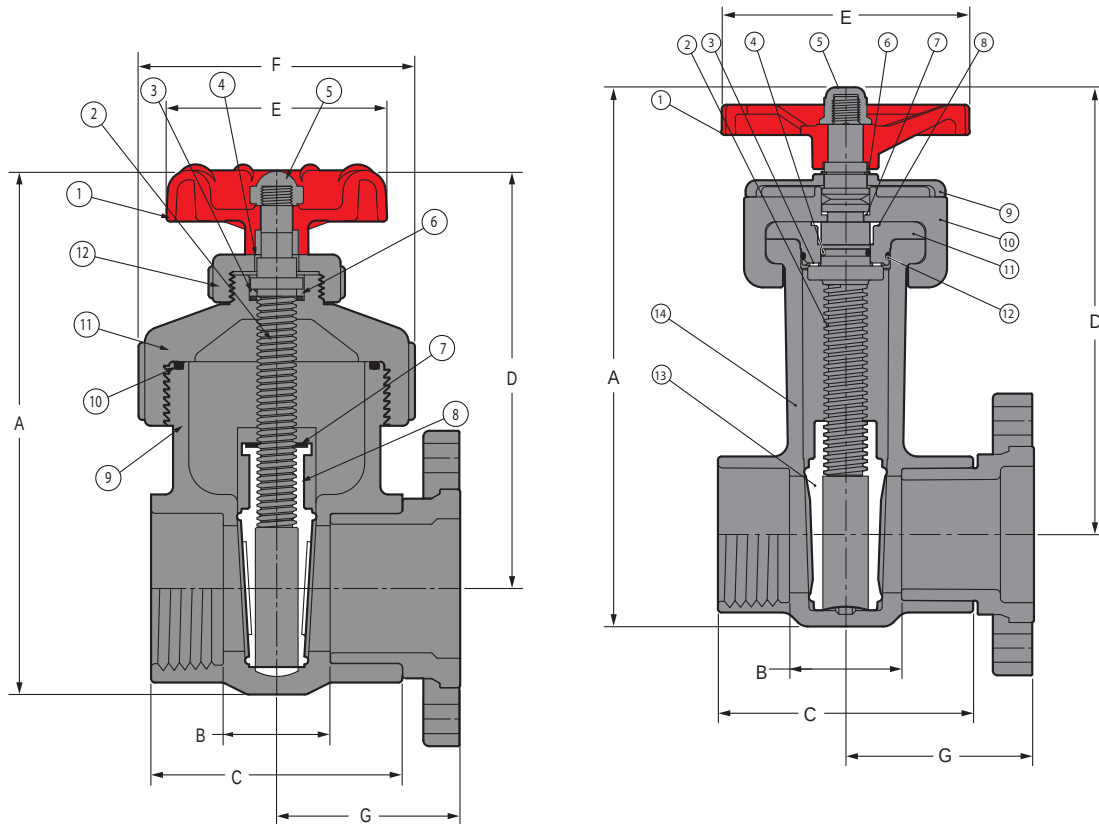
1: Gallons per minute at 1 psi pressure drop.

2: Size 2-1/2" is a reducer bushed down 3" valve, Cv not available.

Temperature Pressure Rating

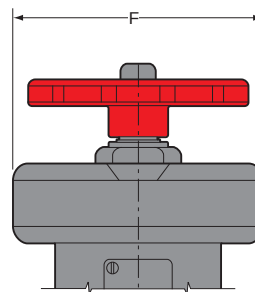
System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2"-2"	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	200 (1.38)	155 (1.07)	140 (.97)	125 (.86)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
	2-1/2"-3"	PVC	150 (1.03)	130 (.90)	110 (.76)	60 (.41)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
	4"	PVC	235 (1.62)	140 (.97)	130 (.90)	90 (.62)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	95 (.66)	80 (.55)	70 (.48)	60 (.41)	50 (.34)

Gate Valves



1/2" - 2" Replacement Parts

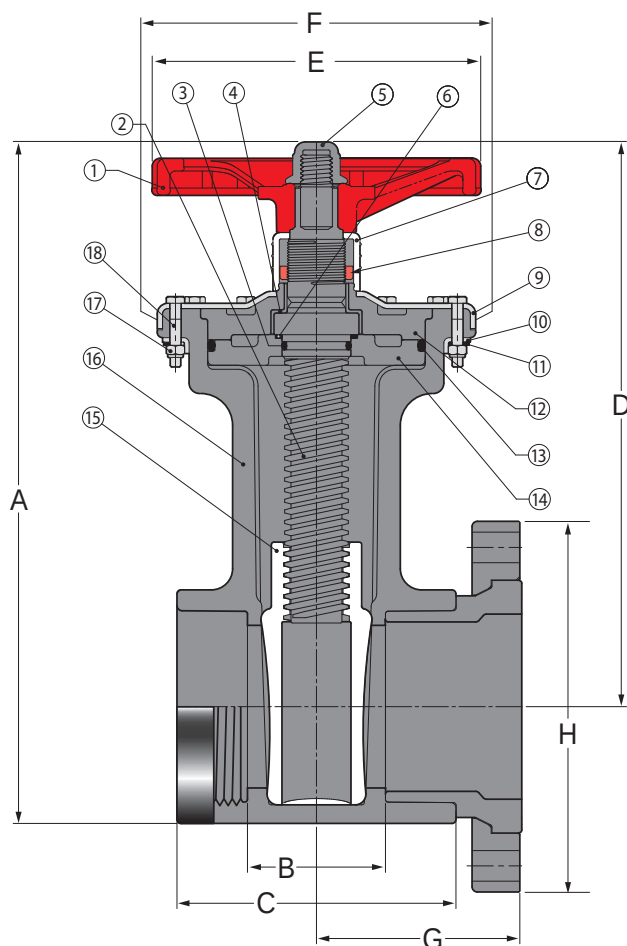
No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Stem Bushing	1	PP
5	Stem Nut	1	PVC/CPVC
6	Stem Washer	1	PP
7	Wedge Washer/O-ring	1	Buna-N/EPDM/FKM
8	Wedge	1	PP/CPVC
9	Body (Socket/Threaded)	1	PVC/CPVC
10	Bonnet O-ring	1	Buna-N/EPDM/FKM
11	Bonnet	1	PVC/CPVC
12	Bonnet Nut	1	PVC/CPVC



2-1/2" & 3" Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem Bearing	1	PP
4	Stem O-ring	1	Buna-N/EPDM/FKM
5	Stem Nut	1	PVC
6	Stem Retaining Ring	1	SS 316
7	Split Washer	1	PP
8	Stem Bushing	1	PP
9	Bonnet Retainer	1	PVC/CPVC
10	Bonnet Half	2	PVC/CPVC
11	Seal Carrier	1	PVC/CPVC
12	Carrier O-ring	1	Buna-N/EPDM/FKM
13	Wedge	1	PP/CPVC
14	Body	1	PVC/CPVC

Gate Valves



4" Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Stem Bushing	1	PTFE/HDPE
5	Stem Nut	1	PVC/CPVC
6	Stem Washer	1	PP
7	Indicator Cover	1	PVC Clear
8	Indicator Nut	1	PP Yellow
9	Bonnet Retainer	1	SS 316
10	Retainer Bracket	2	SS 316
11	Bracket Lock	1	SS 316
12	Bonnet	1	PVC/CPVC
13	Seal Carrier O-ring	1	Buna-N/EPDM/FKM
14	Seal Carrier	1	PVC/CPVC
15	Wedge	1	PP/CPVC
16	Body	1	PVC/CPVC
17	Locknut	12	SS 316
18	Hex Bolt	12	SS 316

Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)			
	A	B ¹	C	D	E	F	G	H	PVC		CPVC	
									Soc/Thd	Flanged	Soc/Thd	Flanged
1/2	5-1/8	1-1/4	2-13/16	4-1/8	2-5/8	2-11/16	2-3/8	3-1/2	.51	.92	.56	.98
3/4	5-1/8	1-1/4	2-13/16	4-1/8	2-5/8	2-11/16	2-1/2	3-7/8	.52	1.09	.57	1.16
1	5-13/32	1-1/4	3-5/16	4-5/16	2-5/8	2-15/16	2-3/4	4-1/4	.67	1.46	.73	1.54
1-1/4	8-1/16	1-9/16	3-9/16	6-9/16	3-7/16	3-15/16	3-1/16	4-5/8	1.61	2.58	1.73	2.74
1-1/2	8-1/16	1-9/16	3-3/4	6-9/16	3-7/16	3-15/16	3-7/16	5	1.63	2.81	1.75	3.03
2	8-9/16	1-11/16	3-15/16	6-7/8	3-7/16	4-7/16	3-5/8	6	1.95	3.81	2.15	4.09
2-1/2	14-5/16	3-3/8	7-3/8	11-7/8	6-11/16	7-1/4	5-1/8	7	9.48	11.91	9.60	12.89
3	14-5/16	2-15/16	6-11/16	11-7/8	6-11/16	7-1/4	4-15/16	7-1/2	9.03	12.21	9.43	13.40
4	16	3-3/8	7-15/16	13-1/4	8	7-9/16	4-7/8	9	13.67	18.39	14.66	19.75

1: Valve Lay Length



2" Square / T-Style Operator Nuts

- Fits Spears® Gate Valves.
- Combination design for use with either standard 2" square drive or conventional "T" drive operators.

Size	Part Number
1/2, 3/4, 1	GTN-005
1-1/4, 1-1/2, 2	GTN-012
2-1/2 & 3	GTN-030
4	GTN-040

Globe Valves



Features - PVC, CPVC

Spears® Globe Valves provide close throttling control throughout the entire range of operation through positive shutoff. This makes the Globe Valve an excellent choice for throttling applications where pressure drop is not critical. Valves are available in PVC and CPVC materials in larger IPS sizes of 2-1/2" through 6" with Flanged end connections.

- Excellent Throttling Characteristics
- Chemical & Corrosion Resistant PVC or CPVC Construction – No Wetted Metal Parts
- Fully Serviceable In-line with Factory Assembled Internal Repair Kit
- Buna-N, EPDM or FKM Seat & Seals
- Sizes 2-1/2" – 6" Pressure Rated to 150 psi @ 73°F
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All thermoplastic Globe valves shall be constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All seals shall be Buna-N, EPDM or FKM. All valves shall have a high impact polypropylene handwheel. All PVC and CPVC 2-1/2" through 6" valves shall be pressure rated to 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	Seals	PVC Part Numbers ¹	Pressure Rating
		Flanged	
2-1/2	Buna-N ²	6013-025	150 psi Non-Shock Water @ 73°F
	EPDM	6023-025	
	FKM	6033-025	
3	Buna-N ²	6013-030	
	EPDM	6023-030	
	FKM	6033-030	
4	Buna-N ²	6013-040	
	EPDM	6023-040	
	FKM	6033-040	
6	Buna-N ²	6013-060	
	EPDM	6023-060	
	FKM	6033-060	

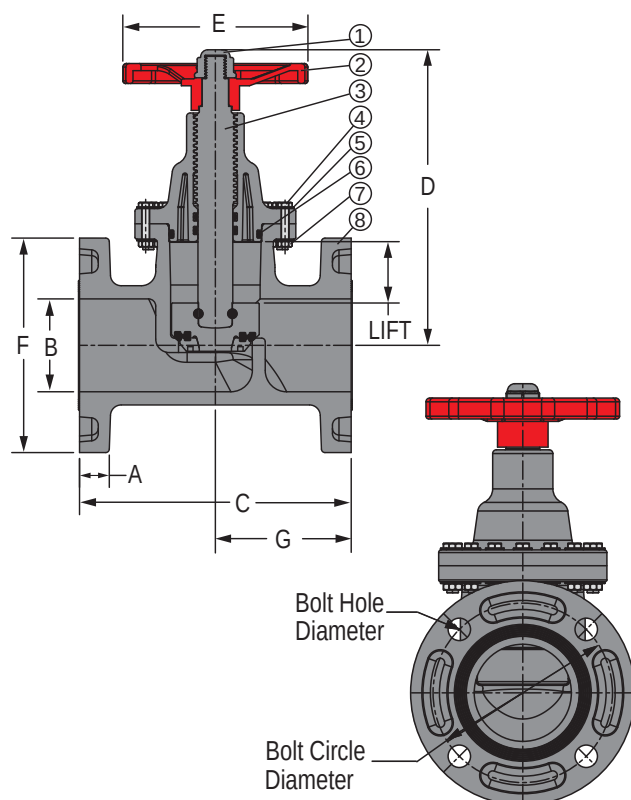
1: For CPVC Globe Valves, add the letter "C" to the part number listed (e.g. 6023-025C).
2: Valves with Buna-N seals available in PVC only.

Globe Valve Internal Repair Kit

Internal Repair Kit includes: Bonnet O-ring (1) along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem O-rings, Seat and Seal Carrier components. Install in valve using existing valve Bolts, Nuts, Washers and Handle Nut.

Valve Size	Part Number				
	Buna-N O-ring	EPDM O-ring	CPVC w/EPDM O-ring	FKM O-ring	CPVC w/FKM O-ring
2-1/2	GL-BRK-025	GL-ERK-025	GL-ERK-025C	GL-VRK-025	GL-VRK-025C
3	GL-BRK-030	GL-ERK-030	GL-ERK-030C	GL-VRK-030	GL-VRK-030C
4	GL-BRK-040	GL-ERK-040	GL-ERK-040C	GL-VRK-040	GL-VRK-040C
6	GL-BRK-060	GL-ERK-060	GL-ERK-060C	GL-VRK-060	GL-VRK-060C

Globe Valves



Replacement Parts

NO.	COMPONENT	QTY.	MATERIAL
1	Handle Nut	1	PVC
2	Handle	1	PP
3	Stem Assembly ¹	1	PVC/CPVC; BUNA-N/EPDM/FKM
4	Hex Bolt	1	SS 316
5	Flat Washer	1	SS 316
6	Bonnet O-ring	1	BUNA-N/EPDM/FKM
7	Hex Nut	1	SS 316
8	Body	1	PVC/CPVC

¹ - Stem Assembly Includes: Stem (1), Bonnet (1), Stem O-rings (2), Dowel Pins (2), Dowel Pin Plugs (2), Seal Carrier (1), Seat (1), Seat Retainer (1)

C_v Values

Nominal Size	C _v ¹
2-1/2	62
3	85
4	125
6	221

¹: Gallons per minute at 1 psi pressure drop.

Dimensions

Nominal Size	A	B	C	D (Open)	E	F	G	LIFT	Bolt Circle Diameter	Bolt Hole Diameter	Number of Bolt Holes
2-1/2	1-1/16	3-1/4	9-1/2	12-1/2	6-9/16	7-1/2	4-3/4	2-1/8	5-1/2	3/4	4
3	1-1/16	3-1/4	9-1/2	12-1/2	6-9/16	7-1/2	4-3/4	2-1/8	6	3/4	4
4	1-1/8	4-1/4	11-1/2	13-1/4	11	9	5-3/4	2-3/16	7-1/2	3/4	8
6	1-1/4	6-5/16	16-1/4	17-7/8	11	11	8-1/8	3-1/4	9-1/2	7/8	8

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	124 (.85)	100 (.69)	75 (.52)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0- (-0-)

Y-Pattern Valves



Sample Engineering Specification

All thermoplastic valves shall be Y-Pattern configuration constructed from PVC, ASTM D 1784 Cell Classification 12454, or CPVC, ASTM D 1784 Cell Classification 23447. All valves shall have Buttress thread bonnet and standard O-ring type seating disc. All O-rings shall be EPDM or FKM. All valves shall have high impact polypropylene handles. All 1/2" - 2" valves shall be pressure rated at 150 psi and all 3" - 4" valves shall be pressure rated at 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC Gray, PVC Clear & CPVC

The Y-Pattern valve is a closing-down, globe type valve design that provides proportional opening to seating disc travel. As such, Y-Pattern valves are ideally suited for flow regulating applications. The Y-pattern configuration reduces pressure loss over that of standard globe valves. Available in IPS Sizes 1/2" - 4" with socket, SR threaded, flanged, socket union or SR threaded union end connectors.

- Chemical & Corrosion Resistant PVC Gray, PVC Clear or CPVC Construction
- Buttress Thread Bonnet
- Fully Serviceable, Replaceable Components
- Standard O-ring Seal Seating Disc & Seals
- EPDM or FKM O-rings
- High Impact Polypropylene Handle
- Assembled with Silicone-Free, Water Soluble Lubricants
- Sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F, Sizes 3" - 4" Pressure Rated to 90 psi @ 73°F

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Material ^{1,2,3}					Pressure Rating
		Socket	SR Threaded	Flanged	Socket Union	SR Threaded Union	
1/2	EPDM	1722-005	1721-005SR	1723-005	172A-005	172B-005SR	150 psi Non-Shock Water @73°F
	FKM	1732-005	1731-005SR	1733-005	173A-005	173B-005SR	
3/4	EPDM	1722-007	1721-007SR	1723-007	172A-007	172B-007SR	
	FKM	1732-007	1731-007SR	1733-007	173A-007	173B-007SR	
1	EPDM	1722-010	1721-010SR	1723-010	172A-010	172B-010SR	
	FKM	1732-010	1731-010SR	1733-010	173A-010	173B-010SR	
1-1/4	EPDM	1722-012	1721-012SR	1723-012	172A-012	172B-012SR	
	FKM	1732-012	1731-012SR	1733-012	173A-012	173B-012SR	
1-1/2	EPDM	1722-015	1721-015SR	1723-015	172A-015	172B-015SR	
	FKM	1732-015	1731-015SR	1733-015	173A-015	173B-015SR	
2	EPDM	1722-020	1721-020SR	1723-020	172A-020	172B-020SR	90 psi Non-Shock Water @73°F
	FKM	1732-020	1731-020SR	1733-020	173A-020	173B-020SR	
3	EPDM	1722-030	1721-030SR	1723-030	172A-030	172B-030SR	
	FKM	1732-030	1731-030SR	1733-030	173A-030	173B-030SR	
4	EPDM	1722-040	1721-040SR	1723-040	172A-040	172B-040SR	
	FKM	1732-040	1731-040SR	1733-040	173A-040	173B-040SR	

1: For CPVC Y-Pattern, add the letter "C" to the part number (e.g. 1722-005C)

2: For PVC Clear Y-Pattern, add the letters "CL" to the part number (e.g. 1722-005CL) or (e.g. 172A-005CL)

3: For CPVC or Clear Special Reinforced Y-Pattern, (e.g. 1721-005CSR) or (e.g. 1721-005CLSR)

Replacement Parts

NO.	COMPONENT	QTY.	MATERIAL
1	Body ¹ (SOC/SR/FLG/UNION)	1	PVC/CLEAR/CPVC
2	Stem Assembly	1	PVC/CPVC;EPDM/FKM
3	Seal Carrier O-ring	1	EPDM/FKM
4	Bonnet Nut	1	PVC/CPVC
5	Bonnet	1	PVC/CPVC
6	Handwheel	1	PP
7	Stem Nut	1	PVC
8	Union O-ring	2	EPDM/FKM
9	Union Socket End	2	PVC/CPVC
10	Union SR Thread End	2	PVC/CPVC

1 - SR-Fipt Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
 - Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
 - Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

2 - Stem Assembly Includes: Stem (1), Seat Retainer (1), Seat Plate (1), Seat (1), Seal Carrier (1), Retainer Plate (1) (Except 4"), Stem O-ring (1)

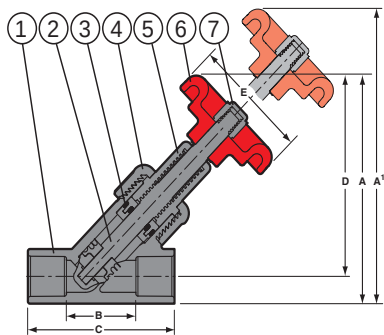
Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)

C_v Values

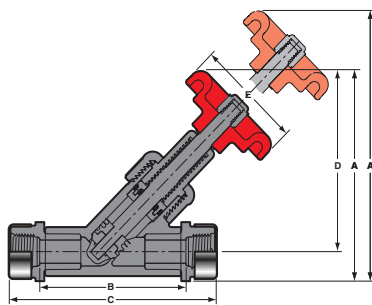
Size	Values
1/2	6.7
3/4	12.6
1	22.9
1-1/4	33.8
1-1/2	50.7
2	79.2
3	235
4	387

Y-Pattern Valves



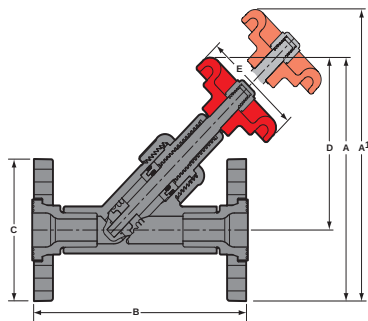
Socket Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	6-3/8	4-9/16	1-5/8	3-3/8	4	2-3/8	.31	.33
3/4	7-1/2	5-1/4	2	4	4-9/16	2-3/8	.50	.53
1	6-15/16	5-7/8	2-1/2	4-3/4	5-1/8	2-3/8	.78	.90
1-1/4	10-15/16	7-5/8	3-1/16	5-9/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12	8-5/8	3-9/16	6-5/16	7-1/2	3-1/2	1.66	1.76
2	13-13/16	9-15/16	4-1/2	7-1/2	8-1/2	3-1/2	2.96	3.10
3	20	14-1/2	6-9/16	10-5/16	12-7/16	6-5/8	5.34	5.64
4	25-1/2	18-1/4	8-5/8	13-1/8	15-5/8	7-15/16	9.97	10.45



SR Threaded Y-Pattern Dimensions & Weights

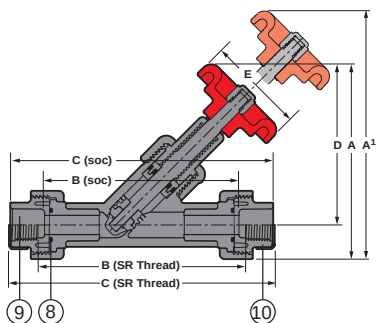
Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	6-1/2	4-11/16	3-5/8	5-1/16	4	2-3/8	.31	.33
3/4	7-5/8	5-7/16	4-3/8	5-13/16	4-9/16	2-3/8	.50	.53
1	8-5/8	6-1/8	5-3/16	7	5-1/8	2-3/8	.85	.90
1-1/4	11-1/8	7-3/4	6	7-15/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12-1/4	8-7/8	6-15/16	8-13/16	7-1/2	3-1/2	1.66	1.76
2	14-1/16	10-3/16	8-1/8	10-1/8	8-1/2	3-1/2	2.96	3.10
3	20	14-13/16	11	14-1/4	12-7/16	6-5/8	5.34	5.64
4	25-13/16	18-1/2	14	14-3/4	15-5/8	7-15/16	9.97	10.45



Flanged Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	7-9/16	5-3/4	5-11/16	3-1/2	4	2-3/8	.82	.85
3/4	8-3/4	6-1/2	6-7/16	3-7/8	4-9/16	2-3/8	1.23	1.28
1	9-3/4	7-1/4	7-1/4	4-1/4	5-1/8	2-3/8	1.70	1.81
1-1/4	12-1/4	8-7/8	8-1/8	4-5/8	6-1/2	3-1/2	2.40	2.52
1-1/2	13-3/8	10	9-3/16	5	7-1/2	3-1/2	3.07	3.25
2	15-3/8	11-1/2	10-3/8	6	8-1/2	3-1/2	5.20	5.42
3	21-11/16	16-3/16	12-1/16	7-1/2	12-7/16	6-5/8	9.44	10.07
4	27-7/16	20-3/16	14-9/16	9-1/16	15-5/8	7-15/16	14.87	16.15

Note: 4" flanged Y-Pattern use split flange ring



True Union Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A ¹	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	7	5-3/16	5-1/8	5-1/2	6-7/8	7	4-1/4	2-5/8	.59	.62
3/4	8-3/16	6	5-7/8	6-7/16	7-7/8	7-7/8	4-7/8	2-5/8	.97	1.02
1	9-1/8	6-5/8	6-1/2	7-3/8	8-3/4	9	5-3/8	2-5/8	1.33	1.41
1-1/4	11-1/2	8-3/16	7-7/16	6-3/16	9-15/16	10-1/8	6-5/8	3-1/2	1.53	1.63
1-1/2	12-13/16	9-3/8	8-3/16	9	10-15/16	10-15/16	7-9/16	3-1/2	3.06	3.25
2	14-9/16	10-11/16	9-7/16	10-13/16	12-7/16	12-13/16	8-5/8	3-1/2	4.90	5.16
3	21-1/8	15-5/8	13-5/8	15-3/8	17-3/8	18-3/16	12-1/2	6-5/8	14.06	14.37
4	25	19-7/16	17-1/16	19-1/4	21-5/8	22-5/16	7-15/16	7-15/16	17.39	19.23

Wafer Butterfly Valves



Sample Engineering Specification

All thermoplastic valves shall be Wafer Butterfly type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type mounted to the valve disc. All valves shall have built-in Santoprene™ Thermoplastic Elastomer (TPE) flange gaskets. Wafer style valves shall be for mounting between two flanges having bolt hole pattern that conform to ANSI/ASME B16.5 CL 150. Disc shall be centered with Type 316L Stainless Steel Stem. Stem shall be isolated from the process medium for dry operation. Lever operated valves shall be equipped with high impact polypropylene handle having 7-position stops and built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC, CPVC

Spears® Wafer Butterfly Valve is a multi-featured design incorporating laying lengths that allow direct replacement of common Cast Iron valves such as Keystone Model 228 and Bray Series 30 Butterfly Valves. Wafer Valves feature built-in Santoprene™ Thermoplastic Elastomer (TPE) flange gaskets, easy operating disc-mounted seat, and fully isolated stem design. Available in sizes 2" through 12", with choice of Buna-N, EPDM or FKM Seats on PVC Valves, EPDM or FKM on CPVC Valves.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Special Designed Laying Lengths for Direct Replacement of Common Cast Iron Butterfly Valves
- Built-in Santoprene™ Thermoplastic Elastomer (TPE) Gaskets on Valve Flange Faces
- Easy Operating Disc Mounted Seat in Choice of Buna-N, EPDM, or FKM
- Fully Isolated (Dry) Solid Type 316L Stainless Steel Stem
- Reversible High Impact Polypropylene Lever Handle with 7-Position Stops and Built-in Lockout Capability
- Optional High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel and Built-in Position Indicator
- Compatible with ANSI/ASME B16.5 Class 150 Bolt Pattern Flanges
- Pressure Rated to 150 psi for water @ 73°F (23°C)

PVC Quick-View Valve Selection Chart

Valve Size	O-ring Material	STANDARD VALVE DESIGN			Pressure Rating
		PVC Part Number ¹			
		w/Lever Handle	w/Gear Operator	Valve Only	
2	Buna-N	751311-020	751321-020	751301-020	150 psi Non-Shock Water @ 73°F
	EPDM	752311-020	752321-020	752301-020	
	FKM	753311-020	753321-020	753301-020	
2-1/2	Buna-N	751311-025	751321-025	751301-020	
	EPDM	752311-025	752321-025	752301-025	
	FKM	753311-025	753321-025	753301-025	
3	Buna-N	751311-030	751321-030	751301-030	
	EPDM	752311-030	752321-030	752301-030	
	FKM	753311-030	753321-030	753301-030	
4	Buna-N	751311-040	751321-040	751301-040	
	EPDM	752311-040	752321-040	752301-040	
	FKM	753311-040	753321-040	753301-040	
6	Buna-N	751311-060	751321-060	751301-060	
	EPDM	752311-060	752321-060	752301-060	
	FKM	753311-060	753321-060	753301-060	
8	Buna-N	751311-080	751321-080	751301-080	
	EPDM	752311-080	752321-080	752301-080	
	FKM	753311-080	753321-080	753301-080	
10	Buna-N	751311-100	751321-100	751301-100	
	EPDM	752311-100	752321-100	752301-100	
	FKM	753311-100	753321-100	753301-100	
12	Buna-N	751311-120	751321-120	751301-120	
	EPDM	752311-120	752321-120	752301-120	
	FKM	753311-120	753321-120	753301-120	

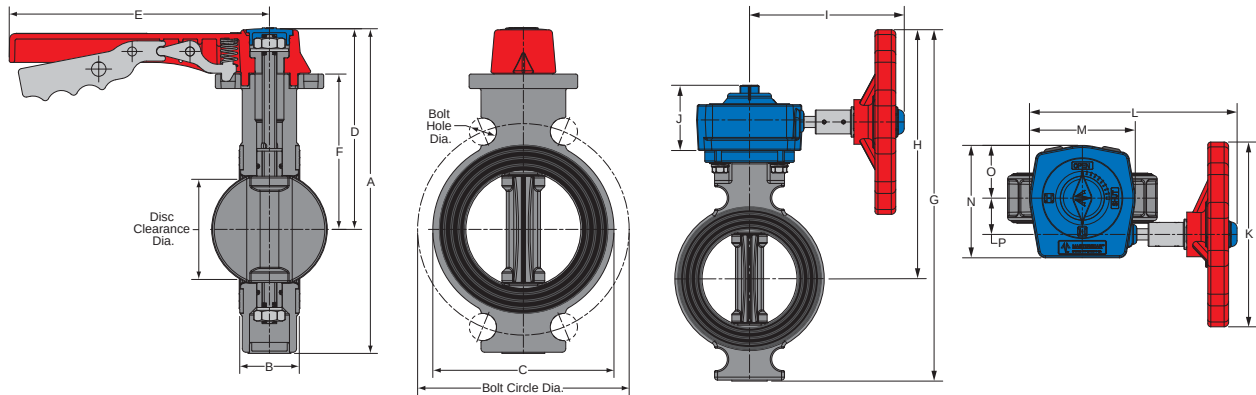
1: For CPVC EPDM & FKM valves, add the letter "C" to part numbers listed (e.g., 752311-030C).

General Installation Information

Spears® Wafer Butterfly Valves are designed for system connections between two flanges having ANSI B16.5 Class 150 bolt hole patterns. The valve handle (or gear operator) is reversible 180° for either left or right side operation. Wafer Butterfly Valves have built-in flange gaskets and are designed for installation with user supplied hex bolts, nuts and flat washers. The valve must be positioned with gasket areas evenly located between mating flange sealing surfaces. Valve Bolt Specification bolt lengths in table below are minimums based on use of two (2) Spears® flanges, Valve with built-in gaskets, standard S.A.E. hex bolts and Standard Plate "W" Series flat washers.

Caution: Spears® Wafer Butterfly Valves are designed for use with flanges or flanged equipment having minimum waterway inside diameter no less than that of Schedule 80 PVC pipe (ASTM D 1785). *Use of smaller inside diameter flange connections may result in obstruction and damage to the valve disc and seat.*

Wafer Butterfly Valves



PVC & CPVC Wafer Butterfly Valve Bolt Specifications & Dimensions

Valve Size	Bolt Diameter (in.)	Bolt Length (in.)	No. of Bolt Holes
2	5/8	4-1/2	4
2-1/2	5/8	5	4
3	5/8	5	4
4	5/8	5-1/2	8
6	3/4	6	8
8	3/4	6-1/2	8
10	7/8	7	12
12	7/8	7-1/2	12

Size	A	B	C	D	E	F	Bolt Circle Diameter ²			No. of Bolts ³	Bolt Hole Dia.	Disc Clearance Dia.
							ANSI	PN16 (mm)	PN10 ISO DIN (mm)			
2	8-5/8	1-11/16	3-3/4	5-9/16	9	4	4-3/4	125	125	4	13/16	1-1/2
2-1/2	9-5/8	1-13/16	4-1/2	6-1/16	9	4-1/2	5-1/2	145	145	4	13/16	1-15/16
3	10-1/8	1-13/16	5	6-7/16	9	4-7/8	6	NA	NA	4	7/8	2-3/4
4	11-13/16	2-1/16	6-1/4	6-15/16	9	5-3/8	7-1/2	180	180	4 (8)	15/16	3-7/16
6	14-7/8	2-3/16	8-9/16	9-3/8	11-7/8	7-1/8	9-1/2	240	240	4 (8)	7/8	5-7/16
8	17-7/16	2-9/16	10-3/4	10-5/8	13-13/16	8-7/16	11-3/4	NA	295	4 (8)	15/16	7-3/16
10 ¹	NA	2-9/16	12-7/8	NA	NA	10-11/16	14-1/4	355	350	4 (12)	1-1/8	9-3/16
12 ¹	NA	3-1/16	15-9/16	NA	NA	11-11/16	17	410	400	4 (12)	1-1/2	11-1/8

1: 10" and 12" valves are only available with gear operator.

2: Holes are oversized to accommodate different bolt patterns — ASME/ANSI B16.1 — Cast Iron Pipe Flanges and Flanged Fittings - Class 150 Bolt Patterns; PN10 & PN16 = B54504 — Circular Flanges for Pipes, Valves and Fittings (PN - Designated); DIN = DIN8063 Part 4 — Pipe Joint Assemblies and Fittings for Unplasticized Polyvinyl Chloride (PVC-U) Pressure Pipe.

3: Valve is positioned with 4 of 8 required Flange Bolts in sizes 4 to 8 inches and 4 of 12 in sizes 10 and 12 inches.

Size	G	H	I	J	K	L	M	N	O	P
2	12-1/4	9-1/8	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
2-1/2	13-1/8	9-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
3	13-5/8	10	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
4	14-3/4	10-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
6	17-3/4	12-1/4	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
8	20-3/8	13-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
10	24	15-7/8	6-3/4	3	8	9-1/4	5-1/8	5-7/8	2-1/2	2-1/8
12	26-3/8	16-7/8	6-3/4	3	8	9-1/4	5-1/8	5-7/8	2-1/2	2-1/8

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



Butterfly Valves

Standard & True Lug Design



Lever Handle



True Lug



Gear Operating



Lug Insert Style



14" Standard
PVC & CPVC
Butterfly Valves

Features - PVC, CPVC

Spears® patented Butterfly Valve design departs from traditional liner-seat type valve to eliminate seat creep, reduce operating torque and provide positive seal-off. Ideally suited for flow control or throttling, this high-performance valve is offered with a full variety of options for greater application versatility in industrial and chemical processing applications. Available in IPS sizes 1-1/2" - 14" in Standard or 1-1/2" - 12" True Lug (factory installed lugs) style.

- Special off-set Disc lifts quickly from seat to reduce wear and reduce operating torque.
- Patented Limited Contact Seat design provides free travel - eliminates seat creep, extrusion and wear. Field replaceable without full valve disassembly.
- Interlocking Body & Seat prevents wash-out or blow-out.
- Buna-N, EPDM or FKM Seat & Seals
- Fully Isolated Solid Type 316L Stainless Steel Stem
- Reversible High Impact Polypropylene Lever Handle with 7-Position stops & Built-in Lockout (standard handle on 1-1/2" - 8" valves; not available on 10" & larger valves)
- High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel, and Built-in Position Indicator (available for all sizes; standard on 10" & larger valves)
- Lug Insert Style valve has factory installed SS316 or zinc plated steel lug inserts.
- Standard valve accepts field-installable Lug Inserts Set option
- True Lug design has factory installed zinc plated or SS 316 lugs and is specially designed for connection to either side of valve.
- Pressure Rated to 150 psi @ 73°F including Dead-End Service.
- ANSI/ASME B16.5 Class 150 Bolt Pattern
- Valves with EPDM Seals & Seats are NSF® Certified for Potable water use.

Sample Engineering Specification

All thermoplastic valves shall be Butterfly type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole patterns shall conform to ANSI/ASME B16.5 Class 150. Disc shall be offset design with fully isolated Type 316L stainless steel stem and Type 316 stainless steel hardware. Lever operated valves shall be equipped with high impact polypropylene handle having built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valve bodies shall accept field installable lug inserts or shall be factory installed lug inserts, or be True Lug type. Lugs shall be stainless steel or zinc plated steel. Valves shall be pressure rated at 150 psi for water at 73°F through 12", as manufactured by Spears® Manufacturing Company.

Optional Accessories

- PTFE Coated Stem
- Stem Extension Kit
- PTFE Seat Sleeve
- Lever Handle Kit (standard on 1-1/2" - 8" valves)
- Gear Operator Kit (standard on 10" & larger valves)
- T-Handle Kit
- Field Installable Lug Insert Sets (for Standard valve)
- Speed Handle (for gear operated valves)
- 2" Square/T-Style Operator Nut (for gear operated valves)
- Chainwheel Operator Kit (for gear operated valves)
- Positive Stem Stop (for gear operated valves)
- Submersible Gear Operators

* See "BUTTERFLY VALVE ACCESSORIES" section for details of individual products.

Butterfly Valves



Standard & Lug Insert Style Quick-View Valve Selection Chart

Valve Size	O-ring Material	STANDARD VALVE DESIGN			LUG INSERT VALVE DESIGN			Pressure Rating
		PVC Part Number ¹			PVC Part Number ¹ Installed with 316 Stainless Steel Lug Inserts ^{2,3,4}			
		w/Lever Handle	w/Gear Operator	Valve Only	w/Lever Handle	w/Gear Operator	Valve Only	
1-1/2	Buna-N	721311-015	721321-015	721301-015	721311G-015	721321G-015	721301G-015	150 psi Non-Shock Water @ 73°F
	EPDM	722311-015	722321-015	722301-015	722311G-015	722321G-015	722301G-015	
	FKM	723311-015	723321-015	723301-015	723311G-015	723321G-015	723301G-015	
2	Buna-N	721311-020	721321-020	721301-020	721311G-020	721321G-020	721301G-020	
	EPDM	722311-020	722321-020	722301-020	722311G-020	722321G-020	722301G-020	
	FKM	723311-020	723321-020	723301-020	723311G-020	723321G-020	723301G-020	
2-1/2	Buna-N	721311-025	721321-025	721301-025	721311G-025	721321G-025	721301G-025	
	EPDM	722311-025	722321-025	722301-025	722311G-025	722321G-025	722301G-025	
	FKM	723311-025	723321-025	723301-025	723311G-025	723321G-025	723301G-025	
3	Buna-N	721311-030	721321-030	721301-030	721311G-030	721321G-030	721301G-030	
	EPDM	722311-030	722321-030	722301-030	722311G-030	722321G-030	722301G-030	
	FKM	723311-030	723321-030	723301-030	723311G-030	723321G-030	723301G-030	
4	Buna-N	721311-040	721321-040	721301-040	721311G-040	721321G-040	721301G-040	
	EPDM	722311-040	722321-040	722301-040	722311G-040	722321G-040	722301G-040	
	FKM	723311-040	723321-040	723301-040	723311G-040	723321G-040	723301G-040	
6	Buna-N	721311-060	721321-060	721301-060	721311G-060	721321G-060	721301G-060	
	EPDM	722311-060	722321-060	722301-060	722311G-060	722321G-060	722301G-060	
	FKM	723311-060	723321-060	723301-060	723311G-060	723321G-060	723301G-060	
8	Buna-N	721311-080	721321-080	721301-080	721311G-080	721321G-080	721301G-080	
	EPDM	722311-080	722321-080	722301-080	722311G-080	722321G-080	722301G-080	
	FKM	723311-080	723321-080	723301-080	723311G-080	723321G-080	723301G-080	
10	Buna-N	10" AND LARGER NOT AVAILABLE WITH LEVER HANDLE	721321-100	721301-100	10" AND LARGER NOT AVAILABLE WITH LEVER HANDLE	721321G-100	721301G-100	
	EPDM		722321-100	722301-100		722321G-100	722301G-100	
	FKM		723321-100	723301-100		723321G-100	723301G-100	
12	Buna-N		721321-120	721301-120		721321G-120	721301G-120	
	EPDM		722321-120	722301-120		722321G-120	722301G-120	
	FKM		723321-120	723301-120		723321G-120	723301G-120	
14	EPDM		722321-140	722301-140		--	--	100 psi @ 73°F
	FKM		723321-140	723301-140		--	--	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 722311-030C).

2: For factory installed Lug Insert Valve with Zinc Plated Lugs, substitute the letter "G" with the letter "K" (e.g. 721311K-030)

3: For True Lug Design Valve with Stainless Steel Lugs, substitute the letter "G" with the letter "L" (e.g. 721311L-030).

4: For True Lug Design Valve with Zinc Plated Steel Lugs, substitute the letter "G" with the letter "Z" (e.g. 721311Z-030).

Note: Optional BFV with submersible gear operators available, inquire with Spears®.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

See dimensions and additional Technical Information on following pages



Butterfly Valves

Polypropylene



Sample Engineering Specification

All thermoplastic valves shall be Butterfly type constructed from Polypropylene, ASTM D 4101. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 Class 150. Disc shall be offset design with fully isolated, Type 316L stainless steel stem and Type 316 stainless steel hardware. Lever operated valves shall be equipped with high impact polypropylene handle having built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valves shall be pressure rated at [see table] for water at 73°F, as manufactured by Spears® Manufacturing Company.

Material Note: UV Stabilized Polypropylene with beige pigment sizes 1-1/2" - 12" are glass reinforced, sizes 14" - 24" are not.

Features

Spears® patented Butterfly Valve design departs from traditional liner-seat type valve to eliminate seat creep, reduce operating torque and provide positive seal-off. Broad range of chemical resistance makes Polypropylene well suited for industrial and chemical processing applications. Designed for flow control or throttling, this high-performance valve is offered with a full variety of options for greater application versatility. Available in IPS sizes 1-1/2" - 24" with custom produced 30" to 60" valves available.

- UV Stabilized Polypropylene Construction
- Special off-set Disc lifts quickly from seat to reduce wear and reduce operating torque.
- Patented Limited Contact Seat design provides free travel - eliminates seat creep, extrusion and wear. Field replaceable without full valve disassembly.
- Interlocking Body & Seat prevents wash-out or blow-out.
- Buna-N, EPDM or FKM Seat & Seals
- Solid Type 316L Stainless Steel Stem, fully isolated from process fluids
- Reversible High Impact Polypropylene Lever Handle with 7-Position stops & Built-in Lockout (standard handle on 1-1/2" - 8" valves; not available on 10" & larger valves)
- High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel, and Built-in Position Indicator (available for all sizes; standard on 10" & larger valves)
- Pressure ratings include Dead-End Service (See Chart).
- ANSI/ASME B16.5 Class 150 Bolt Pattern

Optional Accessories

- PTFE Coated Stem
- Stem Extension Kit
- PTFE Seat Sleeve (through 12" size)
- Lever Handle Kit (standard on 1-1/2" - 8" valves)
- Gear Operator Kit (standard on 10" & larger valves)
- T-Handle Kit
- Speed Handle (for gear operated valves)
- 2" Square/T-Style Operator Nut (for gear operated valves)
- Chainwheel Operator Kit (for gear operated valves)
- Positive Stem Stop (for gear operated valves)
- Submersible Gear Operators

* See "BUTTERFLY VALVE ACCESSORIES" section for details of individual products.

Butterfly Valves



Polypropylene Quick-View Valve Selection Chart

Valve Size	O-ring Material	w/Lever Handle	w/Gear Operator	Valve Only	Pressure Rating
1-1/2	Buna-N	721311-015P	Special Order	721301-015P	150 psi Non-Shock Water @ 73°F
	EPDM	722311-015P	Special Order	722301-015P	
	FKM	723311-015P	Special Order	723301-015P	
2	Buna-N	721311-020P	721321-020P	721301-020P	
	EPDM	722311-020P	722321-020P	722301-020P	
	FKM	723311-020P	723321-020P	723301-020P	
2-1/2	Buna-N	721311-025P	721321-025P	721301-025P	
	EPDM	722311-025P	722321-025P	722301-025P	
	FKM	723311-025P	723321-025P	723301-025P	
3	Buna-N	721311-030P	721321-030P	721301-030P	
	EPDM	722311-030P	722321-030P	722301-030P	
	FKM	723311-030P	723321-030P	723301-030P	
4	Buna-N	721311-040P	721321-040P	721301-040P	
	EPDM	722311-040P	722321-040P	722301-040P	
	FKM	723311-040P	723321-040P	723301-040P	
6	Buna-N	721311-060P	721321-060P	721301-060P	
	EPDM	722311-060P	722321-060P	722301-060P	
	FKM	723311-060P	723321-060P	723301-060P	
8	Buna-N	721311-080P	721321-080P	721301-080P	
	EPDM	722311-080P	722321-080P	722301-080P	
	FKM	723311-080P	723321-080P	723301-080P	
10	Buna-N	10" and Larger not available with Lever Handle	721321-100P	721301-100P	
	EPDM		722321-100P	722301-100P	
	FKM		723321-100P	723301-100P	
12	Buna-N		721321-120P	721301-120P	
	EPDM		722321-120P	722301-120P	
	FKM		723321-120P	723301-120P	
14	Buna-N		—	—	100 psi Non-Shock Water @ 73°F
	EPDM		722321-140P	722301-140P	
	FKM		723321-140P	723301-140P	
16	Buna-N		—	—	85 psi Non-Shock Water @ 73°F
	EPDM		722321-160P	722301-160P	
	FKM		723321-160P	723301-160P	
18	Buna-N		—	—	70 psi Non-Shock Water @ 73°F
	EPDM		722321-180P	722301-180P	
	FKM		723321-180P	723301-180P	
20	Buna-N		—	—	50 psi Non-Shock Water @ 73°F
	EPDM		722321-200P	722301-200P	
	FKM		723321-200P	723301-200P	
24	Buna-N		—	—	
	EPDM		722321-240P	722301-240P	
	FKM		723321-240P	723301-240P	

Note: 30" - 60" Polypropylene Butterfly Valves produced to order

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	1-1/2"-12"	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	65 (.45)	50 (.34)	45 (.31)	30 (.21)	20 (.14)	-0-
	14"	100 (.69)	70 (.48)	60 (.41)	53 (.37)	43 (.26)	33 (.23)	30 (.21)	20 (.14)	13 (.09)	-0-
	16"	85 (.59)	60 (.41)	51 (.35)	45 (.31)	37 (.26)	28 (.19)	26 (.18)	17 (.12)	11 (.08)	-0-
	18"	70 (.48)	49 (.34)	42 (.29)	37 (.26)	30 (.21)	23 (.16)	21 (.14)	14 (.10)	9 (.06)	-0-
	20"-24"	50 (.34)	35 (.24)	30 (.21)	27 (.19)	22 (.15)	17 (.12)	15 (.10)	10 (.07)	7 (.05)	-0-



Butterfly Valves

High Purity TFM Lined



Features - CPVC

This advanced technology TFM Lined valve is specially designed and produced for applications requiring high purity and maximum chemical resistance. Spears® exclusive component-interface seal fully isolates process media to disc and liner contact only. Custom produced in sizes 2" through 6".

- Direct disc-to-liner seal between ECTFE fluoropolymer disc and TFM liner for positive shut-off. Specially designed offset disc lifts quickly from sealing surface to minimize wear and reduce operating torque.
 - Special disc-to-liner interface isolates valve components from process media. Eliminates stem and elastomer backing seal contact with process fluids. In the unlikely event of seal failure, leakage is expelled externally to protect process integrity. TFM skirt is integrally formed as part of the liner to isolate the CPVC body.
 - Solid, fully isolated type 316 stainless steel stem is additionally PTFE coated as a safeguard.
 - Lug style, chemical and corrosion resistant CPVC body features integrally molded actuation mounting pad and provides increased temperature handling capability to 200°F.
- 316 stainless steel Lug Inserts provide quick single-side valve installation and easy system add-on.
 - Low Profile Gear Operator features high efficiency worm gear drive with built-in position indicator and high impact polypropylene handwheel. Operator housing is powder coated for improved cleanliness. Reversible for either right or left side operation.
 - 150 psi Maximum Internal Pressure rating at 73°F.

Sample Engineering Specification

All thermoplastic Butterfly Valves shall be constructed from CPVC Type IV Cell Classification 23447 with TFM liner and ECTFE disc. Disc and liner interface shall isolate valve components and elastomeric seals from process media. Valve Stem shall be PTFE coated type 316 stainless steel. Body shall be lug style with 18-8 stainless steel or type 316 stainless steel lugs. Bolt hole patterns shall conform to ANSI/ASME B16.5 Class 150. Valve shall be gear operated with powder coated operator housing, position indicator, and high impact polypropylene handwheel. Valve shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Factory Reconditioning

In the event of damage, this maintenance-free valve can be factory reconditioned in order to maintain optimum serviceability and assure proper component isolation function. Valve reconditioning is made on an exchange basis with original limited warranty. Contact Spears® Technical Services for additional information.

Material Specifications

Media Contact Components:

Liner/seal	TFM (Hostaflon® — modified - PTFE)
Disc	ECTFE (HALAR® — ethylene chlorotrifluoroethylene)

No Media-Contact Components:

Body	CPVC (chlorinated polyvinylchloride)
Stem	Type 316 Stainless Steel, PTFE coated
O-ring Backing	FKM (fluorocarbon)
Bushings	Glass Reinforced Polypropylene blend / Polyurethane
Gear Operator	Die Cast Aluminum
Handwheel	Polypropylene

Quick-View Valve Selection Chart

Valve Size	Part Number	Pressure Rating
2	253322-020	150 psi Non-Shock Water @ 73°F
3	253322-030	
4	253322-040	
6	253322-060	

NOTE: High Purity TFM Lined Butterfly Valve has the same basic dimensions as Spears® Standard Butterfly Valve.

HALAR® is a registered trademark of Ausimont, Inc.
Hostaflon® is a registered trademark of Hoechst Celanese Corporation.

PVC Pool Butterfly Valves



Features - PVC White

Distinct White Body with Blue Handle readily identifies this high quality PVC Butterfly Valve specifically designed for chlorinated water applications such as swimming pools. Fully isolated, non-wetted stainless steel stem with limited-contact EPDM seat provides maximum resistance to chlorinated water with superior ease of operation. Available in IPS sizes 1-1/2" through 12".

- White PVC Valve with Blue PP Handle provides easy application identification for chlorinated water
- Type 316L non-wetted stainless steel stem is fully isolated from system fluid, but still compatible with chlorinated water
- Patented limited-contact seat is field replaceable
- High-grade EPDM seat & seals
- Blue polypropylene lever handle with built-in lockout (10" & 12" valves are gear operated only)
- Optional gear operated valve with powder coated cast aluminum housing and Blue polypropylene handwheel
- ANSI/ASME B16.5 Class 150 bolt pattern flange connection
- All sizes pressure rated to 150 psi @ 73°F
- Optional SS 316 field-installable Lug Inserts sets
- Pneumatic or electric actuation available

Sample Engineering Specification

All Pool Butterfly Valves shall be constructed from PVC with EPDM seals suitable for chlorinated water applications. Valve body shall be white (gray disc) with blue handle for application identification. All handles shall be high impact polypropylene. Lever handles shall have built-in lockout capability. Stem shall be Type 316L stainless steel and non-wetted. Valve bodies shall have ANSI/ASME B16.5 bolt patterns and accept optional field installable lug inserts. Valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Quick View Valve Selection Chart

PVC Lever Handle with EPDM Seat		
Size	Part Number	Pressure Rating
1-1/2	682311-015	150 psi Non-Shock Water @ 73°F
2	682311-020	
2-1/2	682311-025	
3	682311-030	
4	682311-040	
6	682311-060	
8	682311-080	
PVC Gear Operated with EPDM Seat		
Size	Part Number	Pressure Rating
1-1/2	682321-015	150 psi Non-Shock Water @ 73°F
2	682321-020	
2-1/2	682321-025	
3	682321-030	
4	682321-040	
6	682321-060	
8	682321-080	
10	682321-100	
12	682321-120	

CAUTION: THE POOL BUTTERFLY VALVE IS NEITHER INTENDED NOR WARRANTED FOR INDUSTRIAL OR CHEMICAL PROCESSING APPLICATIONS

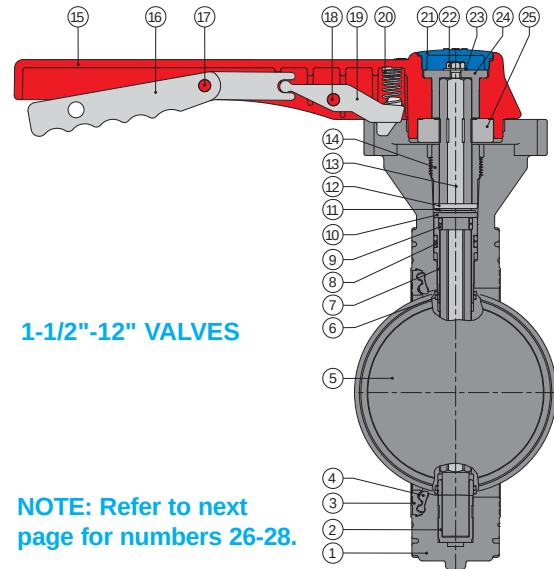


Butterfly Valves

Replacement Parts for 1-1/2" - 12" PVC & CPVC Standard, True Lug and Polypropylene Valves

No	Component	Qty.	Material
1	Body	1	PVC/CPVC
2	Stem Bearing	1	PTFE/GFPP
3	Seal Carrier	1	PVC/CPVC/PP
4	Seat	1	Buna-N, EPDM, FKM
5	Disc	1	PVC/CPVC/PP
6	Disc O-ring	2	Buna-N, EPDM, FKM
7	Stem Bushing	1	PTFE/GFPP
8	Stem Bushing O-ring	2	Buna-N, EPDM, FKM
9	Stem O-ring	2	Buna-N, EPDM, FKM
10	Stem Washer - Hex	1	PTFE
11	Stem Washer - Slot*	1-2	SS 316
12	Stem Washer - Round	1	PTFE/GFPP
13	Stem	1	SS 316
14	Stem Nut	1	PVC/CPVC
15	Handle Body	1	PP
16	Handle Grip	1	GFPVC
17	Grip Pin	1	PP
18	Lock Pin	1	PP
19	Handle Lock	1	GFPVC
20	Handle Spring	1	SS 316
21	Handle Cover	1	PP
22	Hex Bolt	1	SS 316
23	Flat Washer	1	SS 316
24	Handle Bushing	1	GFPVC
25	Disc Timing Stop	1	CPVC
26	Lug Insert	4-12	SS/Zinc Plated Steel
27	Gear Operator Assembly	1	Cast Aluminum
28	Hand Wheel	1	PP
True Lug Only (not shown):			
	Seal Carrier Flange Plate	1	PVC/CPVC
	Lug & Nut	4-12	SS/Zinc Plated Steel
	Plate O-ring	1	Buna-N, EPDM, FKM

Notes: *2-Slotted washers used on 6" & larger
1: See 14"-24" PP valve illustration for Gear Operator Components, No. 8 - 16



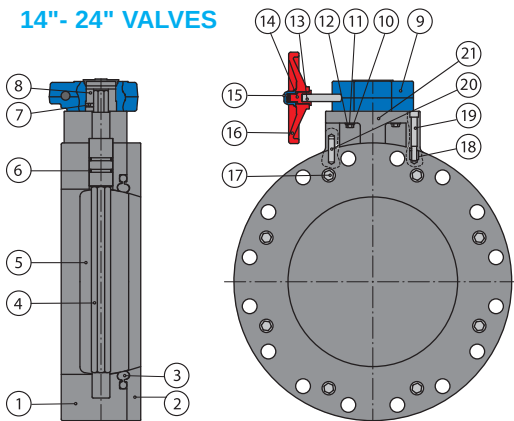
1-1/2"-12" VALVES

NOTE: Refer to next page for numbers 26-28.

Replacement Parts for 14" - 24" Polypropylene Valves

No.	Component	Qty	Material
1	Body	1	PP
2	Seal Carrier	1	PP
3	Seat	1	EPDM/FKM
4	Stem	1	SS 316L
5	Disc	1	PP
6	Stem O-ring	2	EPDM/FKM
7	Set Screw	1	Steel
8	Drive Bushing	1	Steel
9	Gear Operator	1	Epoxy Coated Aluminum
10	Flat Washer	4	SS 316
11	Lock Washer	4	SS 316
12	Hex Head Cap Screw	4	SS 316
13	Handwheel Pin	1	SS 316
14	Handwheel Adapter	1	GFPVC
15	Handwheel Nut	1	PP
16	Handwheel	1	PP
17	Hex Bolts	6-12	Nylon
18	Thread Insert	2	Steel
19	Hex Head Cap Screws	2	SS 316
20	Dowel Pin	1	Steel
21	Tower	1	PP

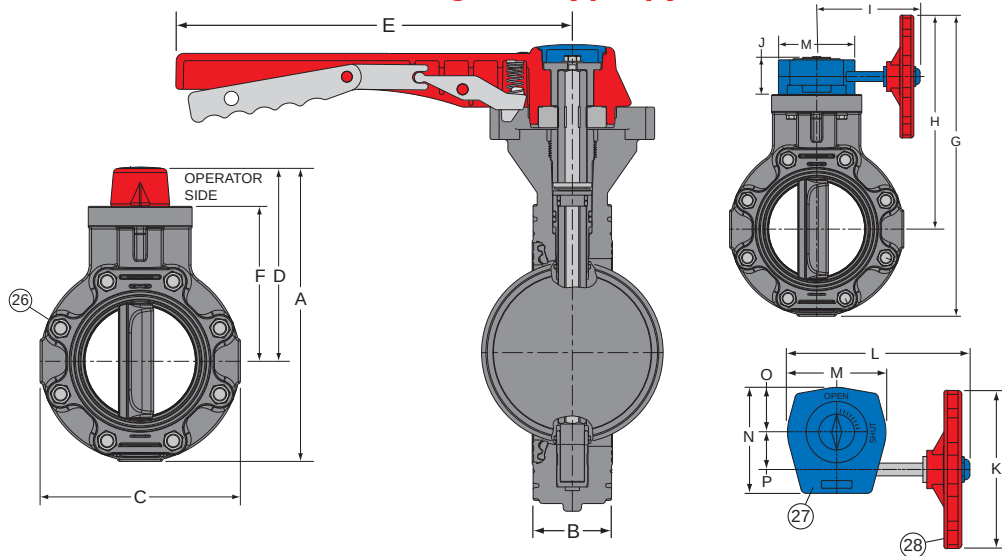
14"- 24" VALVES



Butterfly Valves



Standard, True Lug & Polypropylene



Dimensions

Nominal Size	Pressure Rating ¹ (psi)	A	B		C	D	E	F	G
			Standard, Lug Insert, & Polypropylene	True Lug					
1-1/2	150	8-5/32	1-9/16	2-1/4	5	5-19/32	9-3/32	4-3/32	11-5/32
2	150	9-11/32	1-15/16	2-9/16	6	6-13/32	9	4-3/4	13-1/8
2-1/2	150	10-9/32	2	2-3/4	7	6-25/32	9-1/4	5-1/4	13-1/8
3	150	11-1/2	2-3/32	2-13/16	7-1/2	7-27/32	12	5-5/8	14-5/32
4	150	13	2-9/32	3	9	8-1/2	12	6-1/4	15-5/8
6	150	16-19/32	2-3/4	3-13/32	10-31/32	11-3/32	13-7/8	8-19/32	19-7/32
8	150	18-5/8	2-15/16	3-23/32	13-1/2	12	13-15/16	9-1/2	21-7/16
10	150	N/A	3-1/4	4-1/4	16	N/A	N/A	11	26-5/8
12	150	N/A	3-1/2	4-1/2	19	N/A	N/A	12	29-1/8
14	100 ²	N/A	6-1/4	N/A	21	N/A	N/A	13-3/16	29
16	85 ²	N/A	6-3/4	N/A	23-1/2	N/A	N/A	14-7/16	31-1/2
18	70 ²	N/A	7-1/8	N/A	25	N/A	N/A	15-3/16	33
20	50 ²	N/A	7-3/4	N/A	27-1/2	N/A	N/A	16-7/16	35-1/2
24	50 ²	N/A	8-7/16	N/A	32	N/A	N/A	18-11/16	40
30-60	Contact Spears® for 30" to 60" Valve Dimensions								

Nominal Size	H	I	J	K	L	M	N	O	P
1-1/2	8-21/32	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
2	10-1/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
2-1/2	9-5/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
3	10-17/32	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
4	11-1/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
6	13-23/32	6-7/16	2-13/32	7-15/16	8-7/8	4-27/32	5-5/32	2-7/32	1-27/32
8	14-11/16	6-7/16	2-13/32	7-15/16	8-7/8	4-27/32	5-3/16	2-7/32	1-27/32
10	18-5/8	7-1/8	2-3/8	8	9-13/16	5-3/8	5-15/16	2-7/16	2-11/32
12	19-5/8	7-1/8	2-3/8	8	9-13/16	5-3/8	5-15/16	2-7/16	2-11/32
14	18-1/2	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
16	19-3/4	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
18	20-1/2	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
20	21-3/4	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
24	24	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
30-60	Contact Spears® for 30" to 60" Valve Dimensions								

1: Maximum Internal Pressure Rating @ 73°F

2: Additional pressure rating is possible with attention to flow direction.



Butterfly Valves

C_v Values & Operating Torque

Valve Size	C _v ¹ Degrees Open						Operating ² Torque (in.-lbs.)
	15°	30°	45°	60°	75°	90°	
1-1/2	2	8	20	36	61	81	100
2	3	11	27	49	82	109	110
2-1/2	5	19	48	86	144	192	206
3	9	35	86	155	259	345	360
4	10	41	103	185	308	411	420
6	28	113	281	506	844	1125	720
8	56	225	562	1012	1687	2249	1200
10	111	444	1110	1998	3330	4440	1320
12	158	631	1577	2839	4732	6309	1920
14	176	705	1762	3172	5286	7048	See Notes
16	211	846	2114	3805	6341	8455	
18	273	1092	2730	4914	8190	10920	
20	355	1418	3545	6381	10635	14180	
24	467	1866	4665	8397	13995	18660	

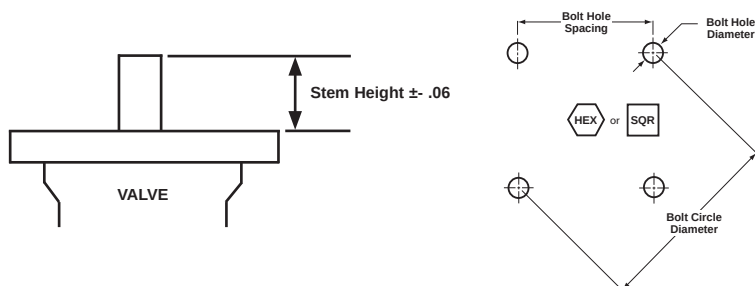
1: Gallons per minute at 1 psi pressure drop.

2: Operating torque for large diameter valves varies significantly with system operating pressure, flow direction and velocity.
Contact Spears® for torque requirement based on application.

Actuator Mounting Dimensions For Custom Actuation

Size	Bolt Hole Spacing		Bolt Hole Diameter		Bolt Circle Diameter		Hex	Square	Stem Height	
	Standard	Wafer	Standard	Wafer	Standard	Wafer	+ .000 - .006	+ .000 - .002		
1-1/2	1.95	N/A	.34	N/A	2.75	N/A	.375	N/A	.75	N/A
2	1.95	2.47	.34	.40	2.75	3.50	.500	.375	.75	1.30
2-1/2	1.95	2.47	.34	.40	2.75	3.50	.500	.375	.75	1.34
3	2.65	2.47	.41	.40	3.75	3.50	.563	.500	1.00	1.34
4	2.65	2.47	.41	.40	3.75	3.50	.625	.500	1.04	1.37
6	3.17	2.83	.41	.40	4.48	4.00	.875	.750	1.27	1.80
8	3.17	3.17	.41	.40	4.48	4.48	1.000	.875	1.29	1.96
10	3.54	N/A	.41	N/A	5.00	N/A	1.125	N/A	1.38	N/A
12	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.38	N/A
14	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.62	N/A
16	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.75	N/A
18	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.75	N/A
20	3.93	N/A	.41	N/A	5.56	N/A	1.250	N/A	1.75	N/A
24	4.33	N/A	.41	N/A	6.12	N/A	1.250	N/A	1.75	N/A

Note: Standard = Standard, Lug & True Lug Style Valves
Wafer = Wafer Style Valves



Butterfly Valves



General Installation Information

Spears® Butterfly Valves are designed for system connections either between two flanges, or with single-side (flange one-side only) connection for dead-end service using lug style valves. Lug Insert Valves require attention to flow direction, True Lug valves may be installed either direction. The valve handle (or gear operator) is reversible 180° for either left or right side operation. Spears® Butterfly Valves are designed for installation with user supplied 1/8" full-faced gaskets, hex bolts, nuts and flat washers.

Caution: Spears® Butterfly Valves are designed for use with flanges or flanged equipment having minimum waterway inside diameter no less than that of Schedule 80 PVC pipe (ASTM D 1785). *Use of smaller inside diameter flange connections may result in obstruction and damage to the valve disc.*

PVC & CPVC Butterfly Valve Torque and Hardware Requirements

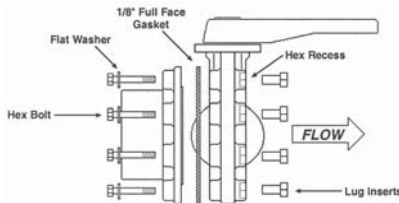
Valve Size (in.)	No. of Bolt Holes	Bolt Torque (ft.-lb.)	Standard Valve					Valve with Lug Inserts					True Lug Valve			
			Bolt Lengths ¹ (in.)		Bolt Diameter (in.)	Bolt Threads per inch	Flat Washer O.D. (in.)	Bolt Lengths ¹ (in.)		Bolt Diameter (in.)	Lug Threads per inch	Flat Washer O.D. (in.)	Bolt Lengths ² (in.)	Bolt Diameter (in.)	Lug Threads per inch	Flat Washer O.D. (in.)
			Single Side	Dual Flange ³				Single Side	2nd Flange ²							
1-1/2	4	12	3-1/4	4-1/4	1/2	13	1-3/8	1-3/4	1-1/2	1/2	13	1-3/8	1-1/2	7/16	14	1-1/4
2	4	25	3-3/4	4-3/4	5/8	11	1-3/4	2	1-3/4	5/8	11	1-3/4	1-1/2	1/2	13	1-3/8
2-1/2	4	25	4-1/4	5-1/4	5/8	11	1-3/4	2-1/4	2	5/8	11	1-3/4	1-3/4	1/2	13	1-3/8
3	4	25	4-1/4	5-1/2	5/8	11	1-3/4	2-1/4	2	5/8	11	1-3/4	2	1/2	13	1-3/8
4	8	25	4-1/2	5-3/4	5/8	11	1-3/4	2-1/2	2	5/8	11	1-3/4	2	1/2	13	1-3/8
6	8	40	5-1/4	6-3/4	3/4	10	2	3-1/4	2-1/4	3/4	10	2	2-1/4	5/8	11	1-3/4
8	8	40	5-3/4	7-1/4	3/4	10	2	3-3/4	2-1/4	3/4	10	2	2-1/4	5/8	11	1-3/4
10	12	64	6-1/2	8-1/4	7/8	9	2-1/4	4	3	7/8	9	2-1/4	2-3/4	3/4	10	2
12	12	95	6-3/4	8-1/2	7/8	9	2-1/4	4-1/4	3	7/8	9	2-1/4	2-3/4	3/4	10	2

1: Minimum bolt lengths based on use of Spears® flanges, 1/8" full faced gaskets, standard S.A.E. hex bolts and Standard Plate Series flat washers.

2: Specified bolt lengths are maximum allowable for maintaining proper clearance in initial Single-Side installation with Lugs where anticipated 2nd Flange installation option is to be retained without removal of valve.

3: Minimum bolt length through 2-flanges, 2-gaskets, 2-flat washers and 1-valve body.

Single-Side (flange one side) Installation Using Standard Valve with Lug Inserts (for field installable Insert Sets or valves with factory installed Lug Inserts)



CAUTION: Flange must be installed on side of valve **opposite** the hex nut recesses for Single-Side Installation as illustrated.

(Flange, bolts, nuts, washers and gaskets not included.
Lug inserts may be ordered separately.)

Polypropylene Butterfly Valve Torque and Hardware Requirements

Valve Size	No. of Bolt Holes	Bolt Diameter (in.)	Bolt Torque (ft.-lb.)	Bolt Lengths	Valve Lay Length
1-1/2	4	1/2	12	Bolt lengths will vary according to thickness of valve, mating flanges, nuts and gaskets used. The following formula may be use to calculate bolt length for installation with mating flange each side. $L = V + 2 (F + G + W) + N$ Where: L = Minimum Bolt Length V = Valve Lay Length F = Flange Thickness G = Gasket Thickness W = Washer Thickness N = Nut Thickness	1-9/16
2	4	5/8	25		1-7/8
2-1/2	4	5/8	25		2-1/16
3	4	5/8	25		2-1/8
4	8	5/8	25		2-5/16
6	8	3/4	40		3
8	8	3/4	40		2-3/4
10	12	7/8	64		3-1/4
12	12	7/8	95		3-1/2
14	12	1	110		6-1/4
16	16	1	110		6-3/4
18	16	1-1/8	110		7-1/8
20	20	1-1/8	110		7-3/4
24	20	1-1/4	110		8-1/2



Butterfly Valves Accessories

Lug Insert Sets



- Field installable lugs for all Spears® PVC & CPVC Standard Butterfly Valves only.
- Allows easy single-side installation to mating flange.
- Choice of high corrosion resistant 316 stainless steel or zinc plated steel construction.

Valve Size	316 Stainless Steel Part Number	Zinc Plated Steel Part Number
1-1/2	LUG1-015	LUG2-015
2 & 2-1/2	LUG1-020	LUG2-020
3	LUG1-030	LUG2-030
4	LUG1-040	LUG2-040
6 & 8	LUG1-080	LUG2-080
10 & 12	LUG1-120	LUG2-120

Lever Handle Kits



- Exact replacement or conversion handle for Spears® 1-1/2" through 8" Butterfly Valves.
- High impact polypropylene construction featuring quick-action reinforced polymer position stop and grip with built-in lock-out capability.
- Includes all components and hardware assembled for quick installation.

Valve Size	Part Number
1-1/2	BFH-015
2 & 2-1/2	BFH-020
3	BFH-030
4	BFH-040
6	BFH-060
8	BFH-080

T-Handle Kits



- Specialty Handle for minimum space requirements.
- High impact polypropylene construction featuring quick-action reinforced polymer position stop and grip with built-in lock-out capability.

Valve Size	Part Number
3	BFTH-030
4	BFTH-040

Speed Handle for Gear Operator



- Quickly attaches to Spears® Gear Operator Handle to allow rapid opening or closing of valve.

Valve Size	Part Number
1-1/2 - 12	SH-120

Positive Stem Stop for Butterfly Valve with Gear Operator



- Provides positive stop for Gear Operator shaft to avoid changes in the degree of opening for varying flow conditions.

Valve Size	Part Number
1-1/2 - 12	PSS-120
14 - 24	PSS-240

2" Square / T-Style Operator Nuts



- Allows operation with conventional 2" Square or T-Style handle wrenches.
- Fits All Spears® Butterfly Valve Gear Operators.

(NOT FOR USE ON VALVE STEM)

Valve Size	Part Number
1-1/2 - 24	GTN-040

Butterfly Valves Accessories



Gear Operator Kits



For Wafer Style Butterfly Valves replace the "GO" prefix with "GOW" in the part number.

- Bolt-on conversion or replacement unit for all Spears® Butterfly Valves.
- Cast aluminum construction with high efficiency worm gear drive, built-in position indicator and easy-grip polypropylene handwheel.
- Includes all components and hardware for direct mount to valve.

Gear Operator Kits

Valve Size	1-1/2	2	2-1/2	3	4	6	8	10	12
Part Number	GO-015	GO-020	GO-025	GO-030	GO-040	GO-060	GO-080	GO-100	GO-120

Powder Coated Gear Operator Kits

Valve Size	1-1/2	2	2-1/2	3	4	6	8	10	12
Part Number	GOP-015	GOP-020	GOP-025	GOP-030	GOP-040	GOP-060	GOP-080	GOP-100	GOP-120

Extended Chemical Resistance Options

Spears® offers several options for extended chemical resistance in PVC, CPVC and Polypropylene Butterfly Valves, including those listed below. Contact Spears® for additional ordering information.

PTFE Seat Sleeves

- PTFE envelope-type sleeve encases and isolates Spears® standard elastomer seat for extended chemical resistance while maintaining resiliency and sealing capability.
- Available for valve sizes 1-1/2" - 12"
- Sold factory-installed in PVC, CPVC or PP valves.

PTFE Coated Valve Stems

- Durable, bonded PTFE coating over standard SS 316L stem for extended chemical resistance.
- Viable alternative to more costly special alloy stems.
- Available for all valve sizes.
- Sold factory installed in PVC, CPVC or PP valves.

True-Lug Butterfly Valve Bolt Kit

Connects 1-Side of True-Lug Valve to 1-Spears® Flange Includes Bolts & Flat Washers

Use 2-Kits For Dual Spears® Flanges

Size	Part Number		
	Zinc Plated	SS316	SS304
1-1/2	BFHKL-015	BFHKL1-015	BFHKL2-015
2	BFHKL-020	BFHKL1-020	BFHKL2-020
2-1/2	BFHKL-025	BFHKL1-025	BFHKL2-025
3	BFHKL-030	BFHKL1-030	BFHKL2-030
4	BFHKL-040	BFHKL1-040	BFHKL2-040
6 & 8	BFHKL-080	BFHKL1-080	BFHKL2-080
10 & 12	BFHKL-120	BFHKL1-120	BFHKL2-120



Butterfly Valves Accessories



(VALVE NOT INCLUDED)

Chainwheel Operator Kits

For Wafer Style Butterfly Valves replace the "CO" prefix with "COW" in the part number.

- Bolt-on conversion unit for all Spears® Butterfly Valves. Includes all hardware for direct mount to valve.
- Enables operation of Spears® Butterfly Valves in high, normally out of reach locations. Makes valve opening or closing easy by means of a slight pull on the sprocket chain.
- Unit consists of Cast Aluminum high efficiency Gear Operator with Aluminum Alloy Sprocket Rim and Chain Guide.
- Chain options provide choice of 316 Stainless Steel, Hot-Dipped Galvanized or Brass. Order separately to desired length.

Note: In horizontal system installations, Chainwheel Operators should be generally mounted with operator below valve (inverted valve) to maintain clearance between chain and system piping. Check for adequate clearance before installing an operator in a top-mount position.

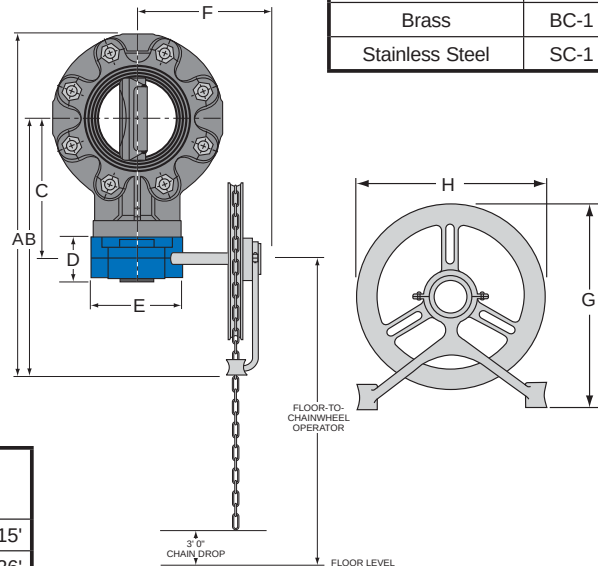
Valve Size	Part Number
2	CO-020
2-1/2	CO-025
3	CO-030
4	CO-040
6	CO-060
8	CO-080
10	CO-100
12	CO-120
14-24	CO-140

2-1/2" and smaller kits available on special order basis.

LOCK-LINK CHAIN OPTIONS	Part Number
Hot-Dip Galvanized	GC-1
Brass	BC-1
Stainless Steel	SC-1

Determining Floor-to-Chainwheel Height

Typical orientation is shown for valve in horizontal piping system installation. Floor-to-Chainwheel height is determined by subtracting the specified "C" dimension from the system centerline height (add "C" dimension if used with top-mount orientation). In vertical piping system installations, the Floor-to-Chainwheel height is the same as that for the centerline location of the valve in the system.



How to Order Chain

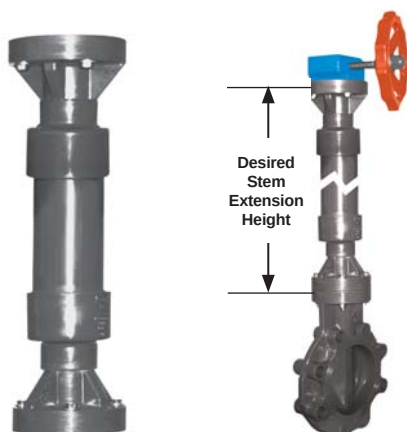
Required chain length is based on chain drop at 3 ft. from floor.

Floor-to-Chainwheel Height	7'	8'	9'	10'	11'	12'	13'	14'	15'
Required Chain Length	10'	12'	14'	16'	18'	20'	22'	24'	26'

Chainwheel Operator Dimensions (Note: w denotes Wafer Style Butterfly Valve Dimensions)

Valve Size	A	A w	B	B w	C	C w	D	D w	E	E w	F	F w	G	G w	H	H w
2	12-15/16	12-3/16	9-15/16	9-1/8	5-7/8	5-1/8	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
2-1/2	13-11/16	13-3/16	10-3/16	9-5/8	6-1/8	5-5/8	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
3	14-7/16	13-3/4	10-11/16	10-1/16	6-5/8	6-1/16	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
4	15-15/16	14-13/16	11-7/16	10-1/2	7-3/8	6-1/2	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
6	19-5/16	17-13/16	13-13/16	12-1/4	9-3/4	8-1/4	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
8	21-9/16	20-7/16	14-13/16	13-9/16	10-3/4	9-9/16	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
10	24-3/16	—	16-3/16	—	12-1/8	—	2-3/8	—	5-3/8	—	6-7/16	—	7-3/4	—	7-3/8	—
12	26-11/16	—	17-3/16	—	13-1/8	—	2-3/8	—	5-3/8	—	6-7/16	—	7-3/4	—	7-3/8	—
14	31	—	20-1/2	—	14-1/2	—	2-3/4	—	6-7/8	—	7-1/4	—	10-1/2	—	9	—
16	33-1/2	—	21-3/4	—	15-3/4	—	2-3/4	—	6-7/8	—	7-1/4	—	10-1/2	—	9	—
18	35	—	22-1/2	—	16-1/2	—	2-3/4	—	6-7/8	—	7-1/4	—	10-1/2	—	9	—
20	37-1/2	—	23-3/4	—	17-3/4	—	2-3/4	—	6-7/8	—	7-1/4	—	10-1/2	—	9	—
24	42	—	26	—	20	—	2-3/4	—	6-7/8	—	7-1/4	—	10-1/2	—	9	—

Butterfly Valves Accessories



Stem Extensions

For Wafer Style Butterfly Valves replace the "BFSE" prefix with "BFSEW" in the part number.

- Designed for use on Spears® Butterfly Valves.
- Corrosion Resistant PVC Housing.
- Stainless Steel Internal Extension Shaft.
- All Mounting Hardware Included.
- Detailed Instructions for Quick Assembly.
- Fabricated to Order in Standard 6" Increments.

Typical Application (VALVE NOT INCLUDED)

Gear Operator (shown) or Lever Handle Sold with Valve

Stem Extension Height	Valve Size						
	1-1/2	2 & 2-1/2	3	4	6	8	10
24	BFSE-015-240	BFSE-020-240	BFSE-030-240	BFSE-040-240	BFSE-060-240	BFSE-080-240	BFSE-100-240
30	BFSE-015-300	BFSE-020-300	BFSE-030-300	BFSE-040-300	BFSE-060-300	BFSE-080-300	BFSE-100-300
36	BFSE-015-360	BFSE-020-360	BFSE-030-360	BFSE-040-360	BFSE-060-360	BFSE-080-360	BFSE-100-360
42	BFSE-015-420	BFSE-020-420	BFSE-030-420	BFSE-040-420	BFSE-060-420	BFSE-080-420	BFSE-100-420
48	BFSE-015-480	BFSE-020-480	BFSE-030-480	BFSE-040-480	BFSE-060-480	BFSE-080-480	BFSE-100-480
54	BFSE-015-540	BFSE-020-540	BFSE-030-540	BFSE-040-540	BFSE-060-540	BFSE-080-540	BFSE-100-540
60	BFSE-015-600	BFSE-020-600	BFSE-030-600	BFSE-040-600	BFSE-060-600	BFSE-080-600	BFSE-100-600
66	BFSE-015-660	BFSE-020-660	BFSE-030-660	BFSE-040-660	BFSE-060-660	BFSE-080-660	BFSE-100-660
72	BFSE-015-720	BFSE-020-720	BFSE-030-720	BFSE-040-720	BFSE-060-720	BFSE-080-720	BFSE-100-720
78	BFSE-015-780	BFSE-020-780	BFSE-030-780	BFSE-040-780	BFSE-060-780	BFSE-080-780	BFSE-100-780
84	BFSE-015-840	BFSE-020-840	BFSE-030-840	BFSE-040-840	BFSE-060-840	BFSE-080-840	BFSE-100-840
90	BFSE-015-900	BFSE-020-900	BFSE-030-900	BFSE-040-900	BFSE-060-900	BFSE-080-900	BFSE-100-900
96	BFSE-015-960	BFSE-020-960	BFSE-030-960	BFSE-040-960	BFSE-060-960	BFSE-080-960	BFSE-100-960
102	BFSE-015-1020	BFSE-020-1020	BFSE-030-1020	BFSE-040-1020	BFSE-060-1020	BFSE-080-1020	BFSE-100-1020
108	BFSE-015-1060	BFSE-020-1080	BFSE-030-1080	BFSE-040-1080	BFSE-060-1080	BFSE-080-1080	BFSE-100-1080
114	BFSE-015-1140	BFSE-020-1140	BFSE-030-1140	BFSE-040-1140	BFSE-060-1140	BFSE-080-1140	BFSE-100-1140
120	BFSE-015-1200	BFSE-020-1200	BFSE-030-1200	BFSE-040-1200	BFSE-060-1200	BFSE-080-1200	BFSE-100-1200

Stem Extension Height	Valve Size					
	12	14	16	18	20	24
24	BFSE-120-240	BFSE-140-240	BFSE-160-240	BFSE-180-240	BFSE-200-240	BFSE-240-240
30	BFSE-120-300	BFSE-140-300	BFSE-160-300	BFSE-180-300	BFSE-200-300	BFSE-240-300
36	BFSE-120-360	BFSE-140-360	BFSE-160-360	BFSE-180-360	BFSE-200-360	BFSE-240-360
42	BFSE-120-420	BFSE-140-420	BFSE-160-420	BFSE-180-420	BFSE-200-420	BFSE-240-420
48	BFSE-120-480	BFSE-140-480	BFSE-160-480	BFSE-180-480	BFSE-200-480	BFSE-240-480
54	BFSE-120-540	BFSE-140-540	BFSE-160-540	BFSE-180-540	BFSE-200-540	BFSE-240-540
60	BFSE-120-600	BFSE-140-600	BFSE-160-600	BFSE-180-600	BFSE-200-600	BFSE-240-600
66	BFSE-120-660	BFSE-140-660	BFSE-160-660	BFSE-180-660	BFSE-200-660	BFSE-240-660
72	BFSE-120-720	BFSE-140-720	BFSE-160-720	BFSE-180-720	BFSE-200-720	BFSE-240-720
78	BFSE-120-780	BFSE-140-780	BFSE-160-780	BFSE-180-780	BFSE-200-780	BFSE-240-780
84	BFSE-120-840	BFSE-140-840	BFSE-160-840	BFSE-180-840	BFSE-200-840	BFSE-240-840
90	BFSE-120-900	BFSE-140-900	BFSE-160-900	BFSE-180-900	BFSE-200-900	BFSE-240-900
96	BFSE-120-960	BFSE-140-960	BFSE-160-960	BFSE-180-960	BFSE-200-960	BFSE-240-960
102	BFSE-120-1020	BFSE-140-1020	BFSE-160-1020	BFSE-180-1020	BFSE-200-1020	BFSE-240-1020
108	BFSE-120-1080	BFSE-140-1080	BFSE-160-1080	BFSE-180-1080	BFSE-200-1080	BFSE-240-1080
114	BFSE-120-1140	BFSE-140-1140	BFSE-160-1140	BFSE-180-1140	BFSE-200-1140	BFSE-240-1140
120	BFSE-120-1200	BFSE-140-1200	BFSE-160-1200	BFSE-180-1200	BFSE-200-1200	BFSE-240-1200

Basic Stem Extension height is 24" and is manufactured in standard 6" increments. Intermediate Stem Extension heights are available and are priced to the next full 6" increment. For heights over 120", please contact your servicing Spears® Regional Distribution Center.



Diaphragm Valves



Features – PVC, CPVC & PP

This full-featured valve is engineered to provide accurate throttling control and shutoff for industrial, chemical and water treatment applications. Weir-type design eliminates entrapped fluids in valve and is excellent for handling liquids with suspended solids, viscous fluids and slurries. Available in PVC, CPVC and Glass Filled Polypropylene with a variety of Diaphragm material options. PVC & CPVC 1/2" - 2" valves with Flanged Body, Spigot Body or True Union style Socket & Threaded ends or Optional Special Reinforced (SR) Threads, and sizes 2-1/2" - 8" with Flanged Body. Polypropylene 1/2" - 2" valves with True Union style Special Reinforced (SR) Threaded ends and sizes 2-1/2" - 8" with Flanged Body. True Union style also available in metric socket and BSP thread sizes 1/2" through 2".

- True Union Style with Buttress Thread Union Nuts - Mate with Spears® True Union 2000 Ball valves and Union 2000 Pipe Unions.
- EPDM, FKM, or Elastomer (EPDM or FKM) Bonded PTFE Diaphragms.
- PVC & CPVC Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 4" and all flanged Pressure Rated to 150 psi @ 73°F, 6" Pressure Rated to 100 psi and 8" to 75 psi @ 73°F
- Polypropylene Sizes 1/2" - 4" Pressure rated to 150 psi @ 73°F
- Easy-Grip, High Impact Polypropylene Handwheel
- Built-in, Clear-View Position Indicator
- Stainless Steel External Hardware
- Fully Serviceable, Replaceable Components
- Suitable for Vacuum Service
- Assembled with Silicone-Free Lubricants (no lubricant in media contact area)

Sample Engineering Specification

All thermoplastic Diaphragm valves shall be Weir-type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All diaphragms shall be EPDM, FKM or PTFE with EPDM or FKM backing. All valves shall have built-in position indicator with polypropylene handwheel. All True Union style valve union nuts shall have Buttress threads. All PVC and CPVC 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" and all flanged valves and valves with PTFE backing shall be pressure rated to 150 psi, all 6" valves shall be pressure rated to 100 psi, and all 8" valves shall be pressure rated to 75 psi for water at 73°F. All Polypropylene valves shall be pressure rated to 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Special Options

- Hypalon® (CSM) Diaphragms
- Natural Polypropylene Body
- Electric or Pneumatic Actuation

Diaphragm Valves



PVC, CPVC & PP Diaphragm Valve Quick-View Selection Chart

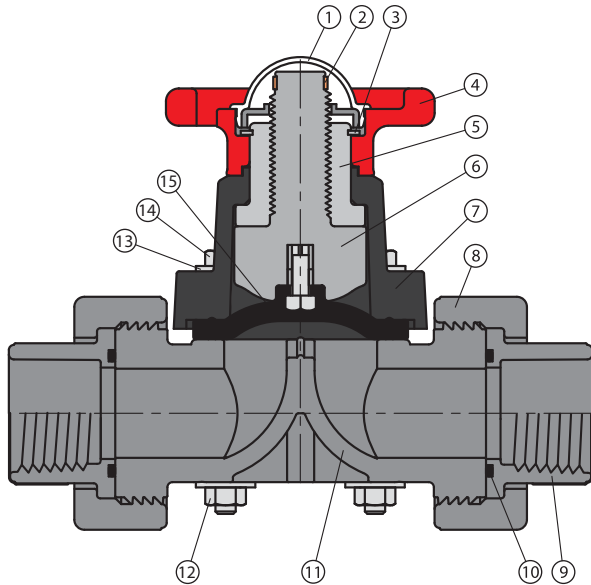
Size	O-ring Material	Diaphragm Material	PVC Part Number ¹				PP Part Number		Pressure Rating
			Soc/Thd	SR Threaded	Spigot	Flanged	SR Threaded	Flanged	
1/2	EPDM	EPDM	2729-005	2721-005SR	2727-005	2723-005	2721-005PSR	True Union & Spigot Style w/ Elastomer Diaphragms 235 psi Non-Shock Water @ 73°F	
		PTFE ²	2729T-005	2721T-005SR	2797T-005	2793T-005	2721T-005PSR		
	FKM	FKM	2739-005	2731-005SR	2737-005	2733-005	2731-005PSR		
		PTFE ²	2739VT-005	2731VT-005SR	2797VT-005	2793VT-005	2731VT-005PSR		
3/4	EPDM	EPDM	2729-007	2721-007SR	2727-007	2723-007	2721-007PSR		
		PTFE ²	2729T-007	2721T-007SR	2797T-007	2793T-007	2721T-007PSR		
	FKM	FKM	2739-007	2731-007SR	2737-007	2733-007	2731-007PSR		
		PTFE ²	2739VT-007	2731VT-007SR	2797VT-007	2793VT-007	2731VT-007PSR		
1	EPDM	EPDM	2729-010	2721-010SR	2727-010	2723-010	2721-010PSR		
		PTFE ²	2729T-010	2721T-010SR	2797T-010	2793T-010	2721T-010PSR		
	FKM	FKM	2739-010	2731-010SR	2737-010	2733-010	2731-010PSR		
		PTFE ²	2739VT-010	2731VT-010SR	2797VT-010	2793VT-010	2731VT-010PSR		
1-1/4	EPDM	EPDM	2729-012	2721-012SR	2727-012	2723-012	2721-012PSR		
		PTFE ²	2729T-012	2721T-012SR	2797T-012	2793T-012	2721T-012PSR		
	FKM	FKM	2739-012	2731-012SR	2737-012	2733-012	2731-012PSR		
		PTFE ²	2739VT-012	2731VT-012SR	2797VT-012	2793VT-012	2731VT-012PSR		
1-1/2	EPDM	EPDM	2729-015	2721-015SR	2727-015	2723-015	2721-015PSR		
		PTFE ²	2729T-015	2721T-015SR	2797T-015	2793T-015	2721T-015PSR		
	FKM	FKM	2739-015	2731-015SR	2737-015	2733-015	2731-015PSR		
		PTFE ²	2739VT-015	2731VT-015SR	2797VT-015	2793VT-015	2731VT-015PSR		
2	EPDM	EPDM	2729-020	2721-020SR	2727-020	2723-020	2721-020PSR		
		PTFE ²	2729T-020	2721T-020SR	2797T-020	2793T-020	2721T-020PSR		
	FKM	FKM	2739-020	2731-020SR	2737-020	2733-020	2731-020PSR		
		PTFE ²	2739VT-020	2731VT-020SR	2797VT-020	2793VT-020	2731VT-020PSR		
2-1/2	EPDM	EPDM				2723-025		2723-025P	150 psi Non-Shock Water @ 73°F
		PTFE ²				2793T-025		2793T-025P	
	FKM	FKM				2733-025		2733-025P	
		PTFE ²				2793VT-025		2793VT-025P	
3	EPDM	EPDM				2723-030		2723-030P	
		PTFE ²				2793T-030		2793T-030P	
	FKM	FKM				2733-030		2733-030P	
		PTFE ²				2793VT-030		2793VT-030P	
4	EPDM	EPDM				2723-040		2723-040P	
		PTFE ²				2793T-040		2793T-040P	
	FKM	FKM				2733-040		2733-040P	
		PTFE ²				2793VT-040		2793VT-040P	
6	EPDM	EPDM				2723-060		2723-060P	100 psi Non-Shock Water @ 73°F
		PTFE ²				2793T-060		2793T-060P	
	FKM	FKM				2733-060		2733-060P	
		PTFE ²				2793VT-060		2793VT-060P	
8	EPDM	EPDM				2723-080		2723-080P	75 psi Non-Shock Water @ 73°F
		PTFE ²				2793T-080		2793T-080P	
	FKM	FKM				2733-080		2733-080P	
		PTFE ²				2793VT-080		2793VT-080P	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2729-005C). Custom end connections available upon request.

2: Elastomer-backed PTFE (standard EPDM backed; special order FKM backed)



Diaphragm Valves



Replacement Parts

No.	Component	Qty.	Material
1	Indicator Cover	1	PVC Clear
2	Indicator	1	PE
3	Retaining Ring	1	SS
4	Handwheel	1	PP
5	Compressor Bushing	1	PTFE/CPVC
6	Compressor	1	CPVC
7	Bonnet	1	GFPP
8	Union Nut	1	PVC/CPVC/GFPP
9	Union End	2	PVC/CPVC/GFPP
10	Union End O-ring	2	EPDM/FKM
11	Body	1	PVC/CPVC/GFPP
12	Nut	4-16	SS
13	Flat Washer	8-32	SS
14	Bolt	4-16	SS
15	Diaphragm	1	EPDM/FKM/PTFE

1: Component applicable to True Union style valves only.
2: True Union Socket/Threaded Valve illustrated

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	6"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
		PP	100 (.70)	90 (.62)	85 (.59)	75 (.52)	70 (.48)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	8"	PVC	75 (.52)	70 (.48)	65 (.45)	60 (.41)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	75 (.52)	72 (.49)	70 (.48)	67 (.46)	65 (.45)	62 (.43)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	40	-0-
		PP	75 (.52)	62 (.43)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	47 (.32)	45 (.31)	-0-	-0-	-0-

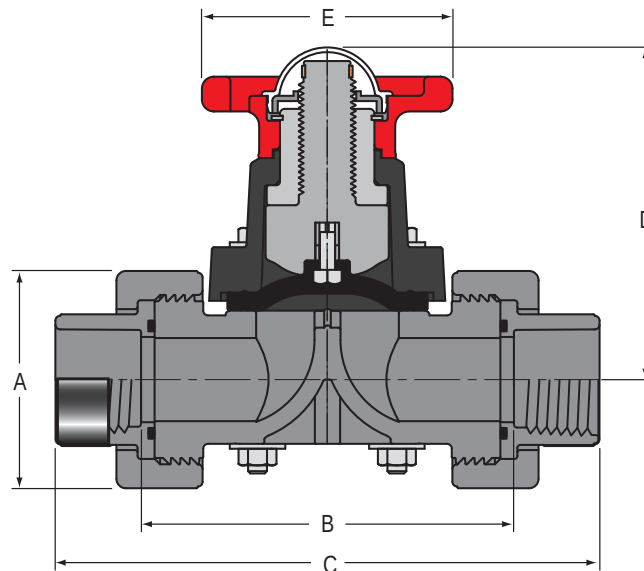
Diaphragm Valves



C_v Values PVC, CPVC & PP

Valve Size	PERCENT OPEN			
	100%	75%	50%	25%
1/2	5.1	4.8	4.2	2.4
3/4	8.0	7.5	6.5	3.8
1	11.5	10.8	9.4	5.4
1-1/4	22.0	20.6	18.0	10.3
1-1/2	28.2	26.4	23.0	13.3
2	52.9	49.6	43.2	24.9
2-1/2	119.0	111.5	97.1	55.9
3	119.0	111.5	97.1	55.9
4	189.2	177.3	154.4	88.9
6	402.2	375.8	327.0	187.5
8	700.0	659.5	573.2	328.4

Gallons per minute at 1 psi pressure drop.



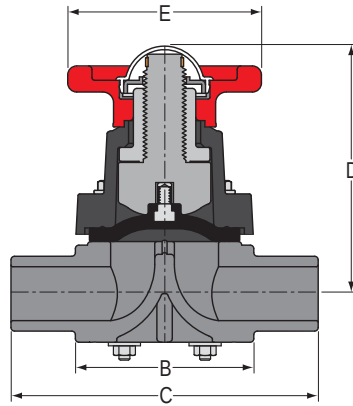
Socket, Threaded & SR Threaded End Connectors Dimension & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A	B ¹	C		D	E	PVC	CPVC
			Socket	Threaded				
1/2	1-15/16	3-7/8	5-9/16	5-3/16	3-11/32	2-7/8	1.12	1.14
3/4	2-1/2	4-1/2	6-7/16	5-15/16	3-3/4	3-1/8	1.37	1.36
1	2-9/16	4-15/16	7-3/16	6-13/16	4-7/16	3-3/8	2.35	2.43
1-1/4	3-5/16	5-1/2	8-7/8	8-1/4	5-5/8	3-7/8	3.91	4.03
1-1/2	3-17/32	6-5/16	9-5/16	8-7/16	5-5/8	4-5/8	4.08	4.21
2	4-7/32	7-1/2	10-9/16	9-1/2	7	6-5/8	7.06	7.25

1: Valve Lay Length.

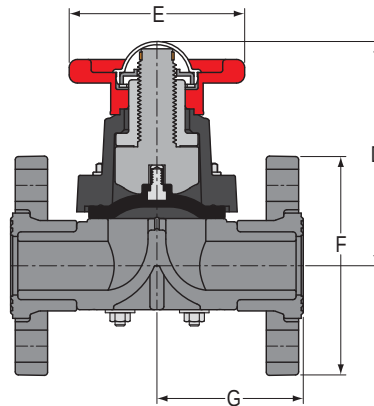


Diaphragm Valves



Spigot Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)				Approx. Wt. (Lbs.)	
	B	C	D	E	PVC	CPVC
1/2	2-5/8	4-3/8	3-11/32	2-7/8	.61	.63
3/4	2-3/4	4-3/4	3-3/4	3-1/4	.79	.82
1	3-1/8	5-3/8	4-7/16	3-5/16	1.32	1.36
1-1/4	3-3/4	6-1/4	5-5/8	4-19/32	2.41	2.50
1-1/2	3-3/4	6-1/2	5-5/8	4-19/32	2.43	2.52
2	4-3/4	7-3/4	7	5-7/8	4.15	4.43



Flanged Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)				Approx. Wt. (Lbs.)	
	D	E	F	G	PVC	CPVC
1/2	3-11/32	2-7/8	3-1/2	2-5/16	.98	1.02
3/4	3-3/4	3-1/4	3-7/8	2-1/2	1.31	1.37
1	4-7/16	3-5/16	4-1/4	2-13/16	2.00	2.08
1-1/4	5-5/8	4-19/32	4-5/8	3-1/4	3.71	3.76
1-1/2	5-5/8	4-19/32	5	3-3/8	3.88	4.04
2	7	5-7/8	6	4	5.59	5.71
2-1/2	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.43
3	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.45
4	12-1/4	10-1/2	9	6-5/8	24.44	25.37
6	16-3/4	18-13/32	11	9-3/8	53.90	58.43
8	21	21-19/32	13-1/2	11-5/32	96.28	100.05

Tee - Style “Zero Dead-Leg” Diaphragm Valves



Tee x Spigot

Features – PVC, LXT PVC & CPVC

Spears® Tee-Style “Zero-Dead-Leg” Diaphragm Valve design integrates valve and Tee-fitting for direct branch take-off and eliminates the need for tees and reducing fittings normally required for service drops and other tie-ins to the loop. The Tee-Style valve provides a stronger, more compact connection enabling throttling, sampling, draining or diverting of critical process fluids. The “Zero Dead-leg” design is excellent for DI water and other critical applications. Close proximity of valve to mainline minimizes any areas of fluid stagnation by eliminating “dead leg” that can harbor bacterial growth and other contamination. Produced to order with Spigot, Socket & Threaded, or Special Reinforced (SR) Threaded end connection valve sizes 1/2" through 2", and specified Tee Socket connection sizes for virtually any mainline connection size.

Sample Engineering Specification

All lateral branch valve connections shall be made using Tee-style Diaphragm Valves. All valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454; CPVC Type IV, ASTM D 1784 Cell Classification 23447; or Low Extractable LXT PVC, ASTM D 1784 Cell Classification 12343. Diaphragms shall be EPDM, FKM or elastomer backed, bonded PTFE. All valves with elastomer diaphragms shall be pressure rated to 235 psi and all valves with PTFE diaphragms to 150 psi, for water at 73°F, as manufactured by Spears® Manufacturing Company.

T-Style Valve Advantages

- Chemical & Corrosion Resistant PVC, CPVC or Low Extractable LXT PVC materials
- Minimizes Fluid Stagnation
- Improves Branch Valve Connection Strength
- Simplifies Installation

Diaphragm Valve Features

- Multi-featured Industrial Grade
- Built-in Position Indicator
- EPDM, FKM, or Elastomer Backed PTFE Diaphragm
- 235 psi Pressure Rating @ 73°F (150 psi for PTFE Diaphragms)
- High Impact Polypropylene Handle
- Fully Serviceable, Replaceable Components

Quick-View Selection Chart

The following Base Part Numbers must be completed according to desired configuration size. Contact Spears® for the appropriate Tee size x Valve size code designations to replace the “xxx” in each.

Diaphragm Material	PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxx	2729ZD-xxx	2721ZD-xxxSR	1/2" – 2" 235 psi
FKM	2737ZD-xxx	2739ZD-xxx	2731ZD-xxxSR	
PTFE, EPDM Backing	2797TZD-xxx	2729TZD-xxx	2721TZD-xxxSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxx	2739VTZD-xxx	2731VTZD-xxxSR	

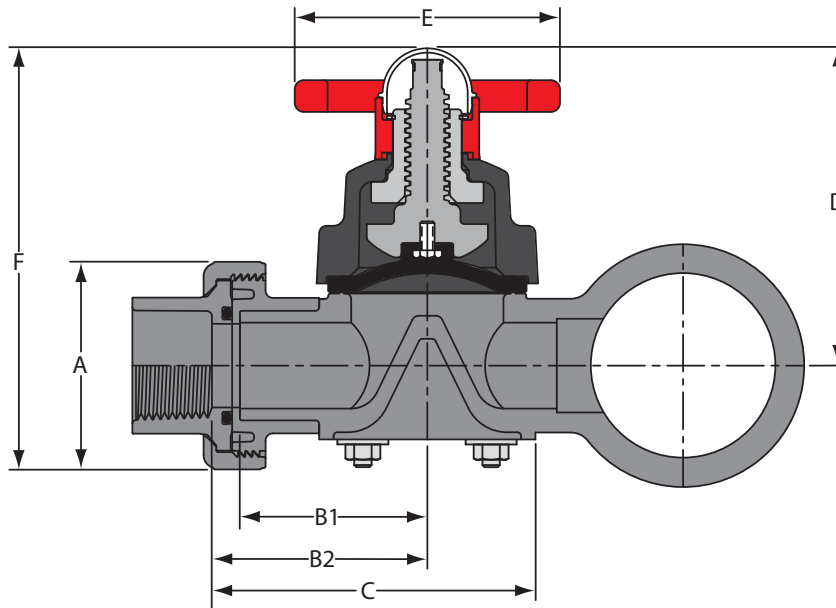
Diaphragm Material	CPVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxC	2729ZD-xxxC	2721ZD-xxxCSR	1/2" – 2" 235 psi
FKM	2737ZD-xxxC	2739ZD-xxxC	2731ZD-xxxCSR	
PTFE, EPDM Backing	2797TZD-xxxC	2729TZD-xxxC	2721TZD-xxxCSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxC	2739VTZD-xxxC	2731VTZD-xxxCSR	

Diaphragm Material	Low Extracable LXT PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxBL	2729ZD-xxxBL	2721ZD-xxxSRBL	1/2" – 2" 235 psi
FKM	2737ZD-xxxBL	2739ZD-xxxBL	2731ZD-xxxSRBL	
PTFE, EPDM Backing	2797TZD-xxxBL	2729TZD-xxxBL	2721TZD-xxxSRBL	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxBL	2739VTZD-xxxBL	2731VTZD-xxxSRBL	

Note: LXT PVC Valves are typically used with elastomer backed PTFE Diaphragms to maintain purity in most applications.



Tee - Style “Zero Dead-Leg” Diaphragm Valves



Dimensions

Nominal Size	Dimension Reference ($\pm 1/16$)						
	A	Spigot B1	Socket Threaded B2	C	D	E	F
1/2	1-15/16	2-3/16	2-1/2	3-13/16	3-5/16	2-7/8	4-5/16
3/4	2-3/8	2-3/8	2-3/4	4-1/8	3-3/4	3-1/4	4-9/16
1	2-5/8	2-11/16	3-1/16	4-5/8	4-7/16	3-5/16	5-3/4
1-1/4	3-3/16	3-1/8	3-1/2	5-3/8	5-5/8	4-5/8	7-1/4
1-1/2	3-9/16	3-1/4	3-3/4	5-5/8	5-5/8	4-5/8	7-7/16
2	4-5/16	4-7/8	4-3/8	6-3/4	7	5-7/8	9-3/16

Temperature Pressure Rating

Nominal Valve Size	73°F to 100°F	110°F	120°F	130°F	140°F
1/2" - 2"	150	135	110	75	50

Valves have elevated temperature pressure ratings different than pipe, as shown in chart above. Maximum PVC system service temperature is 140°F.

Cv Values

Valve Size	PERCENT OPEN			
	100%	75%	50%	25%
1/2	5.1	4.8	4.2	2.4
3/4	8.0	7.5	6.5	6.5
1	11.5	10.8	9.4	9.4
1-1/4	22.0	20.6	18.0	18.0
1-1/2	28.2	26.4	23.0	23.0
2	52.9	49.6	43.2	43.2

Note: Cv values are for basic Diaphragm Valve only, excluding Tee end connection.

Industrial Swing Check Valves



Sample Engineering Specification

All thermoplastic check valves shall be flanged Swing Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All O-rings shall be EPDM or FKM. All valves components shall be replaceable. All valves shall have top-entry access with O-ring sealed drain plug for in-line servicing. All valves shall have optional external Arrow Position Indicator or optional external Counter Balance. All 3/4" - 4" valves shall be pressure rated to 150 psi, all 6" valves to 100 psi, and all 8" valves to 70 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number ^{1,2,3}	Pressure Rating
3/4	EPDM	4423-007	150 psi Non-Shock Water @ 73°F
	FKM	4433-007	
1	EPDM	4423-010	
	FKM	4433-010	
1-1/4	EPDM	4423-012	
	FKM	4433-012	
1-1/2	EPDM	4423-015	
	FKM	4433-015	
2	EPDM	4423-020	
	FKM	4433-020	
2-1/2	EPDM	4423-025	
	FKM	4433-025	
3	EPDM	4423-030	
	FKM	4433-030	
4	EPDM	4423-040	
	FKM	4433-040	
6	EPDM	4423-060	100 psi @ 73°F
	FKM	4433-060	
8	EPDM	4423-080	70 psi @ 73°F
	FKM	4433-080	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g. 4423-025C).

2: For valve with Arrow Position Indicator, add the letter "I" before the dash separator (e.g., 4423I-025).

3: For Polypropylene valves, add the letter "P" to the part number (e.g. 4423-025P).

Features – PVC, CPVC & PP

Designed for optimum flow, quick response and positive shutoff with minimum turbulence, this industrial grade Swing Check Valve is used in a variety of industrial and chemical processing applications where high volume fluid transfer is required. Suitable for horizontal or up-flow vertical applications. Available in PVC, CPVC and Glass Filled Polypropylene, IPS 3/4" - 8" with Flanged Body.

Engineered for Quick Response, Full-Flow Fluid Transfer

- Heavy Bodied All-Plastic Interior Construction
- Top Access & O-ring Sealed Drain Plug for In-line Servicing
- Standard O-ring type Seat & Seals in EPDM or FKM
- Sizes 3/4" - 4" Pressure Rated to 150 psi @ 73°F, 6" Pressure Rated to 100 psi and 8" to 70 psi @ 73°F
- Stainless Steel External Hardware
- Fully Serviceable, Replaceable Components
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants

Options & Accessories

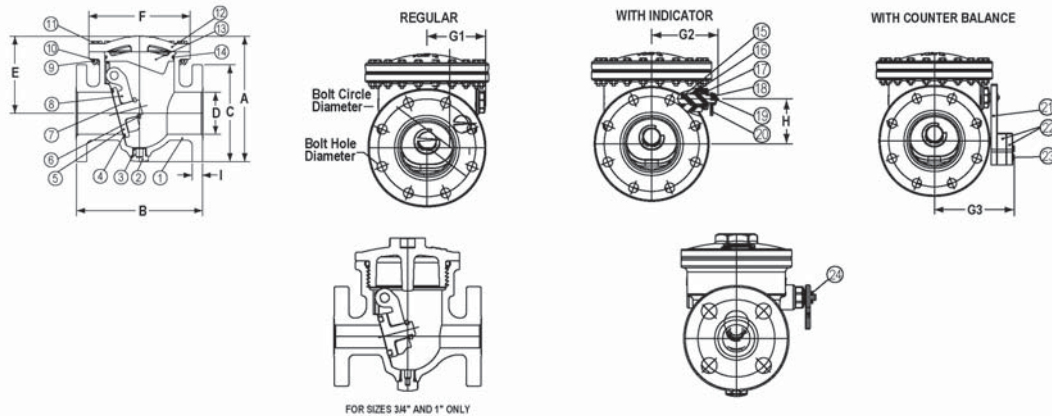
- External Arrow Position Indicator¹
- External Counter Balance¹
- Natural Polypropylene Body

1: Available as assembled valve or kit for installed valve

General Installation Information: Industrial Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow. Do not install valve upside down. Normal flange-bolt assembly in top holes of the valve flange requires bolt insertion through the companion flange with nuts secured on Swing Check flange side. Certain system configurations involving direct connection of a Swing Check Valve to other flanged equipment may require consideration of this bolt clearance.



Industrial Swing Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Body	1	PVC/CPVC/PP
2	Plug	1	PVC/CPVC/PP
3	Plug O-ring	1	EPDM/FKM
4	Disc O-ring A	1	EPDM/FKM
5	Disc	1	PVC/CPVC/PP
6	Disc Ret. Clip	1	PP
7	Disc O-ring B	1	EPDM/FKM
8	Swing Arm	1	PVC/CPVC/PP
9	Nut	12-30	SS 316
10	Washer	24-60	SS 316
11	Bolt	12-30	SS 316
12	Bonnet	1	PVC/CPVC/PP

No.	Component	Qty.	Material
13	Seal Carrier	1	PVC/CPVC/PP
14	Body O-ring	1	EPDM/FKM
15	Arm Pin	1	PVC/CPVC/PP
16	Arm Pin Seal	2	FKM
17	Arm Pin Plug	1	PVC/CPVC/PP
18	Arm Pin Washer	1	SS 316
19	Arm Pin Bolt	1	SS 316
20	Indicator	1	PP
21	Counterbalance	1	PVC
22	Weight Block	1	PVC
23	Weight Block Bolt	2	SS 316
24	Arm Pin Ret. Clip	1	PP

Dimensions & Weights

Nominal Size	A	B	C	D	E	F	G1	G2	G3	H	I	Approx. Wt (Lbs.)	
												PVC	CPVC
3/4	5-5/16	5-1/2	3-7/8	3/4	3-3/4	3-3/4	2-1/2	3	4	1-7/16	1/2	1.72	1.80
1	6-5/8	6-5/16	4-1/4	31/32	4-1/2	4-1/2	2-25/32	3-7/32	4-7/32	1-21/32	5/8	2.62	2.80
1-1/4	7-3/8	7-3/32	5	1-19/32	4-9/16	5-3/4	3-3/16	3-25/32	4-3/8	1-27/32	23/32	4.61	4.87
1-1/2	7-3/8	7-3/32	5	1-19/32	4-9/16	5-3/4	3-3/16	3-25/32	4-3/8	1-27/32	23/32	4.61	4.87
2	8-1/2	7-7/8	6	2	5-1/4	7	3-9/16	4-1/8	4-23/32	2-29/32	13/16	6.99	7.24
2-1/2	10-3/4	10-1/4	7-1/2	3-1/8	6-3/4	8-5/8	4-1/4	5	6-9/32	3-1/16	7/8	14.77	15.74
3	10-3/4	10-1/4	7-1/2	3-1/8	6-3/4	8-5/8	4-1/4	5	6-9/32	3-1/16	7/8	14.77	15.74
4	11-3/4	11-13/16	9	3-29/32	7-1/4	9-1/2	4-1/2	5-1/4	6-17/32	3-17/32	31/32	18.37	19.78
6	15-5/8	15-3/4	11	5-7/8	9-1/2	13-7/16	6	6-3/4	8-1/32	5-1/32	1	42.64	44.56
8	19-1/8	19-23/32	13-1/2	7-7/8	11-5/8	16-5/16	7	7-3/4	9-1/32	6-1/2	1-5/32	68.85	76.05

C_v Values

Valve Size	C _v ¹
3/4	18
1	24
1-1/4	70
1-1/2	70
2	95
2-1/2	300
3	300
4	480
6	1100
8	1900

1: Gallons per minute at 1 psi pressure drop.

Nominal Size	Bolt Circle Diameter	Bolt Hole Diameter	Number of Bolt Holes
3/4	2-3/4	5/8	4
1	3-1/8	5/8	4
1-1/4	3-1/2	5/8	4
1-1/2	3-7/8	5/8	4
2	4-3/4	3/4	4
2-1/2	5-1/2	3/4	4
3	6	3/4	4
4	7-1/2	3/4	8
6	9-1/2	7/8	8
8	11-3/4	7/8	8

Industrial Swing Check Valves



Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	3/4" – 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	6"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
		PP	100 (.70)	90 (.62)	85 (.59)	75 (.52)	70 (.48)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	8"	PVC	70 (.48)	65 (.45)	60 (.41)	50 (.34)	45 (.31)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	70 (.48)	65 (.45)	62 (.43)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	45 (.31)	42 (.29)	40 (.28)	-0-
		PP	70 (.48)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	47 (.32)	45 (.31)	40 (.28)	-0-	-0-	-0-

Arrow Position Indicator Kit

Spears® Swing Check Valve Indicator Kit is designed for field installation of external Indicator Arrow in Spears® Swing Check Valves. This kit can be installed through the bonnet assembly and removal of valve from line is not required.

Kit Includes:

- 1 - Extended Shaft
- 2 - Shaft Cup Seals
- 1 - Shaft Nut
- 1 - Indicator Arrow
- 1 - Retaining clip

Valve Size	Part Numbers		
	PVC Kit	CPVC Kit	PP Kit
3/4	I3K-007	I3K-007C	I3K-007P
1	I3K-010	I3K-010C	I3K-010P
1-1/4 & 1-1/2	I3K-015	I3K-015C	I3K-015P
2	I3K-020	I3K-020C	I3K-020P
2-1/2 & 3	I3K-030	I3K-030C	I3K-030P
4	I3K-040	I3K-040C	I3K-040P
6	I3K-060	I3K-060C	I3K-060P
8	I3K-080	I3K-080C	I3K-080P

Application of Counter Balance

Swing Check Valves operate in response to a fluid stream flow opening a swinging disc. As the fluid stream slows and reverses, the disc responds by swinging to the closed position. Sudden reversal of flow direction can result in “slamming” condition as the disc closes. The function of the Counter Balance mechanism is to start the disc closing earlier as the fluid stream begins to slow so that it is almost closed when flow reversal takes place, thereby eliminating slamming of the disc. Available as installed unit with valve or as a kit for adaptation of installed valves.

Counter Balance Kits

Spears® Swing Check Valve Counter Balance Kit is designed for field installation of counter balance mechanism in Spears® Swing Check Valves. This kit can be installed through the bonnet assembly and removal of valve from line is not required.

Kit Includes:

- 1 - Extended Shaft
- 2 - Shaft Cup Seals
- 1 - Shaft Nut
- 1 - Counter Balance
- 1 - Retaining Bolt
- 1 - Flat Washer
- 1 - Extra Weight Plates
(1-small & 1-large)
- 1 - Plate Mounting Bolts
(2-long & 2 short).

Valve Size	Part Numbers		
	PVC Kit	CPVC Kit	PP Kit
3/4	CB3K-007	CB3K-007C	CB3K-007P
1	CB3K-010	CB3K-010C	CB3K-010P
1-1/4 & 1-1/2	CB3K-015	CB3K-015C	CB3K-015P
2	CB3K-020	CB3K-020C	CB3K-020P
2-1/2 & 3	CB3K-030	CB3K-030C	CB3K-030P
4	CB3K-040	CB3K-040C	CB3K-040P
6	CB3K-060	CB3K-060C	CB3K-060P
8	CB3K-080	CB3K-080C	CB3K-080P



Utility Swing & Spring Check Valves



Sample Engineering Specification

All thermoplastic check valves Shall be Utility Swing Check or Utility Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All Spring Check Valves shall have stainless steel spring assisted operation. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @ 73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Features - PVC White & PVC Clear

Spears® Utility Swing Check and spring assisted Utility Spring Check Valves offer a compact, high performance check valve for Landscape & Irrigation, Pool & Spa, Aquaculture, OEM and many general purpose applications. These maintenance free sealed units feature long-life EPDM elastomer seats with weighted disc for full-flow with minimal restriction and positive shutoff. Spring assisted "Spring Check" model incorporates a positive-pressure spring to assist in valve closing without slamming. Produced from PVC White or PVC Clear material with Socket, Threaded or SR Threaded end connectors. Available in IPS Sizes 1/2" through 8" for Swing Check Valves and 1/2" through 4" for Spring Check Valves.

- Chemical & Corrosion Resistant PVC White or High Visibility PVC Clear Construction
- No Metal Parts on Swing Check - Stainless Steel Spring on Spring Check
- Maintenance Free Sealed Unit in a Compact Space Saving Design
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Long-Life, High Grade EPDM Seat with Weighted Disc
- Spring Assisted Spring Check Model Option for Positive Closing
- Sizes 1/2" – 8" Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for either Horizontal or Vertical Up-flow Installations and Vacuum Service
- NSF® Certified for Potable Water Use
- Silicone-Free Assembly

Quick-View Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material ¹			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1520-05	S1520-05F	S1520-05FSR	150 psi @ 73°F Full Flow (Open)
3/4	EPDM	S1520-07	S1520-07F	S1520-07FSR	
1	EPDM	S1520-10	S1520-10F	S1520-10FSR	
1-1/4	EPDM	S1520-12	S1520-12F	S1520-12FSR	
1-1/2	EPDM	S1520-15	S1520-15F	S1520-15FSR	
2	EPDM	S1520-20	S1520-20F	S1520-20FSR	
2-1/2	EPDM	S1520-25	S1520-25F	S1520-25FSR	75 psi Back Pressure (Closed)
3	EPDM	S1520-30	S1520-30F	S1520-30FSR	
4	EPDM	S1520-40	S1520-40F	S1520-40FSR	
6	EPDM	S1520-60	S1520-60F	S1520-60FSR	
8	EPDM	S1520-80	N/A	N/A	

1: For PVC Clear Swing Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1520C05), (e.g. S1520C05F) or (e.g. S1520C05FSR)

Quick-View Utility Spring Check Valve Selection Chart

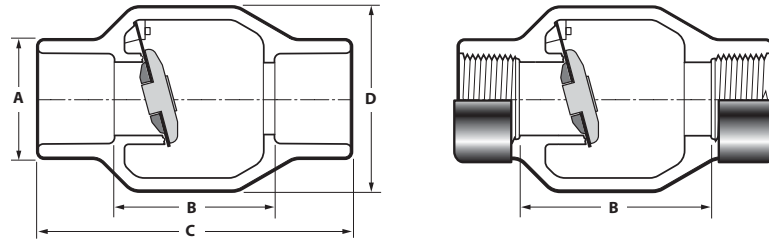
Valve Size	Seat Material	PVC Material ¹			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1580-05	S1580-05F	S1580-05FSR	150 psi @ 73°F Full Flow (Open)
3/4	EPDM	S1580-07	S1580-07F	S1580-07FSR	
1	EPDM	S1580-10	S1580-10F	S1580-10FSR	
1-1/4	EPDM	S1580-12	S1580-12F	S1580-12FSR	
1-1/2	EPDM	S1580-15	S1580-15F	S1580-15FSR	75 psi Back Pressure (Closed)
2	EPDM	S1580-20	S1580-20F	S1580-20FSR	
2-1/2	EPDM	S1580-25	S1580-25F	S1580-25FSR	
3	EPDM	S1580-30	S1580-30F	S1580-30FSR	
4	EPDM	S1580-40	S1580-40F	S1580-40FSR	

1: For PVC Clear Spring Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1580C05), (e.g. S1580C05F) or (e.g. S1580C05FSR)

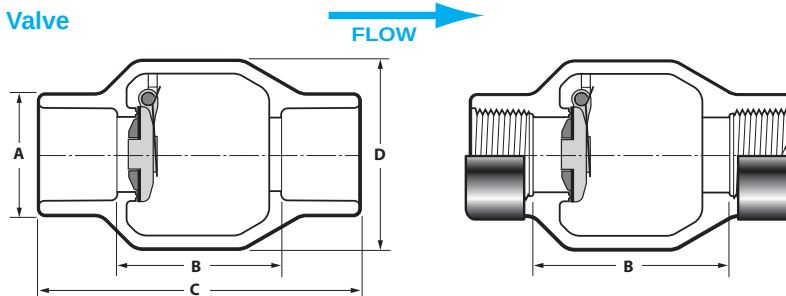
Utility Swing & Spring Check Valves



Utility Swing Check Valve



Utility Spring Check Valve



Dimensions

Nominal Size	Dimension Reference (inches, $\pm 1/16$)					
	A	B		C	D	
		Socket	Threaded/SR Threaded		Swing	Spring
1/2	1-3/8	2-19/32	2-5/8	4-3/32	2-1/8	2-5/8
3/4	1-3/8	2-5/32	2-1/16	4-1/16	2-1/8	2-5/8
1	1-11/16	2-5/16	2-15/16	4-9/16	2-5/8	2-5/8
1-1/4	2-1/16	2-15/16	3-5/8	5-1/2	3-3/8	3-3/8
1-1/2	2-7/16	3	3-11/16	5-5/8	3-3/8	3-3/8
2	3	3-5/8	4-3/8	6-3/8	4-1/4	4-1/4
2-1/2	3-9/16	4-3/8	5-1/4	7-7/8	5-1/8	5-1/8
3	4-5/16	4-11/16	5-5/8	8-7/16	5-3/4	5-3/4
4	5-1/4	6	7-1/16	10-1/16	6-3/8	6-3/8
6	7-11/16	8-1/2	11-5/16	14-9/16	9-1/4	N/A
8	9-7/16	11-3/16	N/A	19-1/4	11-15/16	N/A

General Installation Information: Utility Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	-110- (-.76)	-100- (-.70)	-90- (-.62)	-80- (-.55)	-70- (-.48)	-60- (-.41)	-50- (-.34)	-0- (-0-)



Compression Utility Swing Check Valves



Sample Engineering Specification

All thermoplastic check valves Shall be Utility Compression Swing Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Quick-View Compression Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material ¹ Compression	Pressure Rating
1/2	EPDM	S1500-05	150 psi @ 73°F Full Flow (Open)
3/4	EPDM	S1500-07	
1	EPDM	S1500-10	
1-1/4	EPDM	S1500-12	
1-1/2	EPDM	S1500-15	
2	EPDM	S1500-20	75 psi Back Pressure (Closed)
2-1/2	EPDM	S1500-25	
3	EPDM	S1500-30	
4	EPDM	S1500-40	

1: For PVC Clear, replace dash (-) separator with the letter "C" in the part number (e.g. S1500C05).

Features - PVC White & PVC Clear

Spears® Compression Utility Swing Check Valves offer a compact, high performance check valve with EPDM gasketed compression-type ends for fast, convenient connection to virtual and IPS size pipe, plastic or metal. Maintenance-free sealed unit design features long-life EPDM elastomer seats and weighted disc for full flow with minimal restriction and positive shutoff. Produced from PVC White or PVC Clear with White compression end connectors and EPDM seats. Available in IPS Sizes 1/2" through 4".

- Standard Swing Check Assembly Maintains a Positive Seal
- Convenient Compression Ends for Quick Connections
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Excellent for Pool & Spa, OEM and General Purpose Applications
- Compact, Space-Saving Design
- Replaceable PVC White or Clear Sealed Unit
- High Grade EPDM Seat
- Suitable for Horizontal or Vertical Up-flow Installations
- Pressure Rated to 150 psi @ 73°F Full Flow (open), 75 psi Back Pressure (closed)
- Maximum Service Temperature 140°F (temperature/pressure de-ratings apply)



Compression Coupling Nut Wrenches

Part Number	Size
CCW-005	1/2
CCW-007	3/4
CCW-010	1
CCW-012	1-1/4
CCW-015	1-1/2
CCW-020*	2
CCW-030**	3

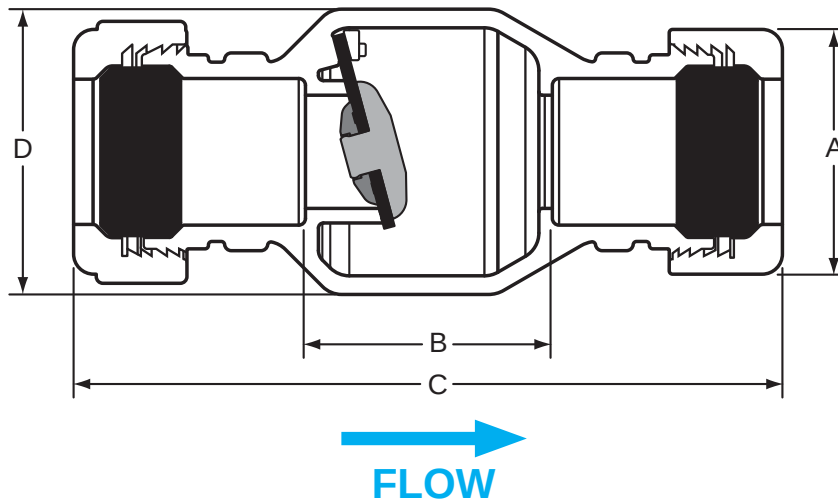
* CCW-020 - Wrench also fits 2-1/2" Coupling Body
**CCW-030 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Sets

Part Number	Size
CCW-000	Set

Complete Set of Wrenches, Sizes 1/2" - 3"

Compression Utility Swing Check Valves



WARNING: The compression joints provide a positive seal but do not restrain pipe from thrust and movement under pressure. Use of compression joint requires blocking of connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

Dimensions

Nominal Size	Dimension Reference (inches, $\pm 1/16$)			
	A	B	C	D
1/2	1-3/4	1-3/4	5-15/16	2-1/8
3/4	2-1/16	1-3/4	6	2-1/8
1	2-7/16	2-1/4	6-5/16	2-21/32
1-1/4	2-15/16	2-15/16	8-9/16	3-3/8
1-1/2	3-5/16	2-15/16	8-17/32	3-3/8
2	3-3/4	3-1/2	9-7/32	4-1/4
2-1/2	4-11/16	4-1/4	11-3/32	5-1/8
3	5-7/16	4-9/16	12-3/8	5-23/32
4	6-3/4	5-15/16	16-7/8	6-3/8

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



True Union Utility Swing & Spring Check Valves



Features - PVC White & PVC Clear

Spears® True Union Utility Swing Check and spring assisted True Union Utility Spring Check Valves offer a compact, high performance check valve for Landscape & Irrigation, Pool & Spa, Aquaculture, OEM 1 and many general purpose applications. True Union design allows for easy in-line replacement of maintenance free sealed units. These valves feature long-life EPDM elastomer seats with weighted disc for full-flow with minimal restriction and positive shutoff. Spring assisted "Spring Check" model incorporates a positive-pressure spring to assist in valve closing without slamming. Produced from PVC White or PVC Clear material with Socket, Threaded or SR Threaded end connectors in IPS Sizes 1/2" through 4".

Sample Engineering Specification

All thermoplastic check valves Shall be True Union Utility Swing Check or True Union Utility Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All union nuts shall have Buttress threads coupled to a replaceable sealed unit with EPDM seat and weighted disc. All Spring Check Valves shall have stainless steel spring assisted operation. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

- Chemical & Corrosion Resistant PVC White or High Visibility PVC Clear Construction
- No Metal Parts on Swing Check - Stainless Steel Spring on Spring Check
- True Union style for Easy In-line Replacement of Sealed Unit
- Strong Buttress Threaded Union Nuts
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Long-Life, High Grade EPDM Seat with Weighted Disc
- Spring Assisted Spring Check Model Option for Positive Closing
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for either Horizontal or Vertical Up-flow Installations and Vacuum Service
- NSF® Certified for Potable Water Use
- Silicone-Free Assembly

Quick-View True Union Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material ¹			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1720-05	S1720-05F	S1720-05FSR	150 psi @ 73°F Full Flow (Open)
3/4	EPDM	S1720-07	S1720-07F	S1720-07FSR	
1	EPDM	S1720-10	S1720-10F	S1720-10FSR	
1-1/4	EPDM	S1720-12	S1720-12F	S1720-12FSR	
1-1/2	EPDM	S1720-15	S1720-15F	S1720-15FSR	
2	EPDM	S1720-20	S1720-20F	S1720-20FSR	75 psi Back Pressure (Closed)
2-1/2	EPDM	S1720-25	S1720-25F	S1720-25FSR	
3	EPDM	S1720-30	S1720-30F	S1720-30FSR	
4	EPDM	S1720-40	S1720-40F	S1720-40FSR	

1: For PVC Clear Swing Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1720C05), (e.g. S1720C05F) or (e.g. S1720C05FSR)

Quick-View True Union Utility Spring Check Valve Selection Chart

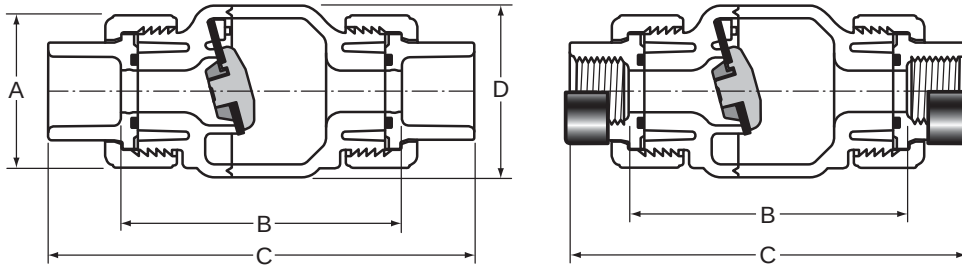
Valve Size	Seat Material	PVC Material ¹			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1780-05	S1780-05F	S1780-05FSR	150 psi @ 73°F Full Flow (Open)
3/4	EPDM	S1780-07	S1780-07F	S1780-07FSR	
1	EPDM	S1780-10	S1780-10F	S1780-10FSR	
1-1/4	EPDM	S1780-12	S1780-12F	S1780-12FSR	
1-1/2	EPDM	S1780-15	S1780-15F	S1780-15FSR	
2	EPDM	S1780-20	S1780-20F	S1780-20FSR	75 psi Back Pressure (Closed)
2-1/2	EPDM	S1780-25	S1780-25F	S1780-25FSR	
3	EPDM	S1780-30	S1780-30F	S1780-30FSR	
4	EPDM	S1780-40	S1780-40F	S1780-40FSR	

1: For PVC Clear Spring Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1780C05), (e.g. S1780C05F) or (e.g. S1780C05FSR)

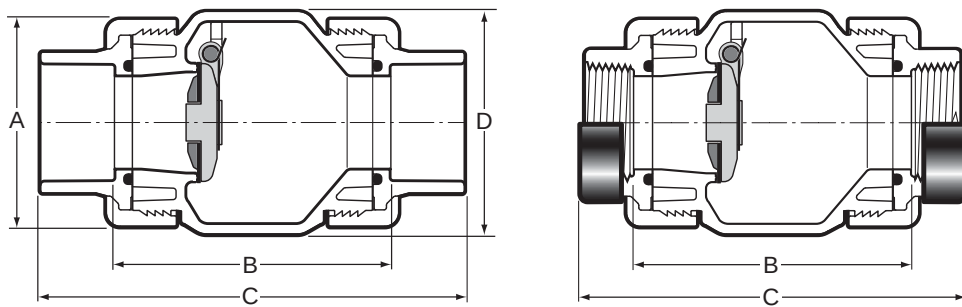
True Union Utility Swing & Spring Check Valves



True Union Utility Swing Check Valve



True Union Utility Spring Check Valve



Dimensions

Nominal Size	A	Dimension Reference (inches, ± 1/16)				D	
		B		C			
		Socket	Threaded/SR Threaded	Socket	Threaded/SR Threaded	Swing	Spring
1/2	1-7/8	3-7/16	3-1/2	5-3/16	4-13/16	2-1/8	2-5/8
3/4	2-1/4	3-9/16	3-9/16	5-1/2	4-15/16	2-1/8	2-5/8
1	2-9/16	4-1/8	4-5/16	6-7/16	6	2-5/8	2-5/8
1-1/4	3-1/8	4-7/8	5-1/16	7-7/16	6-13/16	3-3/8	3-3/8
1-1/2	3-9/16	4-9/16	4-3/4	7-3/8	6-1/2	3-3/8	3-3/8
2	4-5/16	5-5/8	5-3/4	8-5/8	7-9/16	4-1/4	4-1/4
2-1/2	6-3/16	7-7/16	7-9/16	10-15/16	10-3/16	5-11/16	5-11/16
3	6-13/16	7-7/16	7-1/2	11-3/16	10-1/4	5-11/16	5-11/16
4	7-3/4	9-3/4	9-7/8	14-5/16	12-3/4	7-1/4	7-1/4

General Installation Information: True Union Swing Check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



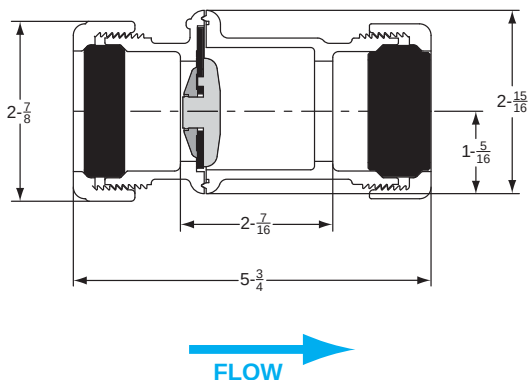
Sump Pump Swing Check Valves



Sample Engineering Specification

All thermoplastic check valves shall be Sump Pump Swing Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be dual-fit design with Buna-N Compression Gaskets for use with either IPS sizes 1-1/4" or 1-1/2" pipe. All valves shall be pressure rated to 150 psi @ 73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

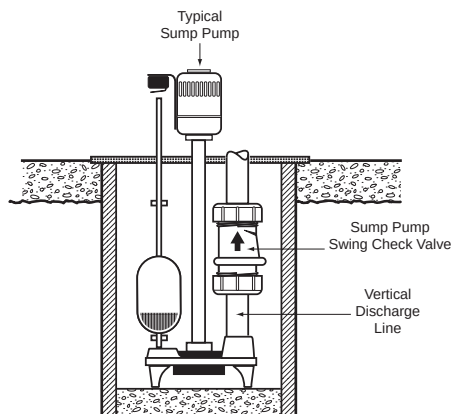
Dimensions



Features - PVC White & PVC Clear

Spears® Sump Pump Swing Check Valves provide a high performance specialty valve engineered for use on sump pump discharge lines, as illustrated. This compact valve is a maintenance free sealed Check Valve featuring long-life EPDM elastomer seats and weighted disc for full-flow with minimal restriction and positive shutoff. Produced in PVC White with compression type end connectors. Dual-fit design is available with Buna-N Gaskets for both 1-1/4" and 1-1/2" pipe.

- All Plastic Construction with Elastomer Seals – No Metal Parts
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for Vertical Up-flow or Horizontal Installations



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up". Do Not install Check Valve upside down.

Quick-View Sump Pump Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material ¹	Pressure Rating
		Socket	
1-1/4" & 1-1/2"	EPDM	S1400-15	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)

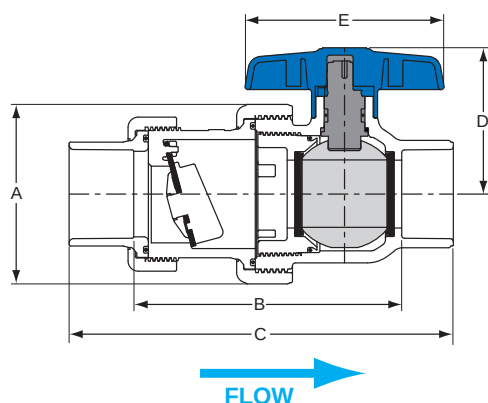
1: For PVC Clear Sump Pump, replace dash (-) separator with the letter "C" in the part number (e.g., S1400C15)

Swing Check Ball Valves



Sample Engineering Specification

All thermoplastic check valves shall be Swing Check Ball Valve combination type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Ball Valve units shall have Safe-T-Shear® stem, Safe-T-Blocked® Seal Carrier and double stop Polypropylene handle. All valve components shall be replaceable. All Swing Check Units shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow designation. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.



Dimensions

Size	A	B	C	D	E
1-1/2	3-7/8	5-3/4	8-1/4	3-3/16	4-1/4
2	4-7/16	6-11/16	9-3/8	3-7/8	5-1/16

Features - PVC White

Spears® Swing Check Ball Valve offers a compact, high performance one-piece combination valve for applications requiring an in-line Ball Valve and Check Valve. This space, time and labor saving valve is designed for general purpose use and in wastewater pumping applications, such as ejector pits. Provides quick shut-off for easy pump or equipment servicing. Fully serviceable Ball Valve with replaceable, maintenance free sealed Check Valve Cartridge featuring long-life EPDM elastomer seats and weighted disc for full-flow with minimal restriction and positive shutoff. Produced in PVC White with socket end connectors. Available in IPS sizes 1-1/2" and 2".

- Compact, Space-Saving Design
- Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE/HDPE Ball Valve Seats
- Safe-T-Blocked® Seal Carrier on Ball Valve with Safe-T-Shear® Stem and High Impact Polypropylene Handle
- Replaceable Sealed Check Valve Cartridge with Weighted EPDM Seat
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for Horizontal or Vertical Up-flow Installations

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

Quick-View Swing Check Ball Valve Selection Chart

Valve Size	Seat Material	PVC Material	Pressure Rating
		Socket	
1-1/2	EPDM	7622-015	150 psi @ 73°F Full Flow (Open)
2	EPDM	7622-020	75 psi Back Pressure (Closed)



Quiet Check Valve

Eliminates Noise in Sump Pump and Sewage Ejector Check Valve Operation

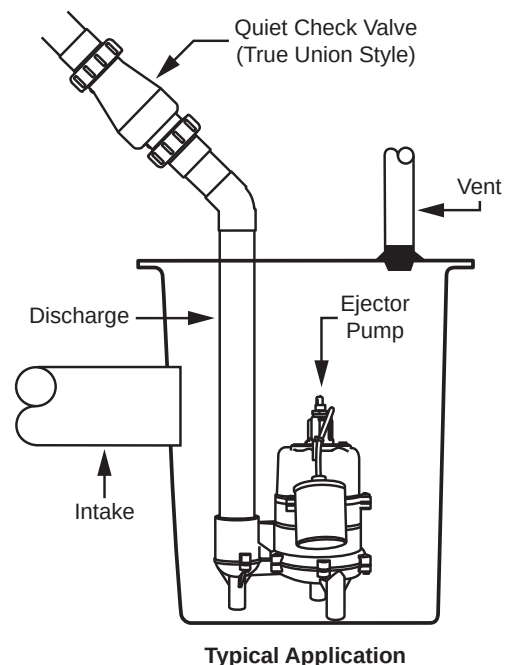


Spears® Quiet Check Valve has been designed to provide quiet operation in sump pump or sewage ejector pump systems typically found in home basements. The back flow of the water column in the discharge pipe can slam conventional check valves closed, producing a disturbing “thump” when the pump shuts off. The Quiet Check Valve uses a spring controlled rate of closing to prevent slamming and eliminates the noise.

Each Spears® Quiet Check Valve contains both regular socket ends for direct solvent cement connection of the valve and True Union style end connectors for easy valve removal or replacement.

Produced in both 1-1/2" and 2" nominal sizes, the 2" size is the minimum recommended for a sewage discharge system (i.e., sewage ejector pump) while the 1-1/2" size can be used in an effluent system (i.e., sump pump) discharge line to prevent back flow of liquid into sump basin.

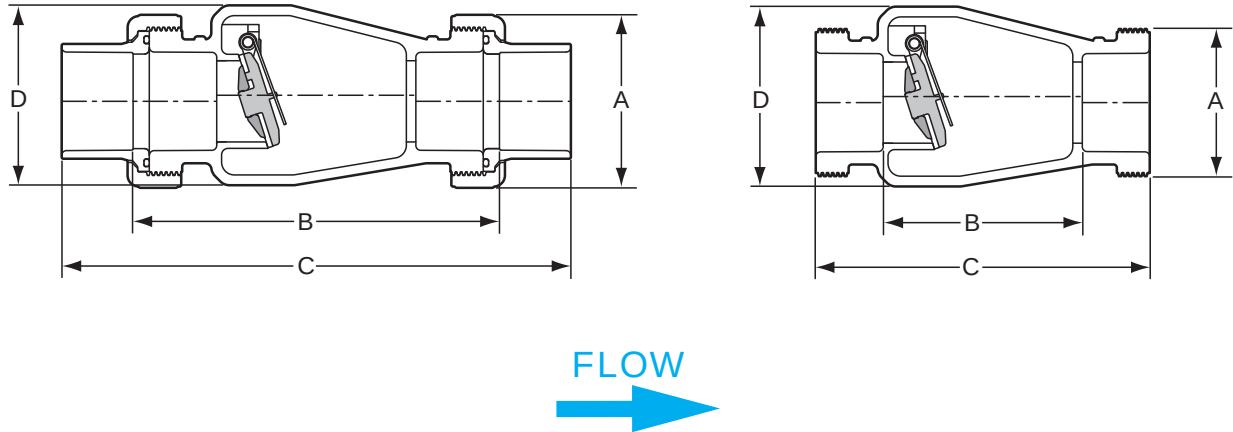
Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



Quiet Check Valve



Technical Information



Part Number	Size	A	B	C	D
8622-015	1-1/2	3-3/8	7-1/8	9-15/16	3-1/2
8622-020	2	3-3/4	8-3/4	11-13/16	4-1/2

Part Number	Size	A	B	C	D
8622-015	1-1/2	2-3/4	3-13/16	6-1/2	3-1/2
8622-020	2	3-3/8	5-3/16	8	4-1/2

Note: Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space

The check valve should be installed 12–18" above the pump discharge, or as recommended by the pump system manufacturer. Be sure check valve installation complies with local codes.

The Quiet Check Valve may be installed in either horizontal or vertical position. Check pump system manufacturer's recommendations for horizontal, vertical or angled positioning of check valve in discharge line. In horizontal installations, orient valve according to "This Side Up" marking for best operation. In all installations, valve **MUST** be installed in proper flow direction as indicated by the flow arrow on body.



Y-Check Valves



Sample Engineering Specification

All thermoplastic valves shall be Y-Check configuration manufactured to ASTM F 1970 and constructed from PVC, ASTM D 1784 Cell Classification 12454, or CPVC, ASTM D 1784 Cell Classification 23447. All valves shall have Buttress thread bonnet and standard O-ring type seating disc. All O-rings shall be EPDM or FKM. All 1/2" - 2" valves shall be pressure rated at 150 psi and all 3" - 4" valves shall be pressure rated at 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC Gray, PVC Clear & CPVC

Spears® Y-Check Valves are an angle type check valve that automatically stops reverse flow by the dead weight of the disc plug. Y-checks are less affected by turbulent flow and typically have lower shutoff characteristics than ball checks. Valves are available in PVC Gray, PVC Clear, and CPVC materials in IPS Sizes 1/2" through 4" with Socket, SR Threaded or Flanged end connections, plus True Union styles with Socket and SR Threaded ends.

- Chemical & Corrosion Resistant PVC, PVC Clear, and CPVC Construction
- Improved Flow Characteristics Over Ball Checks, Outperforms Spring Loaded Designs
- Easy Access Cap for In-Line Clean Out & Servicing
- Optional True Union Design for Easy Valve Service Replacement
- Standard O-ring type EPDM or FKM Seat & Seals
- Sizes 1/2" – 2" Pressure Rated to 150psi @ 73°F, Sizes 3" – 4" Pressure Rated to 90 psi @ 73°F
- Suitable for either Horizontal or Vertical Up-flow Installations
- Assembled with Silicone-Free, Water Soluble Lubricants

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number ^{1,2,3}					Pressure Rating
		Socket	SR Threaded	Flanged	Soc Union	SR Thd Union	
1/2	EPDM	1622-005	1621-005SR	1623-005	162A-005	162B-005SR	150 psi Non-Shock Water @ 73°F
	FKM	1632-005	1631-005SR	1633-005	163A-005	163B-005SR	
3/4	EPDM	1622-007	1621-007SR	1623-007	162A-007	162B-007SR	
	FKM	1632-007	1631-007SR	1633-007	163A-007	163B-007SR	
1	EPDM	1622-010	1621-010SR	1623-010	162A-010	162B-010SR	
	FKM	1632-010	1631-010SR	1633-010	163A-010	163B-010SR	
1-1/4	EPDM	1622-012	1621-012SR	1623-012	162A-012	162B-012SR	
	FKM	1632-012	1631-012SR	1633-012	163A-012	163B-012SR	
1-1/2	EPDM	1622-015	1621-015SR	1623-015	162A-015	162B-015SR	
	FKM	1632-015	1631-015SR	1633-015	163A-015	163B-015SR	
2	EPDM	1622-020	1621-020SR	1623-020	162A-020	162B-020SR	90 psi Non-Shock Water @ 73°F
	FKM	1632-020	1631-020SR	1633-020	163A-020	163B-020SR	
3	EPDM	1622-030	1621-030SR	1623-030	162A-030	162B-030SR	
	FKM	1632-030	1631-030SR	1633-030	163A-030	163B-030SR	
4	EPDM	1622-040	1621-040SR	1623-040	162A-040	162B-040SR	
	FKM	1632-040	1631-040SR	1633-040	163A-040	163B-040SR	

1: For CPVC Y-Check, add the letter "C" to the part number (e.g. 1622-005C)

2: For PVC Clear Y-Check, add the letters "CL" to the part number (e.g. 1622-005CL) or (e.g. 162A-005CL)

3: For CPVC or PVC Clear Special Reinforced Y-Check, (e.g. 1621-005CSR) or (e.g. 1621-005CLSR)

Replacement Parts (next page)

NO.	COMPONENT	QTY.	MATERIAL
1	Body ¹ (SOC/SR/FLG/UNION)	1	PVC/CLEAR/CPVC
2	Seat	1	EPDM/FKM
3	Compressor Assembly ²	1	PVC/CPVC
4	Bonnet O-ring	1	EPDM/FKM
5	Bonnet Nut	1	PVC/CPVC
6	Bonnet	1	PVC/CPVC
7	Retaining Clip	1	PP
8	Plug O-ring	1	EPDM/FKM
9	Plug	1	PVC/CPVC
10	Union O-ring	2	EPDM/FKM
11	Union Socket End	2	PVC/CPVC
12	Union SR Threaded End	2	PVC/CPVC

1 - Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)

- Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)

- Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

2 - Compressor Assembly Includes: Compressor (1), Weight (1), Compressor Plug (1)

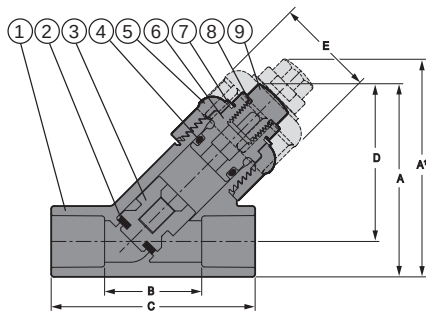
Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)

C_v Values

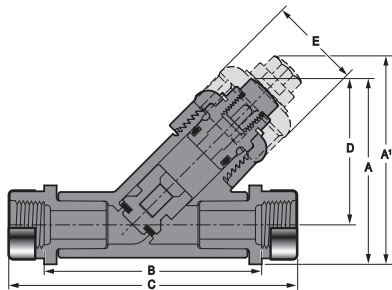
Size	Values
1/2	6.7
3/4	12.6
1	22.9
1-1/4	33.8
1-1/2	50.7
2	79.2
3	235
4	387

Y-Check Valves



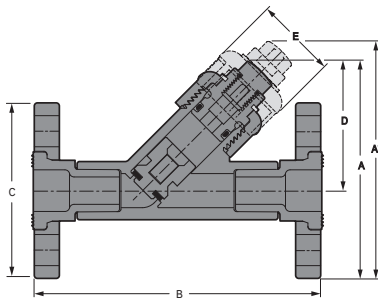
Socket Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	4-1/32	3-5/32	1-19/32	3-11/32	2-19/32	1-5/8	.31	.33
3/4	4-27/32	3-27/32	2	4	3-5/32	2	.50	.53
1	5-5/8	4-1/2	2-15/32	4-23/32	3-5/8	2-1/4	.85	.90
1-1/4	6-1/2	5-5/16	3-1/32	5-9/16	4-9/32	2-13/16	1.21	1.28
1-1/2	7-17/32	6-1/32	3-19/32	6-5/16	4-7/8	3-5/32	1.66	1.76
2	8-15/32	6-29/32	4-31/32	7-1/2	5-1/2	3-23/32	2.96	3.10
3	12-15/32	9-21/32	6-9/16	10-11/32	7-9/16	5-1/4	5.34	5.64
4	15-17/32	12-11/16	8-5/8	13-1/8	9-25/32	6-17/32	9.97	10.45



SR Threaded Y-Check Dimensions & Weights

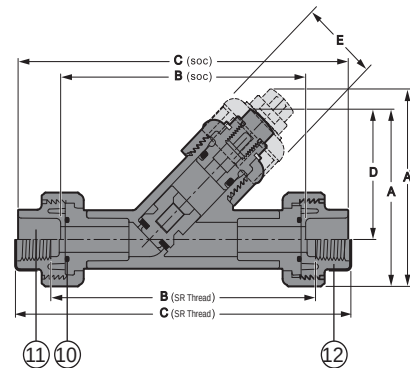
Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	4-5/32	3-9/32	3-27/32	5-1/8	2-19/32	1-5/8	.31	.33
3/4	5	4	4-3/4	5-31/32	3-5/32	2	.50	.53
1	5-25/32	4-21/32	5-9/32	6-15/16	3-5/8	2-1/4	.85	.90
1-1/4	6-23/32	5-1/2	6-1/4	7-31/32	4-9/32	2-13/16	1.21	1.28
1-1/2	7-25/32	6-9/32	7-5/32	8-7/8	4-7/8	3-5/32	1.66	1.76
2	8-3/4	7-3/16	8-5/16	10-1/8	5-1/2	3-23/32	2.96	3.10
3	12-3/4	9-15/16	11-17/32	14-5/16	7-9/16	5-1/4	5.34	5.64
4	15-25/32	12-11/16	14-11/32	17-11/32	9-25/32	6-17/32	9.97	10.45



Flanged Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	5-7/32	4-11/32	5-23/32	3-1/2	2-19/32	1-5/8	.82	.85
3/4	6-1/16	5-3/32	6-7/16	3-7/8	3-5/32	2	1.23	1.28
1	6-7/8	5-3/4	7-5/32	4-1/4	3-5/8	2-1/4	1.70	1.81
1-1/4	7-25/32	6-9/16	8-1/8	4-5/8	4-9/32	2-13/16	2.40	2.52
1-1/2	8-7/8	7-3/8	9-5/32	5	4-7/8	3-5/32	3.07	3.25
2	10-1/32	8-15/32	10-1/2	5-31/32	5-1/2	3-23/32	5.20	5.42
3	13-29/32	11-5/16	12-1/16	7-1/2	7-9/16	5-1/4	9.44	10.07
4	17-13/32	14-5/16	15-11/16	9-1/16	9-25/32	6-17/32	14.87	16.15

Note: 4" flanged Y-Check use split flange ring



True Union Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A ¹	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	4-3/8	3-1/2	5-3/32	5-1/2	6-7/8	7	2-19/32	1-5/8	.49	.53
3/4	5-5/16	4-9/32	5-7/8	6-13/32	7-29/32	8	3-5/32	2	.80	.85
1	6-1/16	4-29/32	6-15/32	7-5/16	8-3/4	9	3-5/8	2-1/4	1.13	1.20
1-1/4	7-1/16	5-13/16	7-7/16	8-7/32	10-1/8	10-5/32	4-9/32	2-13/16	1.84	1.90
1-1/2	8-1/8	6-5/8	8-1/4	9	11	11-1/16	4-7/8	3-5/32	2.44	2.52
2	9-7/32	7-5/8	9-13/32	10-13/16	12-7/16	12-13/16	5-1/2	3-23/32	4.33	4.45
3	13-7/16	10-5/8	13-5/8	15-11/32	17-13/32	18-7/32	7-9/16	5-1/4	10.35	10.55
4	16-3/4	13-5/8	17-3/32	19-9/32	21-21/32	22-5/16	9-25/32	6-17/32	18.51	18.80

Drain Plug Tap Size

Y-Check Size	Tap Size (NPT)	Y-Check Size	Tap Size (NPT)
1/2	1/4 - 18	1-1/2	1-11-1/2
3/4	1/4 - 18	2	1-11-1/2
1	3/8 - 18	3	1-11-1/2
1-1/4	1/2 - 14	4	1-11-1/2



Butterfly Check Valves



Features – PVC, CPVC

This multi-purpose check valve provides an extremely low profile and very quick response to back flow without slamming. Since most all components are internal, Spears® Butterfly Check Valves require no more space than a piece of pipe and fitting. Special design incorporates flexible reinforced elastomer seal for long life and is suitable for mounting in any position for greater versatility. Available in IPS sizes 2" - 12" with Flanged, Spigot, Male Threaded, Grooved Pipe style & Wafer end connections, and 14" - 24" Flanged, Spigot, Grooved & Wafer end connections. Can be custom produced to virtually any standard pipe diameter.

- Chemical Resistant PVC & CPVC Construction
- No Metal Components
- Quick Response Shut-off In Any Position
- Replaceable Internal Components - Choice of Reinforced EPDM or FKM
- Suitable for Horizontal or Vertical Installation
- Sizes 2" - 8" Pressure Rated to 150 psi for water at 73°F
Sizes 10" - 16" Pressure Rated to 100 psi for water at 73°F
- Sizes 18" - 24" Pressure Rated to 50 psi for water at 73°F
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All thermoplastic Check Valves shall be Butterfly design constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell classification 23447. Valves shall be Flanged, Spigot, Male Threaded, Grooved end or Wafer style. All valve seals shall be reinforced EPDM or FKM with replaceable internal components. All 2" - 8" valves shall be pressure rated at 150 psi, all 10" - 16" valves at 100 psi for water at 73°F, all 18" - 24" valves at 50 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

Butterfly Check Valves



Quick-View Butterfly Check Valve Selection Chart

C_v Values

Valve Size	O-ring Material	PVC Material ¹					Pressure Rating
		Flanged	Spigot	Threaded	Grooved	Wafer	
2	EPDM	5423-020	5427-020	5421A-020	542G-020	5420-020	150 psi Non-Shock Water @73°F
	FKM	5433-020	5437-020	5431A-020	543G-020	5430-020	
2-1/2	EPDM	5423-025	5427-025	5421A-025	542G-025	5420-025	
	FKM	5433-025	5437-025	5431A-025	543G-025	5430-025	
3	EPDM	5423-030	5427-030	5421A-030	542G-030	5420-030	
	FKM	5433-030	5437-030	5431A-030	543G-030	5430-030	
4	EPDM	5423-040	5427-040	5421A-040	542G-040	5420-040	
	FKM	5433-040	5437-040	5431A-040	543G-040	5430-040	
6	EPDM	5423-060	5427-060	5421A-060	542G-060	5420-060	
	FKM	5433-060	5437-060	5431A-060	543G-060	5430-060	
8	EPDM	5423-080	5427-080	5421A-080	542G-080	5420-080	
	FKM	5433-080	5437-080	5431A-080	543G-080	5430-080	
10	EPDM	5423-100	5427-100	5421A-100	542G-100	5420-100	100 psi Non-Shock Water @73°F
	FKM	5433-100	5437-100	5431A-100	543G-100	5430-100	
12	EPDM	5423-120	5427-120	5421A-120	542G-120	5420-120	
	FKM	5433-120	5437-120	5431A-120	543G-120	5430-120	
14	EPDM	5423-140	5427-140	N/A	542G-140	5420-140	
	FKM	5433-140	5437-140	N/A	543G-140	5430-140	
16	EPDM	5423-160	5427-160	N/A	542G-160	5420-160	50 psi Non-Shock Water @73°F
	FKM	5433-160	5437-160	N/A	543G-160	5430-160	
18	EPDM	5423-180	5427-180	N/A	542G-180	5420-180	
	FKM	5433-180	5437-180	N/A	543G-180	5430-180	
20	EPDM	5423-200	5427-200	N/A	542G-200	5420-200	
	FKM	5433-200	5437-200	N/A	543G-200	5430-200	
24	EPDM	5423-240	5427-240	N/A	542G-240	5420-240	50 psi Non-Shock Water @73°F
	FKM	5433-240	5437-240	N/A	543G-240	5430-240	

Size	C _v ¹
2	91
2-1/2	123
3	365
4	665
6	1695
8	2990
10	5595
12	8490
14	10,000
16	13,000
18	15,000
20	18,000
24	29,000

1: Gallons per minute at 1 psi pressure drop.

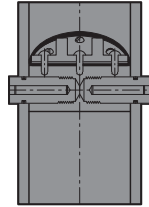
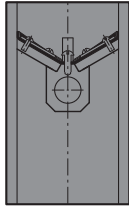
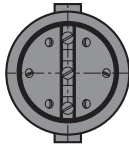
1: For CPVC valves add the letter "C" following the size code of the part number listed (e.g., 5423-020C)

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	2" - 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)
	10" - 16"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)
	18" - 24"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	50 (.34)	47 (.32)	45 (.31)	42 (.83)	40 (.30)	37 (.26)	35 (.24)	30 (.21)	25 (.17)	20 (.14)	15 (.10)

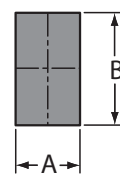
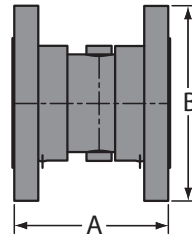
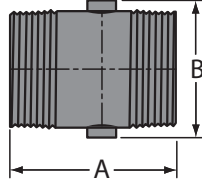
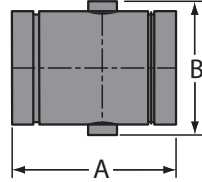
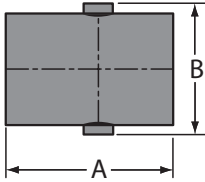


Butterfly Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Body	1	PVC/CPVC
2	Flapper	2	PVC/CPVC
3	Flex Seal Gasket	1	EPDM/FKM
4	Flapper Cover	2	PVC/CPVC
5	Flapper Screws	6	PVC/CPVC
6	Hinge Post Screws	3	Encapsulated SS
7	Post Strip	1	PVC/CPVC
8	Post Bolt	3	PVC/CPVC (Steel Reinforced)
9	O-ring	2	EPDM/FKM
10	Hinge Post	1	PVC/CPVC



Dimensions

Size	Spigot (Plain End) Valve, Grooved End Valve & Threaded Valve		Flanged		Wafer		Pressure Rating (psi)
	A	B	A	B	A	B	
2	5-3/4	2-9/16	6-1/16	6	1-3/4	4	150
2-1/2	5-3/4	3-3/32	6-1/8	7	2-3/8	4-3/4	150
3	5-3/4	4-1/32	6-1/4	7-1/2	2-3/4	5-1/4	150
4	6-3/4	4-13/16	7-1/4	9	3-5/8	6-5/8	150
6	10-1/2	7-9/32	11-3/8	11	4-1/4	8-5/8	150
8	14	10-7/32	14-9/16	13-1/2	6	11	150
10	16	11-31/32	17-3/8	16	10	13-1/4	100
12	16	14-1/32	17-1/4	19	12	16	100
14	18	14-3/4	20	21	13	17-5/8	100
16	19-3/4	16-17/32	21-1/4	23-1/2	13-1/2	20-1/8	70
18	26-1/2	19-31/32	27	25	15-1/2	21-1/2	50
20	28-7/8	21-25/32	40-7/8	27-1/2	17	23-3/4	50
24	29-7/8	25-21/32	43-7/8	32	19	24	50

As a general guideline, Opening & Closing Pressures will range from .2 to .5 psi for horizontal applications. Opening pressure tends to decrease in larger size valves. Valves installed in vertical up-flow applications will require slightly higher pressures.

General Installation Information

Butterfly Check Valve seating may be affected by normal system turbulence. Valves should be installed at least 5 pipe diameters away from any fitting. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and **NOT** from side to side of the elbow.

Notes: Flanged valves are designed for mounting between two (2) ANSI Class 125/150 bolt pattern flanges using user supplied 1/8" full-faced gaskets, bolts, nuts and flat washers. Male thread ends are standard NPT tapered. Grooved ends are for use with mechanical coupler designed for thermoplastic pipe.

Diaphragm Check Valves



Features – PVC, CPVC

Spears® Diaphragm Check Valves do not depend on gravity, springs, or even reverse flow to seat. Resilient thermoplastic elastomer (TPE) diaphragm is the only moving component, which automatically seats when flow stops. No sticking, no chatter. This specialty elastomer exhibits high flex and tear resistance to provide excellent durability and long life. Valves are available in PVC and CPVC material size of 3/4" with socket and threaded end connections.

- “Normally Closed” operation is excellent for applications with low seating pressure
- Low cracking pressure, 1 to 1-1/2 psi
- Leak-free, silent operation
- Installs just like a Union – in ANY position
- Pressure rated to 150 psi full-flow (open), 100 psi back pressure (closed) for water @ 73°F
- Santoprene™ TPE diaphragm seat provides extended life and durability – fully serviceable and replaceable
- All materials are NSF® Certified for use with potable water

Sample Engineering Specification

All thermoplastic Diaphragm Check Valves shall be Diaphragm design constructed from PVC Type 1, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. Valves shall be socket or threaded ends. All diaphragms shall be Santoprene™ TPE material. Valves shall be pressure rated at 150 psi full-flow (open), 100 psi back pressure (closed) for water @ 73°F, as manufactured by Spears® Manufacturing Company.

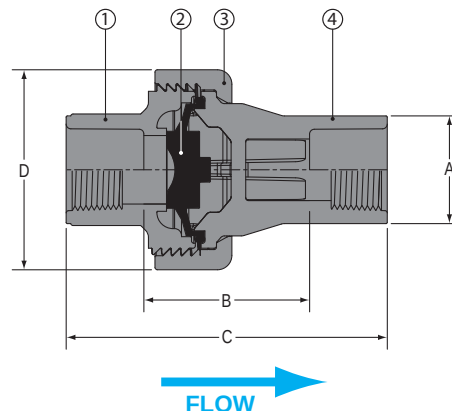
Quick-View Diaphragm Check Valve Selection Chart

Valve Size	Seat Material	PVC Material ¹		Pressure Rating
		Socket	Threaded	
3/4	SANTOPRENE™	6562-007	6561-007	150 psi @ 73°F Full Flow (open) 100 psi Back Pressure

1: For CPVC Diaphragm Check Valve, add the letter "C" to the part number (e.g. 6562-007C)

Replacement Parts

No.	Component	Qty	Material
1	Body Inlet	1	PVC/CPVC
2	Diaphragm	1	Santoprene™ Rubber
3	Nut	1	PVC/CPVC
4	Body Outlet	1	PVC/CPVC



Dimensions & Weights

Nominal Size	Dimension Reference (inches, ±1/16)					Approx. Wt. (Lbs.)	
	A	B		C	D	PVC	CPVC
		Socket	Threaded				
3/4	1-7/16	2-1/8	2-5/8	4-1/8	2-21/32	.32	.34

NOTE: Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec. Do not use Union Nut to draw together system components. Using a strap wrench, tighten hand-tight plus no more than 1/16 turn. Do not use conventional pipe wrenches.

Santoprene™ is a trademark of Exxon Mobile Corporation



In-Line Adjustable Spring Check Valves



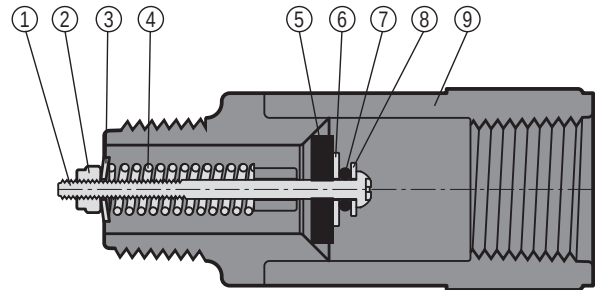
Features - PVC

Adjustable feature allows control of back pressure in system, reduces water hammer, and prevents siphoning. Easily adjusts to hold back from 5 to 32 feet of pressure head, 1 psi (2.3 feet of head) for each full turn of the adjustment screw. Ideal for landscape and irrigation applicators, quickly installs with space saving in-line design.

- 2 - 14 lbs. Adjustable Spring Tension (5 to 32 feet of head) Factory Preset to Approx. 5 psi (12 feet of head)
- Stainless Steel Adjustment Spring with EPDM Seat
- Pressure Rated to 200 psi for Water @ 73°F
- Standard Unit Available in 1/2", 3/4", 1" & 1/2" x 3/4" with Fipt Inlet x Mipt Outlet Configuration
- Plus, Popular Configuration Options of 1/2" Mipt Inlet x Fipt Outlet & 3/4" Fipt Inlet x Fipt Outlet

Sample Engineering Specification

All thermoplastic check valves shall be Adjustable Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Valve Seats shall be EPDM. All valves shall have external Arrow Flow Indicator. All valves shall be pressure rated to 200 psi water at 73°F, as manufactured by Spears® Manufacturing Company.



Quick-View Valve Selection Chart

Standard Unit - Female Inlet x Male Outlet		
Size	Part Number	Configuration
1/2	S1102-05	Fipt x Mipt (Inlet x Outlet)
3/4	S1102-07	Fipt x Mipt (Inlet x Outlet)
1	S1102-10	Fipt x Mipt (Inlet x Outlet)
1/2 x 3/4	S1102-05-07	Fipt x Mipt (Inlet x Outlet)
Male Inlet x Female Outlet Option		
Size	Part Number	Configuration
1/2	S1101-05	Mipt x Fipt (Inlet x Outlet)
Female Inlet x Female Outlet Option		
Size	Part Number	Configuration
3/4	S1100-07	Fipt x Fipt (Inlet x Outlet)

Replacement Parts

No.	Component	Qty.	Material
1	Screw	1	Stainless Steel
2	Nut	1	Stainless Steel
3	Belleville Washer	1	Stainless Steel
4	Spring	1	Stainless Steel
5	Seat	1	EPDM
6	Washer - A	1	Stainless Steel
7	O-ring	1	EPDM
8	Washer - B	1	Stainless Steel
9	Body	1	PVC

In-Line Adjustable Spring Check Valves

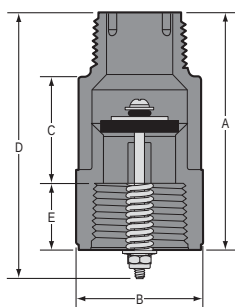


FIG. I
Standard Unit Female Inlet x
Male Outlet

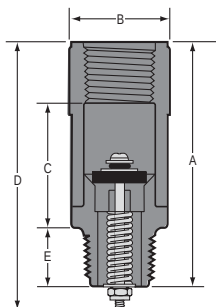


FIG. II
Male Inlet x
Female Outlet Option

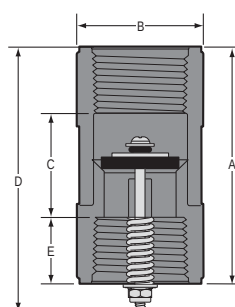


FIG. III
Female Inlet x
Female Outlet Option



Dimensions

SIZE	INLET X OUTLET	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	FIG.
1/2	FIPT X MIPT	2-5/8	1-3/16	1-3/16	2-3/4	3/4	I
3/4	FIPT X MIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	I
1	FIPT X MIPT	3-3/16	1-11/16	1-7/16	3-7/16	7/8	I
1/2 x 3/4	FIPT X MIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	I
1/2	MIPT X FIPT	2-7/8	1-3/16	1-7/16	3-1/8	3/4	II
3/4	FIPT X FIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	III

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2"-1"	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)



Backwater Valves



Basic Valve

- All PVC Construction with EPDM Flapper Seal
- Threaded Top Plug for Convenient Service
- Simple Snap-In Internal Flapper Assembly for Easy Replacement
- Optional Factory Assembled Service-Access Extension Kits - External Housing with Internal Extension for Convenient Removal, Inspection or Replacement
- Optional Extension Components Kits for Assembly with User-Supplied Pipe
- Available in Sizes 2", 3", 4" and 6" with Socket Ends
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® IPS x Sewer Adapters Available for Connection to ASTM 3034 Sewer
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves
- Pressure Rated to 43 psi (100 feet of head) @ 73°F

Sample Engineering Specification

All thermoplastic valves shall be Backwater type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Valve Seats shall be EPDM. All valves shall have external Arrow Flow Indicator. All valves shall be pressure rated to 43 psi (100 feet of Head) for water @ 73°F as manufactured by Spears® Manufacturing Company.

Quick-View Backwater Valve Selection Chart Standard Valve

Valve Size	Seat Material	PVC Material	Pressure Rating
		Socket	
2	EPDM	S275P	43 psi (100 feet of Head)
3	EPDM	S375P	
4	EPDM	S475P	
6	EPDM	S675P	

Features - PVC Gray

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension Kit.



Valve with Extension Kit

PVC Service-Access Extension Kit Options:

Available as a complete unit, with or without valve, factory assembled to internal flap assembly, extension pipe, and external extension housing with top access adapter in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). All extension kits can be cut shorter in the field for custom fits. Also available as Extension Components Kits, with or without valve for assembly with user-supplied Class 125 or Schedule 40 pipe. Kits without valve require use of existing valve top Access Plug, all kits require solvent cement assembly to valve. Contact Spears® for pricing on custom cut lengths.

Quick View Extension Components Kit Options

Extension Adapters and Flap Assembly with or without valve. Must be assembled with user-supplied Class 125 or Schedule 40 Pipe.

Valve Size	Socket Valve With Extension Component Kit	Extension Component Kit Only	Pressure Rating
2	S275P-AK	S275P-ECK	43 psi (100 feet of head)
3	S375P-AK	S375P-ECK	
4	S475P-AK	S475P-ECK	
6	S675P-AK	S675P-ECK	

Backwater Valves



Quick View Backwater Valves with Extension Kit to Premade Lengths

Socket Valve with complete Extension Assembly in precut lengths.

Valve x Extension Size ¹	Socket Valve With Extension	Valve x Extension Size ¹	Socket Valve With Extension	Pressure Rating
2 x 12HT	S275P-120	4 x 12HT	S475P-120	43 psi (100 feet of head)
2 x 16HT	S273P-160	4 x 16HT	S473P-160	
2 x 20HT	S275P-200	4 x 20HT	S475P-200	
2 x 24HT	S275P-240	4 x 24HT	S475P-240	
2 x 36HT	S275P-360	4 x 36HT	S475P-360	
2 x 48HT	S275P-480	4 x 48HT	S475P-480	
3 x 12HT	S375P-120	6 x 12HT	S675P-120	
3 x 16HT	S373P-160	6 x 16HT	S673P-160	
3 x 20HT	S375P-200	6 x 20HT	S675P-200	
3 x 24HT	S375P-240	6 x 24HT	S675P-240	
3 x 36HT	S375P-360	6 x 36HT	S675P-360	
3 x 48HT	S375P-480	6 x 48HT	S675P-480	

1 - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches).

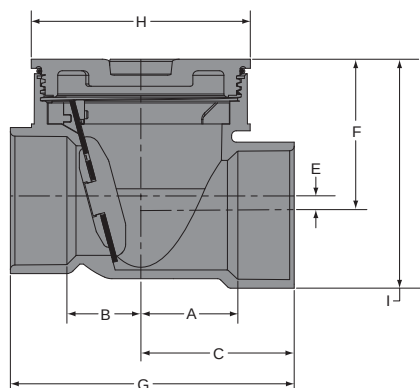
Quick View Service Access Extension Kit Only In Premade Lengths (valve not included)

Extension Assembly in precut lengths. Use exiting valve top Access Plug.

Size ¹	Premade Extension	Size ¹	Premade Extension	Pressure Rating
2 x 12HT	SAEK-020-120	4 x 12HT	SAEK-040-120	43 psi (100 feet of head)
2 x 16HT	SAEK-020-160	4 x 16HT	SAEK-040-160	
2 x 20HT	SAEK-020-200	4 x 20HT	SAEK-040-200	
2 x 24HT	SAEK-020-240	4 x 24HT	SAEK-040-240	
2 x 36HT	SAEK-020-360	4 x 36HT	SAEK-040-360	
2 x 48HT	SAEK-020-480	4 x 48HT	SAEK-040-480	
3 x 12HT	SAEK-030-120	6 x 12HT	SAEK-060-120	
3 x 16HT	SAEK-030-160	6 x 16HT	SAEK-060-160	
3 x 20HT	SAEK-030-200	6 x 20HT	SAEK-060-200	
3 x 24HT	SAEK-030-240	6 x 24HT	SAEK-060-240	
3 x 36HT	SAEK-030-360	6 x 36HT	SAEK-060-360	
3 x 48HT	SAEK-030-480	6 x 48HT	SAEK-060-480	

1 - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches). All extension kits can be cut shorter in the field for custom fits.

STANDARD VALVE



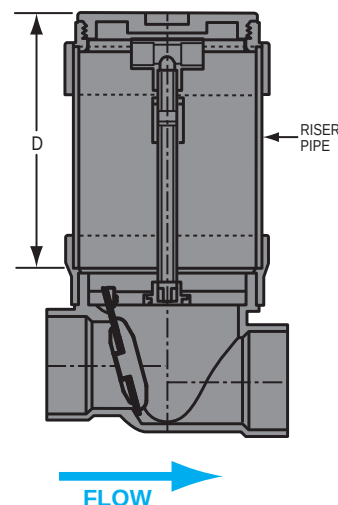
Standard Valve Dimensions

Size	A	B	C	E	F	G	H	I
2	1-13/16	1-3/4	2-5/8	5/16	3-1/4	5-9/32	4-3/16	4-9/16
3	2-5/8	2	4-3/16	13/32	4-1/8	7-3/4	6	6-1/8
4	3-5/8	3-3/4	5-7/16	23/32	5-7/16	10-15/16	8-1/4	7-15/16
6	4-3/4	4-5/8	7-3/4	13/16	7-3/16	15-3/8	11-1/4	10-13/16

VALVE WITH EXTENSION KIT

Valve with Extension Kit Dimensions (Inches)

HEIGHT-D
12
16
20
24
36
48
D = Top of plug Standard Valve to top of plug with Extension





Y-Strainers



Sample Engineering Specification

All sediment strainers shall be Y-type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All Y-strainers shall have replaceable PVC, CPVC or Type 316 stainless steel screens and O-ring sealed drain plugs with magnetic drain plug option. All threaded Y-Strainers shall have Special Reinforced (SR) threads. All Y-Strainers, sizes 1/2"- 2" shall be pressure rated to 150 psi, sizes 3"- 4" to 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC Gray, PVC Clear & CPVC

Spears® Y-type sediment strainers are the perfect choice for in-line removal of suspended solids, sediment, dirt and debris. Convenient removable strainer basket allows quick cleaning with an assortment of screen mesh sizes to meet a variety of application needs. Spears® Y-Strainers are produced from PVC Gray, PVC Clear for fluid visibility and CPVC Gray for higher temperatures. Available with socket, Special Reinforced (SR) threads, flanged, or True Union socket and SR threaded end connectors in IPS sizes 1/2" - 4".

- Provides In-line Protection of Process Equipment
- PVC, CPVC or PVC Clear Construction
- EPDM or FKM O-ring Seals
- Removable Strainer Basket with O-ring Sealed Drain Plug Allows Quick-Flushing or Bleed-Off Valve Connection
- Multiple Strainer Screen Options in PVC, CPVC, and Type 316 Stainless Steel (see Mesh Code table)
- Optional Magnetic Drain Plug for Ferrous Metal Pickup
- Suitable for Horizontal or Vertical Installation
- Sizes 1/2"- 2" Pressure Rated to 150 psi @ 73°F
Sizes 3"- 4" to 90 psi @ 73°F
- Assembled with Silicone-Free, Water Soluble Lubricants

Quick-View Y-Strainer Selection Chart

Valve Size	O-ring Material	PVC Material ^{1,2,3}					Pressure Rating
		Socket	SR Threaded	Flanged	Socket Union	SR Threaded Union	
1/2	EPDM	YS22P__-005	YS21P__-005SR	YS23P__-005	YS2AP__-005	YS2BP__-005	150 psi Non-Shock Water @73°F
	FKM	YS32P__-005	YS31P__-005SR	YS33P__-005	YS3AP__-005	YS3BP__-005	
3/4	EPDM	YS22P__-007	YS21P__-007SR	YS23P__-007	YS2AP__-007	YS2BP__-007	
	FKM	YS32P__-007	YS31P__-007SR	YS33P__-007	YS3AP__-007	YS3BP__-007	
1	EPDM	YS22P__-010	YS21P__-010SR	YS23P__-010	YS2AP__-010	YS2BP__-010	
	FKM	YS32P__-010	YS31P__-010SR	YS33P__-010	YS3AP__-010	YS3BP__-010	
1-1/4	EPDM	YS22P__-012	YS21P__-012SR	YS23P__-012	YS2AP__-012	YS2BP__-012	
	FKM	YS32P__-012	YS31P__-012SR	YS33P__-012	YS3AP__-012	YS3BP__-012	
1-1/2	EPDM	YS22P__-015	YS21P__-015SR	YS23P__-015	YS2AP__-015	YS2BP__-015	
	FKM	YS32P__-015	YS31P__-015SR	YS33P__-015	YS3AP__-015	YS3BP__-015	
2	EPDM	YS22P__-020	YS21P__-020SR	YS23P__-020	YS2AP__-020	YS2BP__-020	90 psi Non-Shock Water @73°F
	FKM	YS32P__-020	YS31P__-020SR	YS33P__-020	YS3AP__-020	YS3BP__-020	
3	EPDM	YS22P__-030	YS21P__-030SR	YS23P__-030	YS2AP__-030	YS2BP__-030	
	FKM	YS32P__-030	YS31P__-030SR	YS33P__-030	YS3AP__-030	YS3BP__-030	
4	EPDM	YS22P__-040	YS21P__-040SR	YS23P__-040	YS2AP__-040	YS2BP__-040	
	FKM	YS32P__-040	YS31P__-040SR	YS33P__-040	YS3AP__-040	YS3BP__-040	

Enter Mesh Code in part number blank as specified in table.

(Contact Spears® for additional strainer sizes).

1: For CPVC body & strainer screen unit, replace the letter "P" before the dash separator with the letter "C" and add the letter "C" to the part number (e.g., YS22C8-020C)

2: For stainless steel strainer screens, replace the letter "P" (or "C") before the dash separator with the letter "S" (e.g., YS22S8-020; YS22S8-020C)

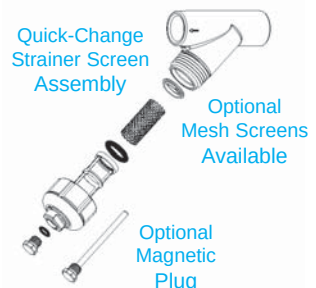
3: For PVC Clear Y-Strainer, add the letters "CL" to the part number (e.g., YS22P8-005CL)

Note: End connections for PVC Clear threaded and flanged Y-strainers are PVC Gray components.

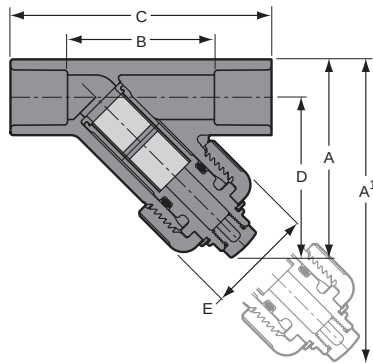
Mesh Codes for PVC, CPVC & SS

Mesh	Sieve Opening Size (in.)	Mesh Code
8 Mesh	0.094	8
12 Mesh	0.062	12
20 Mesh	0.033	20
30 Mesh	0.024	30

Additional Stainless Steel screens available to 320 mesh, custom ordered.

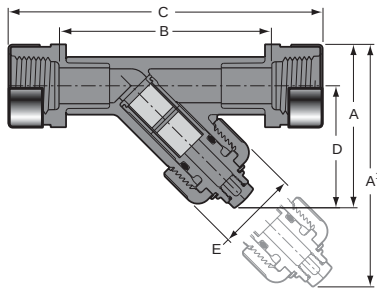


Y-Strainers



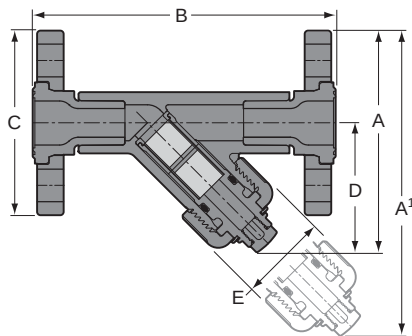
Socket Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	5	3-1/16	1-9/16	3-3/8	2-9/16	1-5/8	.31	.33
3/4	5-3/4	3-11/16	2	4	3	2	.50	.53
1	6-7/8	4-7/16	2-1/2	4-3/4	3-5/8	2-1/4	.85	.90
1-1/4	8-5/32	5-5/16	3-1/16	5-9/16	4-1/4	2-13/16	1.21	1.28
1-1/2	9-1/8	6	3-9/16	6-5/16	4-7/8	3-3/16	1.66	1.76
2	11-3/4	7-5/8	4-1/2	7-1/2	6-3/16	3-1/2	2.96	3.10
3	15	9-11/16	6-9/16	10-5/16	7-5/8	5-1/8	5.34	5.64
4	19-11/16	12-1/2	8-5/8	13-1/8	9-7/8	6-9/16	9.97	10.45



SR Threaded Y-Strainer Dimensions & Weights

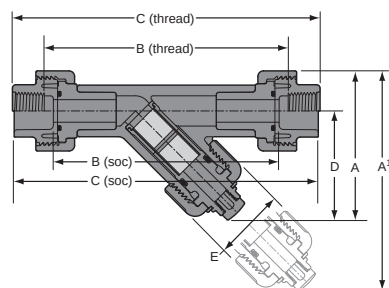
Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	6-1/2	4-11/16	3-5/8	5-1/16	4	2-3/8	.31	.33
3/4	7-5/8	5-7/16	4-3/8	5-13/16	4-9/16	2-3/8	.50	.53
1	8-5/8	6-1/8	5-3/16	7	5-1/8	2-3/8	.85	.90
1-1/4	11-1/8	7-3/4	6	7-15/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12-1/4	8-7/8	6-15/16	8-13/16	7-1/2	3-1/2	1.66	1.76
2	14-1/16	10-3/16	8-1/8	10-1/8	8-1/2	3-1/2	2.96	3.10
3	20	14-13/16	11	14-1/4	12-7/16	6-5/8	5.34	5.64
4	25-13/16	18-1/2	14	14-3/4	15-5/8	7-15/16	9.97	10.45



Flanged Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, $\pm 1/16$)						Approx. Wt. (Lbs.)	
	A ¹	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	5-13/16	4-3/16	5-11/16	3-1/2	2-1/2	1-5/8	.82	.85
3/4	7-1/8	5	6-7/16	3-7/8	3-1/8	2	1.23	1.28
1	8-3/16	5-3/4	7-1/4	4-1/4	3-5/8	2-1/4	1.70	1.81
1-1/4	9-7/16	6-9/16	8-1/8	4-5/8	4-9/32	2-13/16	2.40	2.52
1-1/2	10-7/16	7-3/8	9-3/16	5	4-7/8	3-3/16	3.07	3.25
2	13-1/4	9-1/8	10-3/8	6	6-3/16	3-1/2	5.20	5.42
3	16-21/32	11-3/8	12-1/32	7-1/2	7-5/8	5-1/8	9.44	10.07
4	21-19/32	14-5/16	14-9/16	9-1/16	9-7/8	6-9/16	14.87	16.15

Note: 4" flanged Y-strainer uses split flange ring

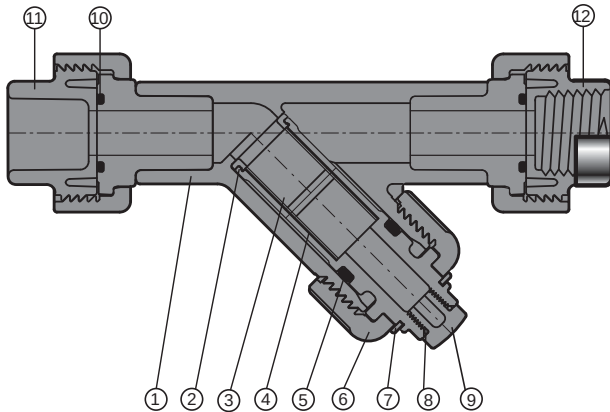


True Union Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A ¹	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	5	3-7/16	5-1/8	5-1/2	6-7/8	7	2-1/2	1-5/8	.49	.53
3/4	6-3/16	4-1/8	5-7/8	6-7/16	7-7/8	7-7/8	3	2	.80	.85
1	7-5/16	4-7/8	6-1/2	7-3/8	8-3/4	9	3-5/8	2-1/4	1.13	1.20
1-1/4	8-5/8	5-13/16	7-7/16	6-3/16	9-15/16	10-1/8	4-1/4	2-13/16	1.84	1.90
1-1/2	9-3/4	6-5/8	8-3/16	9	10-15/16	10-15/16	4-7/8	3-3/16	2.44	2.52
2	12-7/16	8-15/16	9-7/16	10-13/16	12-7/16	12-13/16	6-3/16	3-1/2	4.33	4.45
3	16-1/6	10-3/4	12-3/16	13-15/16	16	16-3/4	7-5/8	5-1/8	10.35	10.55
4	20-15/16	13-3/4	15-5/16	17-1/2	19-13/16	20-1/2	9-7/8	6-9/16	18.51	18.80



Y-Strainers



Replacement Parts

NO.	COMPONENT	QTY.	MATERIAL
1	Body ¹ (SOC/SR/FLANGE/UNION)	1	PVC/PVC CLEAR/CPVC
2	Screen Support Ring	1	PVC/CPVC
3	Screen	1	PVC/CPVC/SS 316
4	Screen Support Housing	1	PVC/CPVC
5	Housing O-ring	1	EPDM/FKM
6	Bonnet Nut	1	PVC/CPVC
7	Retaining Clip	1	PP
8	Plug O-ring	1	EPDM/FKM
9	Plug	1	PVC/CPVC
10	Union O-ring	2	EPDM/FKM
11	Union Socket End	2	PVC/CPVC
12	Union SR Threaded End	2	PVC/CPVC

- 1 - Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
 - Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
 - Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Strainer Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-

Drain Plug Tap Size

Y-Strainer Size	Tap Size (NPT)
1/2	1/4 - 18
3/4	1/4 - 18
1	3/8 - 18
1-1/4	1/2 - 14
1-1/2	1 - 11 - 1/2
2	1 - 11 - 1/2
3	1 - 11 - 1/2
4	1 - 11 - 1/2

Y-Strainer Cv

Nominal Size	Plastic Strainer Mesh			
	8	12	20	30
1/2	5.5	5.4	5.3	5.2
3/4	8.2	7.8	7.5	7.2
1	14.3	13.9	13.6	13.3
1-1/4	33.6	32.9	29.4	25.4
1-1/2	43.8	41.6	33.0	32.1
2	50.6	50.0	49.6	48.8
3	75.2	74.6	74.0	73.4
4	169.5	169.0	168.8	168.0

Gallons per minute at 1 psi pressure drop.
 Plastic Strainers are perforated PVC or CPVC screens.
 Standard is mesh.

Gauge Guards



Optional gauge shown,
not included with basic unit

Quick View Gauge Guard Selection

Inlet Size (in.)	PVC Part Numbers ^{1,2,3,4}		
	Diaphragm		
	PTFE	EPDM	FKM
1/4	G0004-002	G0002-002	G0003-002
1/2	G0004-005	G0002-005	G0003-005

- 1: Gauge Guard only. Contact Spears® for pre-filled Gauge & Gauge Guard combination units.
- 2: For CPVC, add the letter "C" to the part number (e.g., G0004-002C)
- 3: For PP, add the letter "P" to the part number (e.g., G0004-002P)
- 4: For Special Reinforced add the letters "SR" to the part number (e.g., G0004-002SR)

General Installation Information

The Gauge Guard and gauge must be completely filled with a suitable liquid, such as glycerin or distilled water, on the gauge side of the diaphragm in order to accurately transmit system pressure or vacuum. Follow packaged instructions for proper filling and installation. Factory installed Gauge & Gauge Guard units are pre-filled. (Contact Spears® Technical Service for additional information). While PTFE diaphragms generally have a broader range of chemical resistance, FKM or EPDM elastomer diaphragms are more sensitive and should be used in low pressure (i.e., 0-15 psi) and vacuum applications.

Features - PVC, CPVC & PP

Gauge Guards isolate process pressure or vacuum gauges from corrosive or other potentially damaging process media by use of a thin PTFE (standard) FKM, or EPDM diaphragm. This flexible membrane accurately transmits system pressure to gauge connection chamber when properly assembled with gauge and liquid filled. Available in PVC, CPVC or Polypropylene construction with 1/2" x 1/4" or 1/4" x 1/4" inlet x outlet NPT connections.

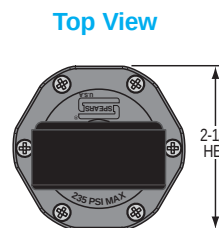
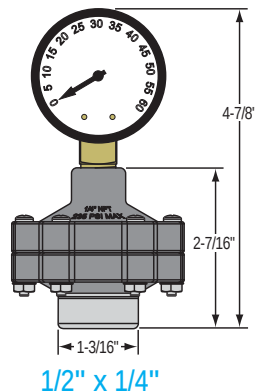
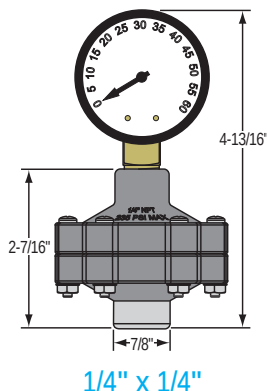
- PTFE Diaphragm (Standard), FKM or EPDM Available
- Type 316 Stainless Steel Fasteners
- 1/4" NPT Gauge Port with O-ring Seal - No Thread Sealant Required
- 1/4" or 1/2" NPT Pressure Inlet Featuring Spears® Patented Special Reinforced (SR) Female Plastic Thread - Suitable for either Plastic or Metal Male NPT Thread Connection
- Pressure Rated to 235 psi @ 73°F, 16 Bar @ 22°C and Full Vacuum Service
- Mount in Any Position

Note: Elevated service temperatures require system pressure de-rating.

Optional Pre-filled, Factory Installed Gauge & Gauge Guard

Gauge Type	Available Range	Dial	Connection	Housing
Pressure	0-15 psi 0-30 psi 0-60 psi 0-100 psi 0-160 psi 0-200 psi 0-300 psi	Black marking on white face, black dial	1/4 NPT Brass, Bottom Mount	Steel cased, Epoxy enamel finish
Vacuum	0-30 in-Hg			

Dimensions



Optional gauge shown,
not included with basic unit



Basket Strainers



Sample Engineering Specification

All thermoplastic Basket Strainers shall be fabricated from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447 material. All O-rings shall be EPDM or FKM. Strainer baskets shall be perforated PVC, CPVC, or type 316 stainless steel, or type 316 stainless steel wire mesh. Standard strainer perforations shall be 1/8" or 3/32" with a minimum open area ratio of 6:1, or specified perforation/mesh opening. Basket strainer sizes 1/2" - 8" shall have quick release

clamp retained bonnet, sizes 10" - 12" shall have bolt-on bonnet. All basket Strainers shall have pressure release valve and safety pressure gauge. Unit shall be equipped with O-ring sealed drain plug at lower end. Basket strainer sizes 1/2" - 8" shall be pressure rated at 150 psi, sizes 10" - 12" to 50 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Basket Strainer Selection Chart

Valve Size	O-ring Material	PVC Part Numbers ^{1,2,3}			Pressure Rating
		Socket	Spigot	Flanged	
1/2	EPDM	BS22P__-005	BS27P__-005	BS23P__-005	150 psi Non-Shock Water @ 73°F
	FKM	BS32P__-005	BS37P__-005	BS33P__-005	
3/4	EPDM	BS22P__-007	BS27P__-007	BS23P__-007	
	FKM	BS32P__-007	BS37P__-007	BS33P__-007	
1	EPDM	BS22P__-010	BS27P__-010	BS23P__-010	
	FKM	BS32P__-010	BS37P__-010	BS33P__-010	
1-1/4	EPDM	BS22P__-012	BS27P__-012	BS23P__-012	
	FKM	BS32P__-012	BS37P__-012	BS33P__-012	
1-1/2	EPDM	BS22P__-015	BS27P__-015	BS23P__-015	
	FKM	BS32P__-015	BS37P__-015	BS33P__-015	
2	EPDM	BS22P__-020	BS27P__-020	BS23P__-020	
	FKM	BS32P__-020	BS37P__-020	BS33P__-020	
2-1/2	EPDM	BS22P__-025	BS27P__-025	BS23P__-025	
	FKM	BS32P__-025	BS37P__-025	BS33P__-025	
3	EPDM	BS22P__-030	BS27P__-030	BS23P__-030	
	FKM	BS32P__-030	BS37P__-030	BS33P__-030	
4	EPDM	BS22P__-040	BS27P__-040	BS23P__-040	
	FKM	BS32P__-040	BS37P__-040	BS33P__-040	
6	EPDM	BS22P__-060	BS27P__-060	BS23P__-060	
	FKM	BS32P__-060	BS37P__-060	BS33P__-060	
8	EPDM	BS22P__-080	BS27P__-080	BS23P__-080	
	FKM	BS32P__-080	BS37P__-080	BS33P__-080	
10	EPDM	BS22P__-100	BS27P__-100	BS23P__-100	50 psi Non-Shock Water @ 73°F
	FKM	BS32P__-100	BS37P__-100	BS33P__-100	
12	EPDM	BS22P__-120	BS27P__-120	BS23P__-120	
	FKM	BS32P__-120	BS37P__-120	BS33P__-120	

Enter Mesh Code in part number blank as specified in table.

(Contact Spears® for additional strainer sizes).

1: For CPVC body & strainer screen unit, replace the letter "P" before the dash separator with the letter "C" and add the letter "C" to the part number (e.g., BS22C8-020C)

2: For stainless steel strainer screens, replace the letter "P" (or "C") before the dash separator with the letter "S" (e.g., BS22S8-020; BS22S8-020C)

3: For Basket Strainers with PTFE O-rings replace the number 2 with the number 5 (e.g. BS53P-010)

Features – PVC, CPVC

Spears® fabricated Basket Strainers are constructed of heavy bodied PVC or CPVC. Available in IPS sizes 1/2" through 12" with choice of socket, spigot or flanged ends and EPDM, FKM or PTFE encapsulated O-ring seals. A convenient quick release clamp cap is equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit. Designed to remove unwanted solids from plastic or metal piping systems, Spears® Basket Strainers are ideal for protecting valves, filters, pumps, nozzles or other liquid control devices in corrosive or non-corrosive fluid systems.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Convenient Quick-Release Clamp For easy Bonnet Removal (Bolt-on Bonnet on Sizes 10" & 12")
- Includes Pressure Release Valve and 0-160 psi Safety Pressure Gauge¹ (O-ring sealed plugs provided if valve/gauge not used)
- O-ring Sealed Drain Plug
- EPDM or FKM O-ring Seals
- Perforated PVC & CPVC Strainer Baskets in a Variety of Sizes. Stainless Steel Available in perforation and Multiple Mesh Sizes
- High Volume 6:1 Open Area Ratio
- Sizes 1/2" - 8" Pressure Rated to 150 psi @ 73°F
Sizes 10" - 12" Pressure Rated to 50 psi @ 73°F
- Assembled with Silicone-Free Seal Lubricants.

1: Commercial bronze bourdon-tube type pressure gauge w/brass NPT inlet. Check for any chemical compatibility issues. Contact Spears® for PVC, CPVC or PP Gauge Guard isolation devices available.

Special Options

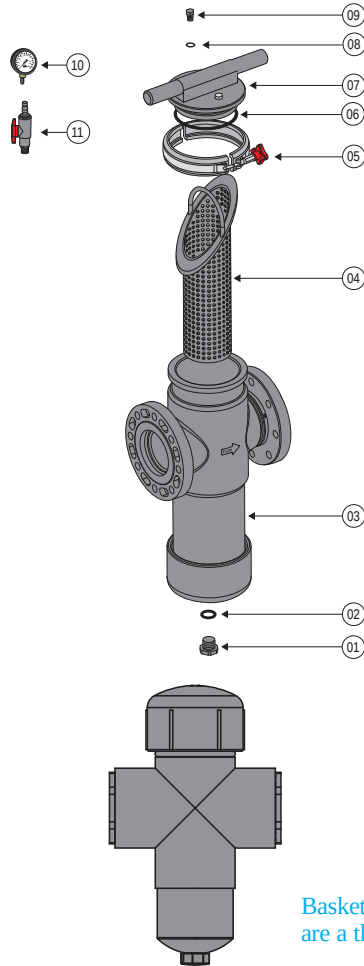
- PTFE Encapsulated O-ring Seals
- Bonnet Sight Glass

Perforation Mesh Codes

Perforation Size (in.)	Mesh Code
1/16	12
3/32	8
1/8	6
3/16	4
1/4	3
3/8	2

Example: BS22P6-020
Additional perforation and mesh sizes available upon request.

Basket Strainers

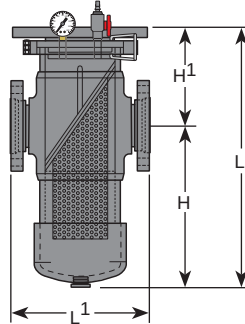


Replacement Parts

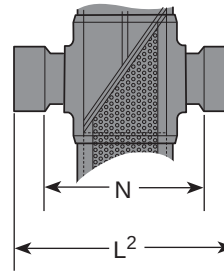
No.	Component	Quantity	Material
1	Drain Plug	1	PVC/CPVC
2	Drain Plug O-ring	1	EPDM/FKM/PTFE
3	Body	1	PVC/CPVC
4	Strainer Basket	1	PVC/CPVC /316 Stainless Steel
5	Bonnet Clamp	1	SS 316
6	Bonnet O-ring	1	EPDM/FKM/PTFE
7	Bonnet	1	PVC/CPVC
8	Plug O-ring	2	EPDM/FKM/PTFE
9	Gauge Port Plug	2	PVC/CPVC
10	Pressure Gauge	1	0-160 psi
11	Pressure Relief Valve	1	PVC/CPVC

- Notes:**
- 1) Bolt-on Bonnet on Sizes 10" & 12".
 - 2) Port plugs for use when pressure gauge and relief valve are not installed.
 - 3) Valve O-rings correspond to Strainer Basket Specification.

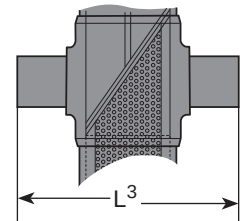
Flanged Style



Socket Style



Spigot Style



Basket Strainer sizes 1/2" through 1" bonnets are a threaded cap with O-ring seal.

Dimensions, Weights & Cv Values

Size	H	H ¹	L	L ¹	L ²	L ³	N	Approx. Wt. (Lbs.)		Cv
								Socket/ Spigot	Flanged	
1/2	5-7/8	4-9/16	10-7/16	9-1/4	6-13/16	9-9/16	5-1/8	2.97	3.35	4.5
3/4	5-7/8	4-9/16	10-7/16	9-1/4	6-7/16	9-7/16	4-7/16	2.99	3.44	10
1	5-7/8	4-9/16	10-7/16	10-3/8	6-13/16	10-1/16	4-1/2	3.02	3.50	15
1-1/4	10-1/4	7-7/8	18-1/8	8-9/16	10-1/16	10-1/4	7-9/16	3.20	3.60	30
1-1/2	10-1/4	7-7/8	18-1/8	8-3/4	11-1/8	11	8-1/8	3.50	3.75	46
2	10-1/4	7-7/8	18-1/8	8-3/4	12-1/8	11	8-5/8	11.00	11.40	72
2-1/2	10-1/4	7-7/8	18-1/8	8-3/4	12-3/8	12-7/8	8-3/8	12.30	12.60	110
3	13-13/16	8-3/4	22-9/16	11-5/8	16-1/8	15	11-5/8	25.00	25.40	172
4	17-5/16	8-3/4	26-1/16	12	18	17-1/2	13-1/2	25.70	26.80	270
6	18-7/8	10-9/16	29-7/16	17-1/8	24-3/8	23-5/16	17-7/8	58.40	60.80	630
8	24-1/2	11-9/16	36-1/16	20-1/2	30-1/2	27-1/2	22	93.60	96.00	750
10	27-1/8	16-5/8	43-3/4	26	34-9/16	34-1/2	24-1/16	200.20	210.30	893
12	34-7/8	17-3/16	52-1/16	28-1/8	38-3/4	36-1/4	26-1/4	229.30	239.80	1063

Cv = Gallons per minute at 1 psi pressure drop.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	10" - 12"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	50 (.34)	47 (.32)	45 (.31)	42 (.83)	40 (.30)	37 (.26)	35 (.24)	30 (.21)	25 (.17)	20 (.14)	15 (.10)	-0-



Suction Strainers



Features – PVC

The Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, the enlarged inlet on reducing sizes perform best in suction-line applications.

- Chemical & Corrosion Resistant PVC Construction
- Bolt-on Bonnet with Top Sight Glass, Standard
- Stainless Steel Strainer Basket with 3/16" Perforation, Standard
- Bottom-Drained Internal Strainer Basket for Direct Flushing
- 360° Adjustable Side Mounted Flush-Discharge Valve Assembly
- EPDM Seals Standard
- Pressure rated to 50 psi @ 73°F

Contact Spears® for additional Basket Mesh/Perforation, Elastomer seal options, or other custom requirements desired.

Sample Engineering Specification

All thermoplastic Suction Strainers shall be fabricated from PVC Type I Cell Classification 12454 material. All O-rings shall be EPDM. Strainer basket shall be type 316 stainless steel. Standard strainer perforations shall be 3/16" with a minimum open area ratio of 6:1. Basket shall have bottom-drained direct discharge with 360° adjustable side discharge assembly, including Ball Valve at terminal end. Unit shall have bolt-on bonnet with built-in sight glass. Suction strainer shall be pressure rated at 50 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

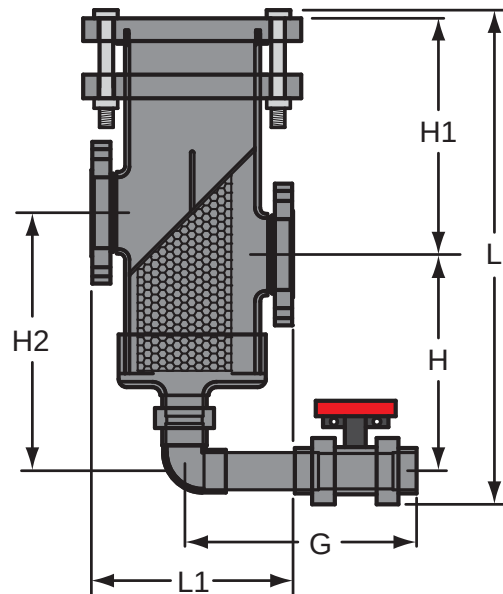
Suction Strainer Stainless Steel Baskets 3/16" Perforation

Size	Part Number
4	SSS4-040
6	SSS4-060
8	SSS4-080
10	SSS4-100
12	SSS4-120

Quick-View Suction Strainer Selection Chart

Valve Size	O-ring Material	Part Numbers	Pressure Rating
		Flanged	
4	EPDM	SS23BS4SG-040	50 psi Non-Shock Water @73°F
4 x 2	EPDM	SS23BS4SG-420	
4 x 2-1/2	EPDM	SS23BS4SG-421	
4 x 3	EPDM	SS23BS4SG-422	
6	EPDM	SS23BS4SG-060	
6 x 4	EPDM	SS23BS4SG-532	
8	EPDM	SS23BS4SG-080	
8 x 4	EPDM	SS23BS4SG-582	
8 x 6	EPDM	SS23BS4SG-585	
10	EPDM	SS23BS4SG-100	
10 x 6	EPDM	SS23BS4SG-626	
10 x 8	EPDM	SS23BS4SG-628	
12	EPDM	SS23BS4SG-120	
12 x 8	EPDM	SS23BS4SG-668	
12 x 10	EPDM	SS23BS4SG-670	

Suction Strainers



Dimensions

Size	G	H	H1	H2	L	L1
4	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-7/8
4 x 2	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	13-1/2
4 x 2-1/2	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-1/2
4 x 3	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-9/16
6	14-13/16	16-7/8	16-7/8	19-15/16	35-7/8	15-7/8
6 x 4	14-13/16	17-15/16	15-13/16	19-15/16	35-7/8	15-7/8
8	17-15/16	22-1/4	21-13/16	27-7/8	46-1/4	18
8 x 4	17-15/16	24-5/16	19-3/4	27-7/8	46-1/4	18
8 x 6	17-15/16	23-1/4	20-13/16	27-7/8	46-1/4	18-1/8
10	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	23-15/16
10 x 6	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	23
10 x 8	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	22-7/8
12	20-3/16	27-3/16	21-5/8	31-3/16	50-13/16	30
12 x 8	20-3/16	29-1/8	19-9/16	31-3/16	50-13/16	29
12 x 10	20-3/16	28-1/16	20-5/8	31-3/16	50-13/16	29-3/4

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	4" - 12"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-



T-Style Cartridge Filters



Sample Engineering Specification

All sediment filters shall be T-Style cartridge type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, or ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All filters shall have removable Type 304 stainless steel cartridge with [specify from chart] mesh perforation or reinforced screen. All filters shall be pressure rated to 200 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick View T-Style Cartridge Filters Selection Chart

PVC Part Numbers ¹				
Cartridge Filter Mesh ²	TF Series (Full Size)			
	Standard		Reverse Flow ²	
	EPDM	FKM	EPDM	FKM
16	TF2-16	TF3-16	TF2-16	TF3-16
32	TF2-32	TF3-32	TF2-32	TF3-32
50	TF2-50	TF3-50	TFR2-50	TFR3-50
76	TF2-76	TF3-76	TFR2-76	TFR3-76
100	TF2-100	TF3-100	TFR2-100	TFR3-100
150	TF2-150	TF3-150	TFR2-150	TFR3-150
200	TF2-200	TF3-200	TFR2-200	TFR3-200
MTF Series (Half-Size)				
16	MTF2-16	MTF3-16	MTF2-16	MTF3-16
32	MTF2-32	MTF3-32	MTF2-32	MTF3-32
50	MTF2-50	MTF3-50	MTFR2-50	MTFR3-50
76	MTF2-76	MTF3-76	MTFR2-76	MTFR3-76
100	MTF2-100	MTF3-100	MTFR2-100	MTFR3-100
150	MTF2-150	MTF3-150	MTFR2-150	MTFR3-150
200	MTF2-200	MTF3-200	MTFR2-200	MTFR3-200

1: For CPVC, Add the letter "C" to the part number (e.g., TF2-16C)

2: Mesh sizes 16 and 32 are perforation cartridges. Same cartridge is used for Standard or Reverse Flow filtration. Mesh sizes 50 - 200 are wire cloth screen with perforated stainless steel reinforcement.

Features – PVC, CPVC

In-line T-Style Cartridge Filters provide high capacity filtration of suspended solids, dirt and debris with reusable Type 304 stainless steel filter cartridges in a variety of mesh sizes. Constructed from PVC or CPVC, this special T-style configuration may be easily ganged in parallel for increased flow and filtration capacity. Standard flow (internal-to-external) filter traps sediment inside cartridge while optional reverse flow (external-to-internal) filter traps sediment on outside of cartridge, according to user preference. Available in full-size TF Series or half-size MTF Series units with IPS size 2-1/2" socket - 3" spigot combination inlet/outlet connection that can be easily adapted to other sizes with use of reducer bushings or couplings.

- Provides In-line Protection of Process Equipment
- PVC or CPVC Construction
- EPDM or FKM O-ring Seals
- Heavy, Reinforced Type 304 Stainless Steel Filter Cartridges in Mesh Sizes 16, 32, 50, 76, 100, 150, or 200
- Standard (Internal-to-External) or Reverse Flow (External-to-Internal) Cartridge Design Option
- Bottom Cartridge Removal with Drain Plug for Cleaning, or Bleed-Off Valve Connection
- Installed Units in Parallel for Increased Filtration Capacity
- Pressure Rated to 200 psi @ 73°F
- Assemble with Silicone-Free, Water Soluble Lubricants

Cartridge Filtration Area

TF Series filter surface area = 214.9 in.² and MTF Series filter surface area = 107.5 in.². Mesh sizes 16 and 32 are perforated stainless steel, 50 to 200 mesh filters are stainless steel wire cloth with perforated stainless backing and internal wire coil to prevent filter collapse or screen blow-out.

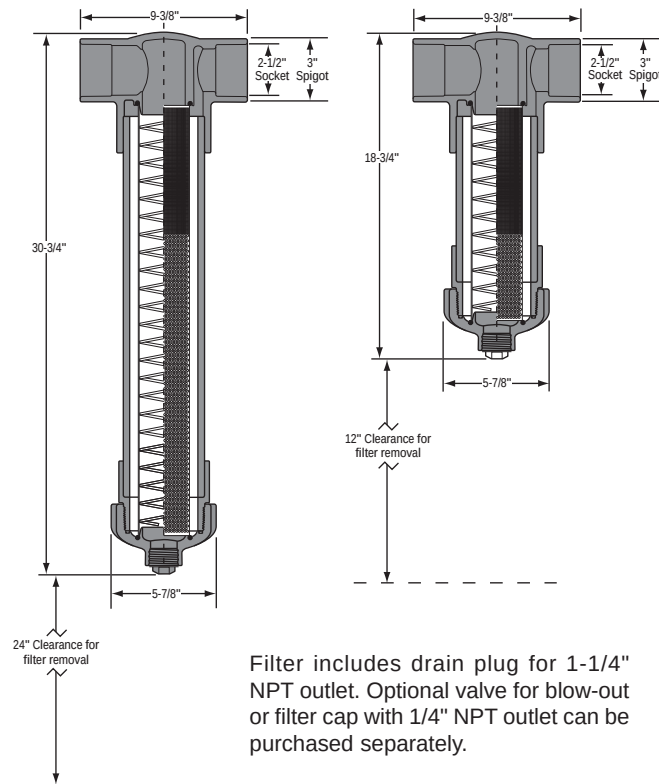
Replacement Filter Cartridges

Mesh Size	Full Size TF Filter Part No.		Half Size MTF Filter Part No.	
	Standard Flow	Reverse Flow	Standard Flow	Reverse Flow
16	FL-16-1	same as Std.	MFL-16-1	same as Std.
32	FL-32-1	same as Std.	MFL-32-1	same as Std.
50	FL-50-1	FLR-50-1	MFL-50-1	MFLR-50-1
76	FL-76-1	FLR-76-1	MFL-76-1	MFLR-76-1
100	FL-100-1	FLR-100-1	MFL-100-1	MFLR-100-1
150	FL-150-1	FLR-150-1	MFL-150-1	MFLR-150-1
200	FL-200-1	FLR-200-1	MFL-200-1	MFLR-200-1

T-Style Cartridge Filters

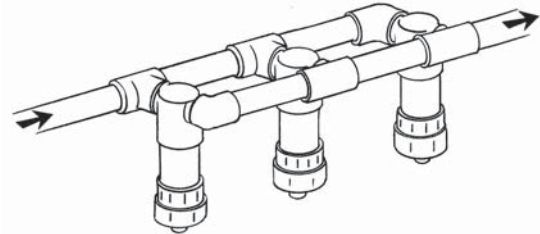


Dimensions



Parallel Filter Installation

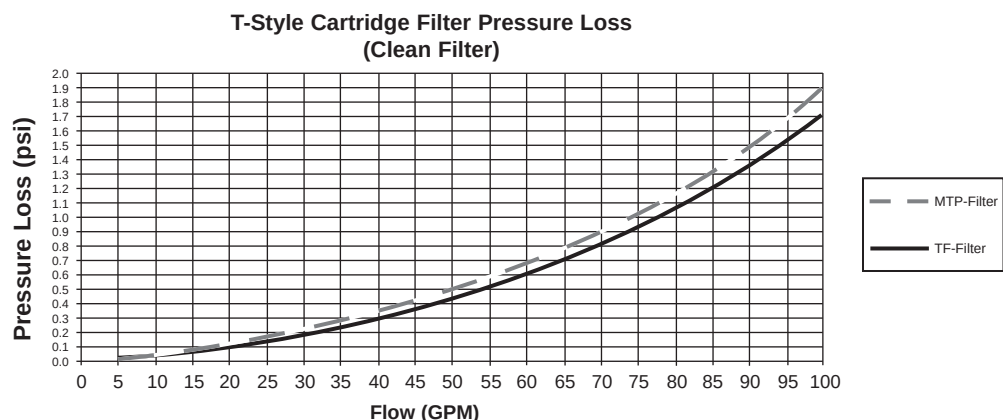
For increased flow or filtration capacity, multiple filters may be installed in parallel as illustrated.



General Installation Information

Avoid installation in direct sun exposure. If required, a white, reflective latex paint coating may be applied to reduce heat absorption. Remove cartridge before solvent cement assembly into system to avoid possible cement contact with screen. Install with proper flow direction as indicated on top of the filter. Be sure to allow clearance in excess of specified space required for removal of cartridge (see drawing notes). Filter drainage or blow-down should be made in normal system flow direction to prevent screen damage. Do not "back flush" unit. Care should be taken in cleaning cartridges to avoid damaging filter screen.

Pressure Loss



Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Filter Pressure Rating psi (MPa)	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	200 (1.38)	155 (1.07)	140 (.97)	125 (.86)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



General Installation

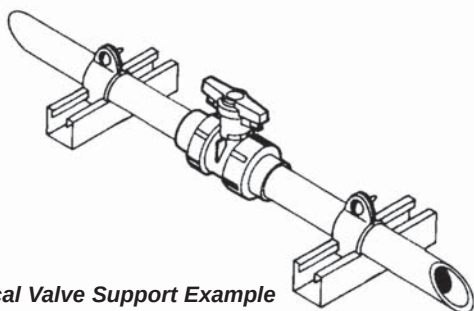
Ease of installation and maintenance is one of the major advantages of using thermoplastic valves. As with any product, certain procedures must be followed for successful installation, service and long life. This section specifies individual installation and maintenance service instructions for Spears® valves. All applicable instructions and procedures should be read thoroughly before starting. Suitability of the intended service application should be determined prior to installation. Please review “**Material Considerations in Application and System Design**”, in the “**MATERIALS**” section of this manual for important additional considerations related valve installations.

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Individual valve installation instructions specific to each product type are packaged with product. The following sections of this manual contain safety precautions and procedures for making solvent cement, threaded or flanged joints.

Precautions & Warnings for All Valve, Strainer & Accessories Installations

CAUTION: The system shall be designed and installed so as not to pull the valve in any direction. Valve and strainers must be supported with conventional piping system support devices.



Typical Valve Support Example

CAUTION: All valve connectors and connecting pipe should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All joining components must be clean and dry. All valves and pipe shall be removed from their packaging or containers and exposed to the environment for a minimum of one hour in order to thermally balance all components. Installation temperatures should be between 40°F and 110°F.

CAUTION: All valves with fixed socket end connectors in the body must be installed in the open position to aid in evaporation of solvent vapors which can attack internal components. **WARNING: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL VALVE COMPONENTS.**

CAUTION: Threaded pipe connections require application of a quality grade thread sealant to seal joint assembly. Sealant should be applied to male pipe threads. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THERMOPLASTIC MATERIALS.**

Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer.

CAUTION: BEFORE THE VALVE IS CYCLED, all dirt, sand, grit or other material shall be flushed from the system. This is to prevent scarring of internal components; e.g., ball, cup, wedge, seats, etc.

WARNING: Some Lubricants, including vegetable oils, are known to cause stress cracking in thermoplastic materials. All lubricants should be checked for compatibility with PVC, CPVC or other thermoplastic products. Formulation changes by lubricant manufacturers may alter compatibility of previously acceptable materials and are beyond our control. Choice of lubricant is at the discretion of the installer.

WARNING: DO NOT USE COMPRESSED AIR OR GAS TO TEST ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, AND DO NOT USE DEVICES PROPELLED BY COMPRESSED AIR OR GAS TO CLEAR SYSTEMS. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING AND COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY. All air must be bled from the system during initial fluid fill. Pressure testing of the system should not be made until all solvent cement joints have properly cured. Initial pressure testing should be made at approximately 10% of the system hydrostatic pressure rating to identify potential problems, prior to testing at higher pressures.

WARNING: Systems should not be operated or flushed out at flow velocities greater than 5 feet per second.

Solvent Cement Welded Joints



Spears® Manufacturing Company recommends following solvent cement manufacturer's recommendations and reading ASTM D 2855, "Standard Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings". This method of joining valves and piping system components is very simple and reliable if procedures are followed correctly. Since variables of temperature, humidity, pipe size, time, and other conditions have a significant effect on solvent cement joints, it is important to understand the principles of each step and make adjustments for actual conditions. Shortcuts or excessive deviations may result in joint failures and / or frozen valve movements.

Safety Precautions

WARNING: Solvent cements and primers for pipe, fittings and valves are flammable. Extinguish all smoking materials, flames, or other ignition sources in working or storage areas. Be sure to work only in a well-ventilated space. Avoid eye and unnecessary skin contact with all cements, primers or solvents. Ingestion or intentional inhalation of solvent vapors can be harmful or fatal. Additional safety precautions may apply, consult solvent cement manufacturer.

Selection of Solvent Cement

A wide variety of solvent cements and primers are commercially available. Selection of specific type, grade and consistency of solvent cement should take into account pipe type, size, installation conditions and chemical compatibility of cement and system fluids. Contact solvent cement manufacturer for additional information.

Required Materials

- Saw & miter box or wheel-type cutter
- Pipe deburring & beveling tool or mill file
- Solvent Cement — PVC cement for PVC materials, CPVC cement for CPVC materials; heavy bodied, as manufactured by Spears® Manufacturing Company
- Primer — as manufactured by Spears® Manufacturing Company
- Brush or dauber type cement and primer applicators — select a size no less than 1/2 the pipe diameter (see chart below).
- Use containers — sealable metal or glass to hold cements and primers
- Cotton cleaning rags
- Cleanup solvents — such as tetrahydrofuran (THF) or methylethylketone (MEK)

Recommended Applicator Size for Solvent Cement and Primer

Applicator Type & Size (in.)	Nominal Pipe Size (in.)									
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5
Brush*	1/2		1				1-1/2		2	3
Dauber	3/4		1-1/2				Not Recommended			
Roller	Not Recommended							3		

General Procedure Outline

General Preparation

For best results, installation should be made at temperatures between 40°F and 110°F.

All joint components should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All pipe and fittings should be removed from their packaging or containers and exposed to the installation environment for a minimum of one hour in order to thermally balance all components.

On True Union Ball, Check and Diaphragm valves, remove union nuts and end connectors before priming and cementing connections. With the threads facing the valve, slide the union nut over the pipe to which the end connector socket is to be cemented. Reinstall the valve body and union nuts only after the joint has fully cured.

On valves with fixed socket connections in the body, be sure the valve is in the open position to aid in evaporation of solvent vapors which can attack internal components. **TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL VALVE COMPONENTS.**

Step 1: Cut Pipe Square

Pipe ends must be cut square, using a wheel-type cutter or saw & miter box. A fine-toothed hand saw (16-18 teeth / inch) with little or no set is recommended. A power cutoff saw with carbide blade is recommended for high volume cutting.

Step 2: Deburr & Bevel Pipe

Regardless of cutting method used in step 1, burrs are created which must be removed from both the pipe I.D. and O.D. before joining. All pipe ends should be beveled 10° to 15°. Commercially available deburring & beveling tool is recommended, or a mill file may be used.

Step 3: Clean Joint Components

Wipe away all loose dirt and moisture from the pipe O.D. and fitting I.D. with a clean, dry cotton rag. **DO NOT ATTEMPT TO JOIN WET SURFACES.**

Step 4: Check Joint Interference Fit

An interference between pipe and fitting socket is necessary for proper fusion of the joint. To check, lightly insert pipe into fitting socket. **DO NOT FORCE.** Interference between pipe and fitting should occur between 1/3 to 2/3 of the socket depth (full interference fit) and the socket bottom (net fit). Do not use components which improperly mate.



Solvent Cement Welded Joints

Step 5: Apply Primer

Primer is necessary to penetrate and soften both pipe and fitting socket surfaces in order for the solvent cement to properly bond. **THE MOST FREQUENT CAUSE OF JOINT FAILURES IS INADEQUATE SOLVENT PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.**

1. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of primer with a scrubbing motion to the fitting socket until the surface is softened and semi-fluid. This may take 5 to 15 seconds depending on size and temperature (larger diameters and lower temperatures will increase required time).
2. Apply primer to pipe in the same manner, extending application area to slightly more than the insertion depth into the fitting socket.
3. Apply a second coat to both the fitting socket and the pipe.
4. Check penetration and softening by scraping the primed surfaces. A few thousandths of the semi-fluid surface should be easily removed. Repeat primer application if necessary.

Step 6: Apply Solvent Cement

Solvent cement must be applied **IMMEDIATELY** to primed surfaces before the primer dries in an alternating 3-coat application. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of solvent cement to the primed pipe surface, then apply a light to medium coat to the primed fitting socket. If a "net fit" was experienced during dry fit check (Step 4), apply an additional coat again to the pipe surface. **BE SURE TO USE A VERY LIBERAL AMOUNT OF SOLVENT CEMENT ON PIPE.**

VALVE INSTALLATION CAUTION: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO CONTACT THE BALL OR OTHER INTERNAL VALVE COMPONENTS.

Step 7: Join Components

IMMEDIATELY following application of cement and before it starts to set, insert the pipe into the fitting socket with a one-quarter turn, twisting motion to evenly distribute cement within the joint. A full bead of cement should form around the circumference of the joint. Hold joint together for approximately 30 seconds to make sure the pipe does not move or back out of the socket.

CAUTION: ABSENCE OF BEAD FORMATION, VOIDS, OR GAPS IN THE BEAD ARE A SIGN OF INSUFFICIENT CEMENT APPLICATION. IF SUCH IS OBSERVED, IMMEDIATELY PULL THE JOINT APART AND REAPPLY AN ADEQUATE AMOUNT OF CEMENT.

Step 8: Remove Excess Cement

Using a cloth, wipe clean all excess cement from the exterior juncture of the pipe and fitting.

Step 9: Initial Set Time

The joint must not be handled or moved for a minimum of 2 minutes, after which the joint must be handled carefully until the cement has gone through a set period. Recommended minimum set time:

30 minutes minimum at 60° to 100°F (15° to 40°C)
1 hour minimum at 40° to 60°F (5° to 15°C)
2 hours minimum at 20° to 40°F (-5° to 5°C)
4 hours minimum at 0° to 20°F (-20° to -5°C)

Step 10: Joint Cure Time

The joint must adequately cure prior to use (see "Joint Cure Schedule" table below). Required cure time depends on temperature, pipe diameter, and pressure application. The following table is based on the guidelines of ASTM D 2855, "Standard Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings". It is the user's responsibility and risk in determining that the joint has properly cured for handling, testing, and use.

Joint Cure Schedule

Temperature	60° - 100°F		40° - 60°F		20° - 40°F		10° - 20°F	
Nominal Pipe Size (in.)	Test Pressure (psi)		Test Pressure (psi)		Test Pressure (psi)		Test Pressure (psi)	
	0-180	181-315	0-180	181-315	0-180	181-315	0-180	181-315
1/2 to 1-1/4	1 hour	6 hours	2 hours	12 hours	6 hours	36 hours	8 hours	48 hours
1-1/2 to 3	2 hours	12 hours	4 hours	24 hours	12 hours	72 hours	16 hours	96 hours
3-1/2 to 5	6 hours	18 hours	12 hours	36 hours	36 hours	4 days	72 hours	8 days
6 to 8	8 hours	24 hours	16 hours	48 hours	3 days	9 days	4 days	12 days

NOTE: Extreme caution should be used when solvent cementing joints at temperatures below 10°F, and many variables exist at temperatures below 20°F. Relative humidity greater than 50% will increase required cure times specified. Consult solvent cement manufacturer for additional information.



Threaded joints are used where piping system dismantling for occasional cleaning or modification is anticipated. Since threading reduces the effective wall thickness of pipe, pressure ratings of the pipe are reduced to one-half that of unthreaded pipe using solvent cement welded joints. Valves, however, have individual pressure ratings substantially different from that of pipe. As a result, no reduction in the valve's specified pressure rating is necessary for threaded connections. Threaded systems should be made with Schedule 80 pipe only, threaded with an ANSI general purpose tapered pipe thread (NPT). Schedule 40 pipe should not be threaded.

General Procedure Outline

Step 1: Apply Joint Sealant

Threaded connections require application of a quality grade thread sealant to seal joint assembly.

WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THERMOPLASTIC MATERIALS. *Spears® Manufacturing Company recommends the use of Spears® BLUE 75™* thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer.

Step 2: Assemble Joint by Hand

Threaded pipe and valves or fittings should be initially assembled "finger tight" (just enough to fully engage thread clearance).

Step 3: Strap Wrench Make-Up

Threaded plastic pipe and fitting components should always be installed using commercially available strap wrenches. Do not use conventional pipe wrenches which can damage plastic piping materials.

WARNING: THE SINGLE MOST COMMON CAUSE OF THREADED JOINT FAILURE IS OVER TIGHTENING. *Tapered pipe threads produce radial stress in female fittings. Over tightening can exceed the stress limits of thermoplastic materials, resulting in split fittings.*

Apply strap wrench make-up of **no more than one to two turns** beyond finger tight thread engagement. Care should be taken in final positioning so as to avoid the need to "back-up" the wrenched assembly.



Flanged Connections

Flanges are used extensively for connections where removable system components are desired. Such includes periodic system servicing, anticipated system modification or add-on, and temporary component hookups. Flanges are also the standard connection for industrial butterfly type valves.

Pressure Ratings

Plastic pipe flanges are designed for system maximum internal pressures of 150 psi, water at 73°F, which must be taken into consideration when using flanges with higher pressure rated components, such as pipe or valves. As with all thermoplastic piping materials, pressure rating is a function of temperature. Refer to **“Temperature Pressure Rating for 150 psi Flanges”** chart below and that specified for individual products. Certain variations may exist according to product type and size.

Bolt Holes & Pattern

Bolt patterns and number of bolt holes are the same as Class 150 metal flanges per ANSI B16.5.

Gaskets

Full faced, 1/8" thick elastomer gaskets with a Shore “A” Durometer of approximately 70 is recommended.

Bolt Torque

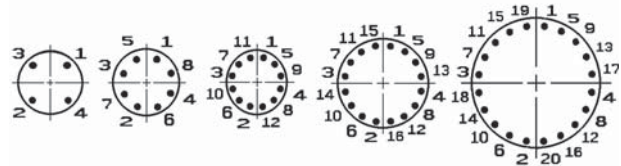
Recommended Bolt torque requirements are shown below. Threads should be clean and well lubricated. Actual field conditions may require variations in these recommendations.

CAUTION: UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.

Flange Size (in.)	Recommended Torque (ft. lbs.)
1/2 - 1-1/2	12
2 - 4	25
5	30
6 - 8	40
10	64
12	95
14 - 24	110

Torque Sequence

Bolts should be tightened in a 180° opposing pattern. Recommended bolt torque sequence is shown in the following table.



General Procedure Outline

Once a flange is attached to the pipe or valve, the method of joining two flanges is as follows:

- Step 1:** Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.
- Step 2:** With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position. (Consideration should be given to alignment of One-Piece Flange prior to joining with pipe.)
- Step 3:** Insert all bolts, washers (two standard flat washers per bolt), and nuts.
- Step 4:** Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.
- Step 5:** Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lbs. increments according to the sequence shown in the above table following a 180° opposing sequence.
- Step 6:** Care must be taken to avoid “bending” the flange when joining a Spears® flange to a “raised face” flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Flange Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	65 (.45)	50 (.34)	45 (.31)	30 (.21)	20 (.14)	-0- (-0-)	-0- (-0-)	-0- (-0-)

Valve Service & Replacement Kits



For easy servicing and extended valve life, Spears® provides numerous maintenance repair kits and replaceable components for all repairable valves. Repair Kits generally include applicable seats, O-ring seals, diaphragms and other components typically subjected to normal operational wear.

Full Cartridge Replacement Kits are available for all True Union style ball valves and ball check valves. These include complete valve assembly, less union nuts and end connectors. Replacement Cartridges can be directly installed in place of existing valve unit using existing union nuts and end connectors.

Individual valve replacement parts may be ordered from the factory. Complete maintenance service instructions for each valve are available. Please contact Spears® Technical Services Department.

True Union 2000 Industrial Ball Valve Seat & O-ring Repair Kit

All kits include PTFE Seats (2), End Connector O-rings (2), Seal Carrier O-ring (1), Stem Bushing (1) and Stem O-rings (2). Sizes 2-1/2" & larger includes Seat O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU2-ERK-005	TU2-VRK-005
3/4	TU2-ERK-007	TU2-VRK-007
1	TU2-ERK-010	TU2-VRK-010
1-1/4	TU2-ERK-012	TU2-VRK-012
1-1/2	TU2-ERK-015	TU2-VRK-015
2	TU2-ERK-020	TU2-VRK-020
2-1/2 & 3	TU2-ERK-030	TU2-VRK-030
4	TU2-ERK-040	TU2-VRK-040
6	TU2-ERK-060	TU2-VRK-060

True Union 2000 Industrial Ball Valve Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number ¹	
	w/EPDM O-rings	w/FKM O-rings
1/2	1820-005	1830-005
3/4	1820-007	1830-007
1	1820-010	1830-010
1-1/4	1820-012	1830-012
1-1/2	1820-015	1830-015
2	1820-020	1830-020
2-1/2 & 3	1820-030	1830-030
4	1820-040	1830-040
6	1820-060	1830-060

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 1820-005C).

True Union 2000 Standard Ball Valve Seat & O-ring Repair Kit

All kits include PTFE/HDPE Seats (2), End Connector O-rings (2), Seal Carrier O-ring (1), and Stem O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU1-ERK-005	TU1-VRK-005
3/4	TU1-ERK-007	TU1-VRK-007
1	TU1-ERK-010	TU1-VRK-010
1-1/4	TU1-ERK-012	TU1-VRK-012
1-1/2	TU1-ERK-015	TU1-VRK-015
2	TU1-ERK-020	TU1-VRK-020
2-1/2 & 3	TU1-ERK-030	TU1-VRK-030
4	TU1-ERK-040	TU1-VRK-040

True Union 2000 Standard Ball Valve Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number ¹	
	w/EPDM O-rings	w/FKM O-rings
1/2	3620-005	3630-005
3/4	3620-007	3630-007
1	3620-010	3630-010
1-1/4	3620-012	3630-012
1-1/2	3620-015	3630-015
2	3620-020	3630-020
2-1/2 & 3	3620-030	3630-030
4	3620-040	3630-040

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 3620-005C).



Valve Service & Replacement Kits

True Union 2000 Industrial 3-Way Ball Valve

Seat & O-ring Repair Kit (Horizontal or Vertical)

All kits include PTFE Seats (2-no branch seal), End Connector O-rings (3), Seal Carrier O-ring (1), Stem Bushing (1) and Stem O-rings (2). Sizes 2-1/2" & larger includes Seat O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU3-ERK-005	TU3-VRK-005
3/4	TU3-ERK-007	TU3-VRK-007
1	TU3-ERK-010	TU3-VRK-010
1-1/4	TU3-ERK-012	TU3-VRK-012
1-1/2	TU3-ERK-015	TU3-VRK-015
2	TU3-ERK-020	TU3-VRK-020
2-1/2 & 3	TU3-ERK-030	TU3-VRK-030
4	TU3-ERK-040	TU3-VRK-040

True Union 2000 Industrial Ball Check Valve

O-ring Repair Kit

All kits include End Connector O-rings (2), Seal Carrier O-ring (1), Seat Plate O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	CK2-ERK-005	CK2-VRK-005
3/4	CK2-ERK-007	CK2-VRK-007
1	CK2-ERK-010	CK2-VRK-010
1-1/4	CK2-ERK-012	CK2-VRK-012
1-1/2	CK2-ERK-015	CK2-VRK-015
2	CK2-ERK-020	CK2-VRK-020
2-1/2 & 3	CK2-ERK-030	CK2-VRK-030
4	CK2-ERK-040	CK2-VRK-040
6	CK2-ERK-060	CK2-VRK-060

Regular True Union Ball Valve

Seat & O-ring Repair Kit

All kits include End Connector O-rings (2), Seal Carrier O-ring (1), Stem Bushing (1) and Seat O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU-ERK-005	TU-VRK-005
3/4	TU-ERK-007	TU-VRK-007
1	TU-ERK-010	TU-VRK-010
1-1/4	TU-ERK-012	TU-VRK-012
1-1/2	TU-ERK-015	TU-VRK-015
2	TU-ERK-020	TU-VRK-020
2-1/2 & 3	TU-ERK-030	TU-VRK-030
4 & 6	TU-ERK-040	TU-VRK-040

True Union 2000 Industrial 3-Way Ball Valve

Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	Vertical PVC Part Number ^{1,2,5}		Horizontal PVC Part Number ^{1,2,3,4}	
	w/EPDM O-rings	w/FKM O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	4720L1-005	4730L1-005	5020L1-005	5030L1-005
3/4	4720L1-007	4730L1-007	5020L1-007	5030L1-007
1	4720L1-010	4730L1-010	5020L1-010	5030L1-010
1-1/4	4720L1-012	4730L1-012	5020L1-012	5030L1-012
1-1/2	4720L1-015	4730L1-015	5020L1-015	5030L1-015
2	4720L1-020	4730L1-020	5020L1-020	5030L1-020
2-1/2 & 3	4720L1-030	4730L1-030	5020L1-030	5030L1-030
4	4720L1-040	4730L1-040	5020L1-040	5030L1-040

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 4720L1-005C).

2: For Double L-Port, change "L1" portion of part number to L2 (e.g. 4720L2-005).

3: For Tripple L-Port, change "L1" portion of part number to L3 (e.g. 4720L3-005).

4: For T-Port, change "L1" portion of part number to "T" (e.g. 4720T-005).

True Union 2000 Industrial Ball Check Valve

Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number ¹	
	w/EPDM O-rings	w/FKM O-rings
1/2	4520-005	4530-005
3/4	4520-007	4530-007
1	4520-010	4530-010
1-1/4	4520-012	4530-012
1-1/2	4520-015	4530-015
2	4520-020	4530-020
2-1/2 & 3	4520-030	4530-030
4	4520-040	4530-040
6	4520-060	4530-060

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 4520-005C).

Regular True Union Ball Check Valve

O-ring Repair Kit

Includes ball seal O-ring (1), end-connector O-rings (2), and seal carrier O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	CK-ERK-005	CK-VRK-005
3/4	CK-ERK-007	CK-VRK-007
1	CK-ERK-010	CK-VRK-010
1-1/4	CK-ERK-012	CK-VRK-012
1-1/2	CK-ERK-015	CK-VRK-015
2	CK-ERK-020	CK-VRK-020
2-1/2 & 3	CK-ERK-030	CK-VRK-030
4	CK-ERK-040	CK-VRK-040

Valve Service & Replacement Kits



Regular True Union Ball Valve Cartridge Replacement Kit

Includes valve assembly, less union nuts, and end connectors.

Size	PVC Part Number ¹	
	w/EPDM O-rings	w/FKM O-rings
1/2	2320-005	2330-005
3/4	2320-007	2330-007
1	2320-010	2330-010
1-1/4	2320-012	2330-012
1-1/2	2320-015	2330-015
2	2320-020	2330-020
2-1/2 & 3	2320-030	2330-030
4 & 6	2320-040	2330-040

¹ For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2320-005C).

Regular True Union Ball Check Valve Cartridge Replacement Kit

Includes valve assembly, less union nuts, and end connectors.

Size	PVC Part Number ¹	
	w/EPDM O-rings	w/FKM O-rings
1/2	2220-005	2230-005
3/4	2220-007	2230-007
1	2220-010	2230-010
1-1/4	2220-012	2230-012
1-1/2	2220-015	2230-015
2	2220-020	2230-020
2-1/2 & 3	2220-030	2230-030
4	2220-040	2230-040

¹ For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2220-005C).

Single Entry Ball Valve Seat & O-ring Replacement Kit

Includes PTFE seats (2), seat O-rings (2), and seal carrier O-ring (1).

Size	Part Number		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	SE-BRK-005	SE-ERK-005	SE-VRK-005
3/4	SE-BRK-007	SE-ERK-007	SE-VRK-007
1	SE-BRK-010	SE-ERK-010	SE-VRK-010
1-1/4 & 1-1/2	SE-BRK-015	SE-ERK-015	SE-VRK-015
2	SE-BRK-020	SE-ERK-020	SE-VRK-020
3	SE-BRK-030	SE-ERK-030	SE-VRK-030
4	SE-BRK-040	SE-ERK-040	SE-VRK-040

Gate Valve O-ring Repair Kit

1/2" through 2" Kit includes stem O-ring (1), body O-ring (1), wedge O-ring or gasket (1), stem bushing (1) and stem washer (1).

2" and 3" Kit includes seal carrier O-ring (1), stem O-ring (1), stem washer (1) and stem bushing (1).

4" Kit includes carrier O-ring (1), stem O-ring (1) and stem bushing.

Size	Part Number		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	GT-BRK-005	GT-ERK-005	GT-VRK-005
3/4	GT-BRK-007	GT-ERK-007	GT-VRK-007
1	GT-BRK-010	GT-ERK-010	GT-VRK-010
1-1/4	GT-BRK-012	GT-ERK-012	GT-VRK-012
1-1/2	GT-BRK-015	GT-ERK-015	GT-VRK-015
2	GT-BRK-020	GT-ERK-020	GT-VRK-020
2-1/2 & 3	GT-BRK-030	GT-ERK-030	GT-VRK-030
4	GT-BRK-040	GT-ERK-040	GT-VRK-040

Gate Valve Internal Replacement Cartridge

Includes complete internal assembly with bonnet and handle.

Size	Part Number ¹		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	2010-005	2020-005	2030-005
3/4	2010-007	2020-007	2030-007
1	2010-010	2020-010	2030-010
1-1/4 & 1-1/2	2010-015	2020-015	2030-015
2	2010-020	2020-020	2030-020

¹ For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2010-005C).



Valve Service & Replacement Kits

Butterfly Valve Standard & True Lug Seat Repair Kit

Standard Valve and True Lug Kit through 12" includes Buna-N, EPDM or FKM seat (1) and PVC or CPVC seal carrier (1).

Sizes 14" and larger include EPDM or FKM seat only.

Size	PVC Part Number ^{1,2}		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BRK-015	BF-ERK-015	BF-VRK-015
2	BF-BRK-020	BF-ERK-020	BF-VRK-020
2-1/2	BF-BRK-025	BF-ERK-025	BF-VRK-025
3	BF-BRK-030	BF-ERK-030	BF-VRK-030
4	BF-BRK-040	BF-ERK-040	BF-VRK-040
6	BF-BRK-060	BF-ERK-060	BF-VRK-060
8	BF-BRK-080	BF-ERK-080	BF-VRK-080
10	BF-BRK-100	BF-ERK-100	BF-VRK-100
12	BF-BRK-120	BF-ERK-120	BF-VRK-120
14	—	BF-ERK-140	BF-VRK-140
16	—	BF-ERK-160	BF-VRK-160
18	—	BF-ERK-180	BF-VRK-180
20	—	BF-ERK-200	BF-VRK-200
24	—	BF-ERK-240	BF-VRK-240

1: For CPVC Seat Replacement Kit, add a "C" to the end of the part number shown (e.g., BF-BRK-015C).

2: For PP, add a "P" to the end of the part number (e.g., BF-BRK-015P).

Butterfly Valve Standard Valve Overhaul Kit

For standard sizes through 12" includes stem nut (1), stem bushing (1), bushing O-ring (2), stem O-ring (2), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), disc O-ring (2) and stem bearing (1).

Sizes 14" and larger includes stem nut (1) 14" only, stem bearing (1), bearing O-ring (1), stem bushing (1), bushing O-ring (3), seal carrier (1), seat (1) and stem O-ring (2) 16" and larger only.

Size	PVC Part Number ^{1,2}		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BOK-015	BF-EOK-015	BF-VOK-015
2	BF-BOK-020	BF-EOK-020	BF-VOK-020
2-1/2	BF-BOK-025	BF-EOK-025	BF-VOK-025
3	BF-BOK-030	BF-EOK-030	BF-VOK-030
4	BF-BOK-040	BF-EOK-040	BF-VOK-040
6	BF-BOK-060	BF-EOK-060	BF-VOK-060
8	BF-BOK-080	BF-EOK-080	BF-VOK-080
10	BF-BOK-100	BF-EOK-100	BF-VOK-100
12	BF-BOK-120	BF-EOK-120	BF-VOK-120
14	—	BF-EOK-140	BF-VOK-140
16	—	BF-EOK-160	BF-VOK-160
18	—	BF-EOK-180	BF-VOK-180
20	—	BF-EOK-200	BF-VOK-200
24	—	BF-EOK-240	BF-VOK-240

1: CPVC Standard Valve Overhaul Kit available through 12" only. Add a "C" to the end of the part number shown (e.g., BF-BOK-015C).

2: For PP, add a "P" to the end of the part number (e.g., BF-BOK-015P).

Important Repair & Overhaul Kit Note

Ongoing Butterfly Valve design improvements have resulted in variations to repair kits. Standard cataloged kits are for current 72 part number series, dry-stem type valve revision. Kits for previous revisions are available and can be determined by valve serial number. When ordering kits, please specify valve size, material (PVC, CPVC, PP), Standard or True Lug type valve, Buna-N, EPDM or FKM elastomer material, and valve serial number stamped on the bottom of the valve body to insure proper kit selection. Stainless Steel Stems are normally not replaced, but can be ordered separately on request.

Butterfly Valve True Lug Valve Overhaul Kit

Includes stem nut (1), stem bushing (1), bushing O-ring (1), stem O-ring (1), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), seal carrier, flange O-ring (1), disc O-ring (2) and stem bearing (1).

Size	PVC Part Number ¹		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BFT-BOK-015	BFT-EOK-015	BFT-VOK-015
2	BFT-BOK-020	BFT-EOK-020	BFT-VOK-020
2-1/2	BFT-BOK-025	BFT-EOK-025	BFT-VOK-025
3	BFT-BOK-030	BFT-EOK-030	BFT-VOK-030
4	BFT-BOK-040	BFT-EOK-040	BFT-VOK-040
6	BFT-BOK-060	BFT-EOK-060	BFT-VOK-060
8	BFT-BOK-080	BFT-EOK-080	BFT-VOK-080
10	BFT-BOK-100	BFT-EOK-100	BFT-VOK-100
12	BFT-BOK-120	BFT-EOK-120	BFT-VOK-120

1: For CPVC True Lug Valve Overhaul Kit, add a "C" to the end of the part number shown (e.g., BFT-BOK-015C).

Valve Service & Replacement Kits



Butterfly Valve

Standard Valve Overhaul Kit with Disc

For standard sizes through 12" includes stem nut (1), stem bushing (1), bushing O-ring (2), stem O-ring (2), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), disc (1), disc O-ring (2) and stem bearing (1).

Sizes 14" and larger includes stem nut (1) 14" only, stem bearing (1), bearing O-ring (1), stem bushing (1), bushing O-ring (3), disc (1), seal carrier (1), seat (1) and stem O-ring (2) 16" and larger only.

Size	Part Number ^{1,2}		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BOKD-015	BF-EOKD-015	BF-VOKD-015
2	BF-BOKD-020	BF-EOKD-020	BF-VOKD-020
2-1/2	BF-BOKD-025	BF-EOKD-025	BF-VOKD-025
3	BF-BOKD-030	BF-EOKD-030	BF-VOKD-030
4	BF-BOKD-040	BF-EOKD-040	BF-VOKD-040
6	BF-BOKD-060	BF-EOKD-060	BF-VOKD-060
8	BF-BOKD-080	BF-EOKD-080	BF-VOKD-080
10	BF-BOKD-100	BF-EOKD-100	BF-VOKD-100
12	BF-BOKD-120	BF-EOKD-120	BF-VOKD-120
14	—	BF-EOKD-140	BF-VOKD-140
16	—	BF-EOKD-160	BF-VOKD-160
18	—	BF-EOKD-180	BF-VOKD-180
20	—	BF-EOKD-200	BF-VOKD-200
24	—	BF-EOKD-240	BF-VOKD-240

1: CPVC Standard Valve Overhaul Kit available through 12" only. Add a "C" to the end of the part number shown (e.g., BF-BOKD-015C).

2: For PP, add a "P" to the end of the part number (e.g., BF-BOKD-015P).

Butterfly Valve

True Lug Valve Overhaul Kit with Disc

Includes stem nut (1), stem bushing (1), bushing O-ring (1), stem O-ring (1), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1) seal carrier flange O-ring (1), disc (1), disc O-ring (2) and stem bearing (1).

Size	Part Number ¹		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BFT-BOKD-015	BFT-EOKD-015	BFT-VOKD-015
2	BFT-BOKD-020	BFT-EOKD-020	BFT-VOKD-020
2-1/2	BFT-BOKD-025	BFT-EOKD-025	BFT-VOKD-025
3	BFT-BOKD-030	BFT-EOKD-030	BFT-VOKD-030
4	BFT-BOKD-040	BFT-EOKD-040	BFT-VOKD-040
6	BFT-BOKD-060	BFT-EOKD-060	BFT-VOKD-060
8	BFT-BOKD-080	BFT-EOKD-080	BFT-VOKD-080
10	BFT-BOKD-100	BFT-EOKD-100	BFT-VOKD-100
12	BFT-BOKD-120	BFT-EOKD-120	BFT-VOKD-120

1: For CPVC True Lug Valve Overhaul Kit with Disc, add a "C" to the end of the part number shown (e.g., BFT-BOKD-015C).

Wafer Butterfly Valve Overhaul Kit

All Kits include Seat (1), Flange Gaskets (2), Stem Bushing O-rings (2), Bushing Washers (2), Stem Bushings (2).

Size	Part Number		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BOK-020	BFW-EOK-020	BFW-VOK-020
2-1/2	BFW-BOK-025	BFW-EOK-025	BFW-VOK-025
3	BFW-BOK-030	BFW-EOK-030	BFW-VOK-030
4	BFW-BOK-040	BFW-EOK-040	BFW-VOK-040
6	BFW-BOK-060	BFW-EOK-060	BFW-VOK-060
8	BFW-BOK-080	BFW-EOK-080	BFW-VOK-080
10	BFW-BOK-100	BFW-EOK-100	BFW-VOK-100
12	BFW-BOK-120	BFW-EOK-120	BFW-VOK-120

Wafer Butterfly Valve Overhaul Kit w/Disc

All Kits include Seat (1), Flange Gaskets (2), Stem Bushing O-rings (2), Stem Bushing Washers (2), Stem Bushings (2), Replacement Disc (1).

Size	Part Number ¹		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BOKD-020	BFW-EOKD-020	BFW-VOKD-020
2-1/2	BFW-BOKD-025	BFW-EOKD-025	BFW-VOKD-025
3	BFW-BOKD-030	BFW-EOKD-030	BFW-VOKD-030
4	BFW-BOKD-040	BFW-EOKD-040	BFW-VOKD-040
6	BFW-BOKD-060	BFW-EOKD-060	BFW-VOKD-060
8	BFW-BOKD-080	BFW-EOKD-080	BFW-VOKD-080
10	BFW-BOKD-100	BFW-EOKD-100	BFW-VOKD-100
12	BFW-BOKD-120	BFW-EOKD-120	BFW-VOKD-120

1: For CPVC Overhaul Kits with Disc available in EPDM or FKM only. Add a "C" to the end of the part number shown (e.g., BFW-EOKD-020C).

Wafer Butterfly Valve Overhaul Kit

All Kits include Seat (1), Flange Gaskets (2).

Size	Part Number		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BRK-020	BFW-ERK-020	BFW-VRK-020
2-1/2	BFW-BRK-025	BFW-ERK-025	BFW-VRK-025
3	BFW-BRK-030	BFW-ERK-030	BFW-VRK-030
4	BFW-BRK-040	BFW-ERK-040	BFW-VRK-040
6	BFW-BRK-060	BFW-ERK-060	BFW-VRK-060
8	BFW-BRK-080	BFW-ERK-080	BFW-VRK-080
10	BFW-BRK-100	BFW-ERK-100	BFW-VRK-100
12	BFW-BRK-120	BFW-ERK-120	BFW-VRK-120



Valve Service & Replacement Kits

Industrial Swing Check Valve Seat & O-ring Repair Kit

All kits include Bonnet O-ring (1), Disc O-ring (1), Seat O-ring (1), Plug O-ring (1) and Arm Plug O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
3/4	SK-ERK-007	SK-VRK-007
1	SK-ERK-010	SK-VRK-010
1-1/4	SK-ERK-012	SK-VRK-012
1-1/2	SK-ERK-015	SK-VRK-015
2	SK-ERK-020	SK-VRK-020
2-1/2 & 3	SK-ERK-030	SK-VRK-030
4	SK-ERK-040	SK-VRK-040
6	SK-ERK-060	SK-VRK-060
8	SK-ERK-080	SK-VRK-080

Butterfly Check Valve Repair Kit

Repair Kit Contains: 1-Flex Seal Gasket Seat, 1-Hinge Post, 2-Flapper Plates, 2-Flapper Covers, 1-Post Strip, 2-Seat Post O-rings & Plastic Assembly Screws.

Use Existing Hinge post Bolts

Size	Part Number ¹	
	w/EPDM O-rings	w/FKM O-rings
2	BFC-ERK-020	BFC-VRK-020
2-1/2	BFC-ERK-025	BFC-VRK-025
3	BFC-ERK-030	BFC-VRK-030
4	BFC-ERK-040	BFC-VRK-040
6	BFC-ERK-060	BFC-VRK-060
8	BFC-ERK-080	BFC-VRK-080
10	BFC-ERK-100	BFC-VRK-100
12	BFC-ERK-120	BFC-VRK-120

1: For CPVC Butterfly Check Valve Repair Kit, add a "C" to the end of the part number shown (e.g., BFC-ERK-020C).

Valve Service & Replacement Kits



Y-Pattern Valve - Internal Repair Kit

Internal Repair Kit includes: Stem O-ring (1), Seal Carrier (1), along with a factory assembled (required) internal component replacement unit consisting of Stem assembled with Seat & Seal Carrier components. Install in valve using existing valve Bonnet, Bonnet Nut, and Handle/Nut. True Union style valve kits include an additional End Connector O-rings (2).

Size	Part Number							
	w/EPDM O-ring	CPVC w/ EPDM O-ring	w/FKM O-ring	CPVC w/FKM O-ring	Union w/ EPDM O-ring	CPVC Union w/ EPDM O-ring	Union w/ FKM O-ring	CPVC Union w/ FKM O-ring
1/2	YV-ERK-005	YV-ERK-005C	YV-VRK-005	YV-VRK-005C	YV-UERK-005	YV-UERK-005C	YV-UVRK-005	YV-UVRK-005C
3/4	YV-ERK-007	YV-ERK-007C	YV-VRK-007	YV-VRK-007C	YV-UERK-007	YV-UERK-007C	YV-UVRK-007	YV-UVRK-007C
1	YV-ERK-010	YV-ERK-010C	YV-VRK-010	YV-VRK-010C	YV-UERK-010	YV-UERK-010C	YV-UVRK-010	YV-UVRK-010C
1-1/4	YV-ERK-012	YV-ERK-012C	YV-VRK-012	YV-VRK-012C	YV-UERK-012	YV-UERK-012C	YV-UVRK-012	YV-UVRK-012C
1-1/2	YV-ERK-015	YV-ERK-015C	YV-VRK-015	YV-VRK-015C	YV-UERK-015	YV-UERK-015C	YV-UVRK-015	YV-UVRK-015C
2	YV-ERK-020	YV-ERK-020C	YV-VRK-020	YV-VRK-020C	YV-UERK-020	YV-UERK-020C	YV-UVRK-020	YV-UVRK-020C
3	YV-ERK-030	YV-ERK-030C	YV-VRK-030	YV-VRK-030C	YV-UERK-030	YV-UERK-030C	YV-UVRK-030	YV-UVRK-030C
4	YV-ERK-040	YV-ERK-040C	YV-VRK-040	YV-VRK-040C	YV-UERK-040	YV-UERK-040C	YV-UVRK-040	YV-UVRK-040C

Y-Check Valve - Seat & O-ring Repair Kit

All Kits include Seat (1), Bonnet O-ring (1), and Plug O-ring (1).

All True Union Kits include Seat (1), Bonnet O-ring (1), Plug O-ring (1), and End Connector O-rings (2).

Size	Part Number			
	w/EPDM O-ring	w/FKM O-ring	Union w/EPDM O-ring	Union w/FKM O-ring
1/2	YC-ERK-005	YC-VRK-005	YC-UERK-005	YC-UVRK-005
3/4	YC-ERK-007	YC-VRK-007	YC-UERK-007	YC-UVRK-007
1	YC-ERK-010	YC-VRK-010	YC-UERK-010	YC-UVRK-010
1-1/4	YC-ERK-012	YC-VRK-012	YC-UERK-012	YC-UVRK-012
1-1/2	YC-ERK-015	YC-VRK-015	YC-UERK-015	YC-UVRK-015
2	YC-ERK-020	YC-VRK-020	YC-UERK-020	YC-UVRK-020
3	YC-ERK-030	YC-VRK-030	YC-UERK-030	YC-UVRK-030
4	YC-ERK-040	YC-VRK-040	YC-UERK-040	YC-UVRK-040

Diaphragm Valve - Diaphragm & End Connector O-ring Replacement Kit

Includes diaphragm (1), and end connector O-rings (2).

Size	Part Number				
	EPDM O-ring & DIAPHRAGM KIT	EPDM O-ring & PTFE* DIAPHRAGM KIT	FKM O-ring & DIAPHRAGM KIT	FKM O-ring & PTFE* DIAPHRAGM KIT	FKM O-ring & FKM Backed Diaphragm Kit
1/2	DV-ERK-005	DV-TERK-005	DV-VRK-005	DV-TVrk-005	DV-VTVRK-005
3/4	DV-ERK-007	DV-TERK-007	DV-VRK-007	DV-TVrk-007	DV-VTVRK-007
1	DV-ERK-010	DV-TERK-010	DV-VRK-010	DV-TVrk-010	DV-VTVRK-010
1-1/4 or 1-1/2	DV-ERK-015	DV-TERK-015	DV-VRK-015	DV-TVrk-015	DV-VTVRK-015
2	DV-ERK-020	DV-TERK-020	DV-VRK-020	DV-TVrk-020	DV-VTVRK-020

* Elastomer backed PTFE laminated diaphragm.

Diaphragm Valve - Replacement Diaphragm

Size	Part Number			
	EPDM DIAPHRAGM	FKM DIAPHRAGM	PTFE* DIAPHRAGM	FKM backed PTFE* DIAPHRAGM
1/2	27-39-00541	27-39-00542	27-39-00565	27-39-00566A
3/4	27-39-00741	27-39-00742	27-39-00765	27-39-00766A
1	27-39-01041	27-39-01042	27-39-01065	27-39-01066A
1-1/4 or 1-1/2	27-39-01541	27-39-01542	27-39-01565	27-39-01566
2	27-39-02041	27-39-02042	27-39-02065	27-39-02066
2-1/2 or 3	27-39-03041	27-39-03042	27-39-03065	27-39-03066
4	27-39-04041	27-39-04042	27-39-04065	27-39-04066
6	27-39-06041	27-39-06042	27-39-06065	27-39-06066
8	27-39-08041	27-39-08042	27-39-08065	27-39-08066

* Elastomer backed PTFE laminated diaphragm.



Ball Valve Troubleshooting Guide

Spears® True Union, Single Entry and Compact Ball Valves are designed and produced for trouble-free operation and use. However, certain aspects of installation and application can result in valve malfunctions.

This guide identifies some of the more common problems encountered and their necessary corrective actions. Such problems have been categorized as External Leaks, Internal Leaks, Frozen Movements and Structural Breakage.

External Leaks		
Location	Possible Cause	Corrective Action
At Thread/Socket Connections	Improper solvent cementing. Improper threads. Insufficient or improperly applied thread sealant; incompatible sealant (paste). Over-tightened thread joint splitting connector. Insufficient valve support splitting connector.	Replace end connector(s) according to installation instructions. Check threads for proper size; replace or reinstall. Reinstall thread connection according to proper procedures; check paste compatibility. Replace cracked end connector(s). Replace cracked end connector(s). Add support on each side of valve.
At Union Nuts	End connector misaligned. Displaced or damaged O-ring; particles in O-ring groove. System contraction pulling end connectors; improper end connector spacing. Loose Union Nut. Displaced or pinched seal carrier O-ring.	Check system alignment - end connector(s) must be parallel. Check for adequate valve support. Remove valve and inspect O-ring for physical or chemical damage. Check O-ring compatibility, replace accordingly. Clean and re-seat O-ring. Check thermal variations; anchor pipe each side of valve; install expansion loop. Correct spacing. Re-tighten nut. Remove and disassemble seal carrier; re-seat or replace O-ring.
At Stem	Damaged stem O-ring.	Remove and disassemble valve stem; inspect for physical or chemical damage. Check O-ring compatibility, clean and replace accordingly.

Ball Valve Troubleshooting Guide



Internal Leaks — In-line Leakage Past Valve

Possible Cause	Corrective Action
Ball obstruction	Check that the valve is in its "full-closed" position. If not, remove valve and check for solids blocking the ball port. Clean and reinstall valve.
Broken Stem	Remove end connector and check for ball rotation while operating valve. Replace as necessary.
Seal Carrier Loose	True Union Valves - remove valve; CAREFULLY tighten seal carrier (located on inlet end of body). Single Entry Valves - CAREFULLY tighten single Union Nut. IMPORTANT: Generally only a slight adjustment is required (either valve). A properly adjusted valve should have significant resistance to operation without binding - AVOID OVER-TIGHTENING!
PTFE Seat Damage or Debris Laden	Remove and disassemble valve seats. Check for excessive debris and physical damage (nicks, cuts, scoring, etc.). Clean and replace as necessary.
Seat O-ring Displaced, Damaged or Debris Laden	Remove and disassemble valve seat O-rings; check for physical or chemical damage. Check O-ring chemical compatibility; clean and replace accordingly. Check for excessive system flow rate.
Ball Damaged	Remove and disassemble valve ball. Check for physical damage (excessive nicks, scoring, etc.) at seat sealing surface (perpendicular to ball port). Clean surface; replace ball if necessary. Check for chemical damage and valve material (PVC, CPVC) compatibility.
Solvent-Cement (glue) Contamination from Installation Spillage	Remove valve and check for glue deposits on ball or seat areas. Clean, if possible; excessive damage may require component replacement.
Thermal Damage (component distortion)	Check system operating temperatures, external heat sources (including direct sun), and heat generated from system design or valve placement.

Frozen Movements — unable, or very difficult, to open/close; sometimes accompanied by stem break (shear)

Possible Cause	Corrective Action
Internal Obstructions; Sediment or Particle Buildup; Solvent Cement on Ball	Remove valve and check for solids, debris or solvent cement deposits blocking the ball or valve interior. Check for sediment particles lodged around ball-to-seat contact areas. Remove stem and check for the same. Clean and reinstall.
Over-tight Seal Carrier	True-Union Valves - remove valve; slightly loosen seal carrier (located on inlet end of body). Single Entry Valves - slightly loosen single Union Nut. IMPORTANT: Generally only a slight adjustment is required (either valve). A properly adjusted valve should have significant resistance to operation without binding.
Chemical Attack (generally appears as distortion, peeling, etching or bleaching of ball sealing surfaces or other internal components)	Check valve material (PVC, CPVC) chemical compatibility with system fluids. Be sure to consider operating temperatures with this determination.



Ball Valve Troubleshooting Guide

Structural Breakage		
Location	Possible Cause	Corrective Action
Handle broken	Frozen movements. External impact.	See "Frozen Movements" section. Replace. Identify and correct source.
Handle Stripped	Overextending open/close range. Excessive exposure to direct-sunlight has softened handle material.	Replace handle. Shield or screen valve from direct-sun exposure.
Stem Sheared / Broken	Frozen movements; external impact.	See "Frozen Movements" section.
Broken Union Nut	Nut has been over tightened to draw-up or align end-connectors; external impact. Inadequate valve supports. Excessive internal pressure / Hydraulic Shock	Adjust spacing between end-connectors for proper valve lay-lengths. Check system alignment - end connector(s) must be parallel. Provide system support on each side of valve. Check system pressures and surge pressures; check for entrapped air.
End Connector Break	System misalignment; external impact. Over-tighten thread-joint connection. Inadequate valve support.	Check system alignment - end connector(s) must be parallel. Install new end connector according to installation instructions. Provide system support on each side of valve.
Body Break	External impact. Excessive internal pressure. System misalignment. Inadequate valve support. Chemical attack.	Identify and correct source. Check system pressures and surge pressures; check for entrapped air. Check system alignment - end connector(s) must be parallel. Provide system support on each side of valve. Check chemical compatibility of system fluids.

NOTES: Certain corrective actions of this guide may not be feasible with the Compact Ball Valve (sealed unit).

Improper system operating temperatures and chemical incompatibility can cause a variety of functional and structural failures. Be sure to use proper valve material-types for both temperature and chemical resistance.

Most valve problems are traceable to improper system design or installation. Be sure to have all design performed by a qualified Engineer and installation made by properly trained personnel.

Spears® valve Installation Instructions and Maintenance/Service Procedures should be followed in conjunction with all corrective actions.



Part II - Actuated Thermoplastic Valves

Full Line of Valve Actuation

From basic on-off actuation to full feature, custom applications, Spears® offers a wide variety of both pneumatic and Electric actuated valve packages for Ball Valves, Butterfly Valves and Diaphragm Valves. Spears® maintains one of the broadest lines of valve options to select from in PVC, CPVC and Polypropylene materials.

Pre-Matched Valve & Actuator Packages

Spears® makes actuation easy by matching each valve type and size with the appropriate actuator for proper operating torque and cycle time to assure optimum performance.

Custom Actuation Configurations

Spears® Premium Actuation Packages can be fully customized to user specifications by addition of selected control accessories. Select from our wide variety of accessories and options or contact Spears® for virtually any special actuation need, even if not specified.

Factory Assembled - Ready for Installation

Whether standard or custom configured, actuation packages include valve, actuator mounting, coupling and factory assembled precision actuator ready for installation. Spears® uses only the finest materials in interfacing each valve and actuator to provide reliable operation and long service life.

How to Use This Manual

This manual provides technical information on Spears® actuated valve packages and accessories. Actuation Packages are listed in separate sections by valve type (ball, butterfly, diaphragm) and actuation type (Electric, Pneumatic).

Each section provides full package information including package description, standard valve specifications and options, package actuator specifications and options, a brief list of available accessories, plus a Sample Engineering Specification.

Specifications for actuator Options & Accessories for custom actuation are described in additional sections according to actuator type (Electric or Pneumatic). Each section includes an overview followed by a brief description of each option and accessory.

The appendices provide additional information on general actuation terminology and definitions, and on Spears® part numbering convention for custom actuation for use at the user's discretion. Part number formulation is not required to order valve packages from Spears®, but is provided for those who wish to select the appropriate part number in preparation of a custom valve package order.

***Contact Spears® for any desired accessories, options, functions
or special controls not listed in this guide.***

The information in this manual is believed to be accurate at the time of publication, but is subject to change without notice.



Spears® Actuated Valve Packages

Choose from economical Electro Ball Valve packages, or one of Spears® Premium Actuation packages which can be fully customized to user specifications with addition of custom feature and control accessories for Spears® True Union and Compact 2000 Ball Valves, Butterfly Valves or Diaphragm Valves. Retrofit actuation of existing Spears® valve installations is also available. Contact factory for additional information.

Actuated Valve Packages Overview

Basic Valve Illustration	Valve Type	Basic Valve Options				Actuation Package Available		
		Basic Valve Material	Size Range (inch)	Seal Material Options	End Connector Options	Premium Electric Actuation	Premium Pneumatic Actuation	Electro Series Actuation
 Typical Illustration	True Union Ball Valves	PVC	1/2 - 6	EPDM FKM PTFE	Socket Threaded Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM PTFE	Socket Threaded Flanged	X	X	X 1/2" - 2"
 Typical Illustration	Compact 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket Threaded Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket Threaded Flanged	X	X	X 1/2" - 2"
 Typical Illustration	Butterfly Valves	PVC	1-1/2 - 12	Buna-N EPDM FKM PTFE	Flanged	X	X	
		CPVC	1-1/2 - 12	Buna-N EPDM FKM PTFE	Flanged	X	X	
		PP	1-1/2 - 24 ¹	EPDM FKM PTFE	Flanged	X	X	
 Typical Illustration	Diaphragm Valves	PVC	1/2 - 8 ²	EPDM FKM PTFE	Socket ³ Threaded ³ Spigot ⁴ Flanged	X	X	
		CPVC	1/2 - 8 ²	EPDM FKM PTFE	Socket Threaded Spigot Flanged	X	X	
		PP	1/2 - 8 ²	EPDM FKM PTFE	Threaded Flanged	X	X	

- Notes:**
- 1 - Butterfly Valves sizes 30" - 60" produced to order.
 - 2 - 2-1/2" to 8" Diaphragm Valves available in Flanged ends only.
 - 3 - 1/2" - 2" Socket and threaded Diaphragm Valves are True Union style.
 - 4 - Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

Contact Spears® for Additional Custom Configurations to User Specifications

Electro Series Actuated Ball Valves



The Electro Actuated Ball Valve provides high quality, basic on-off electrical actuation at an economical price, with voltage options and special "2-wire" control available. This prepackaged combination is constructed with an all plastic NEMA 4X enclosure directly mounted to a PVC or CPVC valve body for lighter weight and a low profile design for minimal space requirements. All Electro Series Ball Valves are pressure rated to 235 psi and suitable for vacuum service. Available in IPS sizes 1/2" - 2", with socket, threaded, or flanged ends and choice of EPDM or FKM O-ring seals.



Typical Illustration



Typical Illustration

ELECTRO ACTUATED COMPACT 2000 BALL VALVE

Compact Electro Ball Valves are built around Spears® industrial grade Compact 2000 Ball Valve. This heavy bodied, sealed unit design is well suited for a multitude of general purpose, industrial, and OEM actuation needs.

ELECTRO ACTUATED TRUE UNION BALL VALVE

The Electro True Union Ball Valve utilizes Spears® industrial grade True Union Ball Valve. This fully repairable, double union style allows easy in-line removal for servicing and is the valve of choice for many industrial and chemical processing applications.

ELECTRO 50 & 100 ACTUATOR SPECIFICATIONS

Motor:	Brushless, Non-Reversing, Shaded Pole, Thermally Protected
Torque:	ELECTRO-50 50 in./lbs. (1/2" - 1" Valves) ELECTRO-100 100 in./lbs. (1-1/4" - 2" Valves)
Opening Time:	5 seconds
Closing Time:	5 seconds
Duty Cycle:	25% standard (optional 75% available)
Limit Switch:	Cam Operated, Omni Directional, SPDT
Housing:	NEMA 4X (Weatherproof, Corrosion Proof), High Impact Polypropylene, SS 316 Fasteners 1/2" NPT Connection
Indicator:	Visual Open/Close - Standard
Voltage:	115V standard (see Voltage Options)

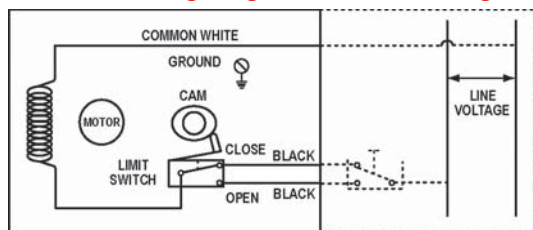
Optional "2-Wire" Control:

Control switch setup operates as a solenoid valve. Valve opens when control switch is open 5-seconds and closes when control switch is closed 5-seconds. Uses 4-wire connection with 2 wires to line voltage and 2 wires to SPST control switch.

Voltage Options:

Voltage	Load AMP Electro-50	Load AMP Electro-100
12 VAC	2.40	N/A
24 VAC	2.1	7.8
115 VAC	.6	1.9
230 VAC	.5	1.5
12 VDC	.3	.2
24 VDC	.2	.2

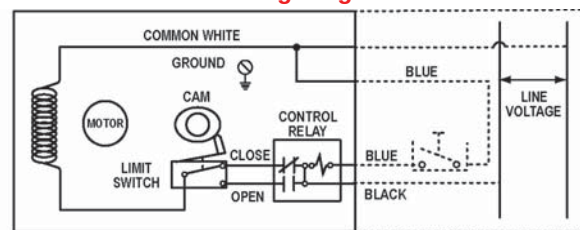
Standard Wiring Diagram 115 VAC Wiring



ELECTRO WIRING

EXTERNAL WIRING

"2-Wire" Control Wiring Diagram



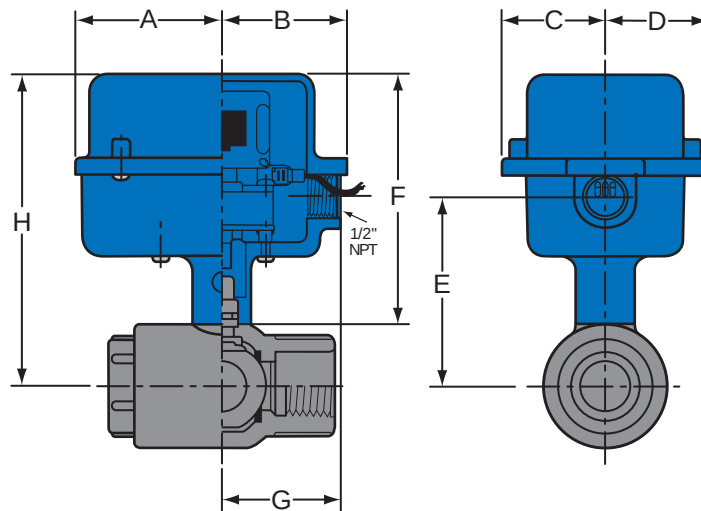
ELECTRO WIRING

EXTERNAL WIRING



Electro Series Actuated Ball Valves

Compact Ball Valve



Actuated Compact Ball Valve Dimensions

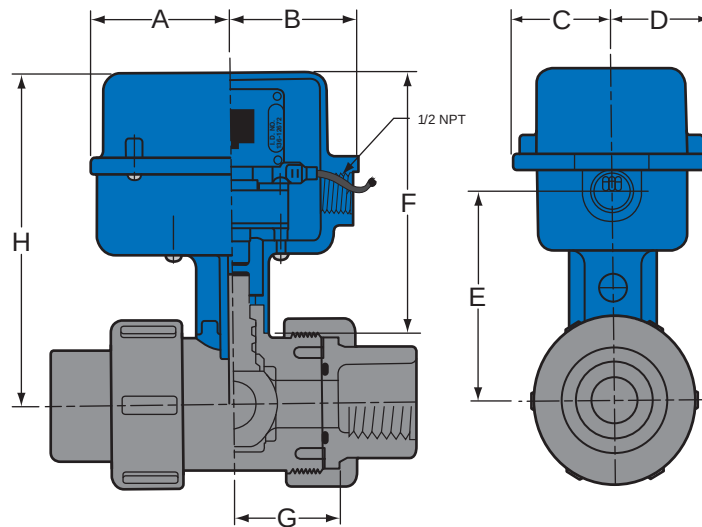
Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-3/4	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

Valve: PVC or CPVC Industrial Grade Valve,
Non-Repairable Sealed Unit
PTFE Seats
EPDM or FKM O-rings
Socket, Threaded or Flanged End Connection
Vacuum Service Rated
Pressure rated to 235 psi water @ 73°F
(Flanged to 150 psi)

Sample Engineering Specification

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be compact sealed unit type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.

True Union Ball Valve



Actuated True Union Ball Valve Dimensions

Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-13/16	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

Valve: PVC or CPVC Industrial Grade Valve
 Double Union Style with Blocked Seal Carrier
 Fully Repairable & Adjustable
 PTFE Seats
 EPDM or FKM O-rings
 Socket, Threaded or Flanged End Connection
 Vacuum Service Rated
 Pressure rated to 235 psi water @ 73°F
 (Flanged to 150 psi)

Sample Engineering Specification

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be True Union type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with buttress threaded union nuts, PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.



Premium Actuated Valve Packages



Typical
Illustration

**Electric True Union
Ball Valve**



Typical
Illustration

**Pneumatic True Union
Ball Valve**



Typical
Illustration

**Electric Actuated
Butterfly Valve**



Typical
Illustration

**Pneumatic Actuated
Butterfly Valve**



Typical
Illustration

**Electric Actuated
Diaphragm Valve**



Typical
Illustration

Pneumatic Actuated Diaphragm Valve



Typical
Illustration

Electric Actuated True Union Ball Valves



Spears® True Union 2000 Ball Valve Premium Electric Actuation Package

The compact design of True Union 2000 Ball Valves provides maximum versatility with minimum space requirements. Fully serviceable valve cartridge also mates with Spears® Union 2000 Schedule 80 pipe unions. Both valves and unions utilize Buttress Thread union nuts for superior strength. All ball valves feature Spears® self adjusting Floating Seat design for extended service, and Spears® Safe-T-Shear® Stem with double O-ring stem seals for assurance of fluid containment in case of inadvertent valve damage. Available in chemical and corrosion resistant PVC or CPVC with socket, flanged or Spears® Patented Special Reinforced (SR) threaded.

Actuated package includes polypropylene valve mounting bracket for accurate valve/actuator alignment and support in any position. Premium electric actuator utilizes a reversing type motor with UL approved, built in thermal overload protection. Gear train is permanently lubricated. All hardware is stainless steel. Standard 115 VAC, 60 HZ, with voltage options available.



Declutchable Style Shown

Typical Illustration

True Union 2000 Ball Valve Specifications

Style	Double union • 1/4 turn shut off • Double O-ring stem seals • Safe-T-Shear® Stem • Blocked seal carrier
Material	PVC or CPVC
Size Range	1/2" - 6" & 8" Venturied*
Pressure Rating	1/2" - 4" = 235 psi @ 73°F 6" - 8" & all flanged valves = 150 psi @ 73°F
Vacuum Service	To 26 in-Hg
Seats	PTFE
O-rings	EPDM or FKM
End Connector	Socket, SR Threaded, or Flanged
Certifications	EPDM Valves NSF® Certified for potable water use.

*8" Venturied is 6" valve fitted with 8 x 6 adapters

Standard Actuator Specifications

Motor	Reversing
Thermal Overload Protection	
Voltage	115 VAC, 60 Hz
Lubrication	Permanent

Custom Electric Actuation Options & Accessories

- Modulating (variable positioning)
- Heater & Thermostat
- Additional Limit Switch sets
- Position Indicator
- LED Indicator lights
- Torque Sensor
- Declutchable Manual Override
- Duty Cycle Upgrades (75% & 100%)
- NEMA 4x, 7, & 9 Enclosures
- Spring Return Operation (Fail Safe)
- Voltage Options: 24 VAC, 230 VAC, 12 VDC, 24 VDC

Note: Modulation requires special enclosure for 1/2" - 2" valves.

Sample Engineering Specification

All ball valves shall be electrically actuated True Union 2000 type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double O-ring stem seals. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF international for use in potable water service. All 1/2" through 4" valves shall be pressure rated at 235 psi and all 6" through 8" & all flanged valves shall be pressure rated at 150 psi for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. All mounting fasteners shall be stainless steel. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.



Pneumatic Actuated True Union Ball Valves

Spears® True Union 2000 Ball Valve Premium Pneumatic Actuation Package

The compact design of True Union 2000 Ball Valves provides maximum versatility with minimum space requirements. Fully serviceable valve cartridge also mates with Spears® Union 2000 Schedule 80 pipe unions. Both valves and unions utilize Buttress Thread union nuts for superior strength. All ball valves feature Spears® self adjusting Floating Seat design for extended service, and Spears® Safe-T-Shear® Stem with double O-ring stem seals for assurance of fluid containment in case of inadvertent valve damage. Available in chemical and corrosion resistant PVC or CPVC with socket, flanged or Spears® Patented Special Reinforced (SR) threaded.

Actuated package includes polypropylene valve mounting bracket for accurate valve/actuator alignment and support in any position. Premium pneumatic actuator is an Air-to-Air (Double Acting; optional Spring Return) featuring twin piston rack and pinion operation with adjustable stops, and permanent lubrication. Manual override is standard. Housing is hard anodized aluminum with epoxy coated aluminum end caps.



Typical Illustration

True Union 2000 Ball Valve Specifications

Style	Double union • 1/4 turn shut off • Blocked seal carrier • Double O-ring stem seals • Safe-T-Shear® Stem
Material	PVC or CPVC
Size Range	1/2" - 6" & 8" Venturied*
Pressure Rating	1/2" - 4" = 235 psi @ 73°F 6" - 8" & all flanged valves = 150 psi @ 73°F
Vacuum Service	To 26 in-Hg
Seats	PTFE
O-rings	EPDM or FKM
End Connector	Socket, SR Threaded, or Flanged
Certifications	EPDM Valves NSF® Certified for potable water use.

*8" Venturied is 6" valve fitted with 8 x 6 adapters

Standard 2-Position Actuator Specifications

Type	Dual piston • rack & pinion • adjustable stop
Standard Operation	Air-to-Air (double acting)
Supply Pressure	80 psi
Air Connection	1/4" - 1/8"

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- 60 psi or 40 psi Operating Pressure
- Declutchable Manual Override
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valve
 - 12VDC, 24VDC, 24VAC, 115VAC, 230VAC
 - NEMA 4/4x & 7/9 rating
- Dual Power Solenoids
- Output Signal Limit Switches
- Standard Limit Switches
- Dome Position Indicator
- Stainless Steel Gauge Sets
- Customized ID Tags

Sample Engineering Specification

All ball valves shall be pneumatically actuated True Union 2000 type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double O-ring stem seals. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be Certified by NSF International for use in potable water service. All 1/2" through 4" valves shall be pressure rated at 235 psi and all 6" through 8" and all flanged valves shall be pressure rated at 150 psi for water at 73°F. Pneumatic Actuators shall be factory installed, dual piston, rack & pinion design with adjustable stops. Operation shall be Air-to-Air (double acting) for 80 psi supply pressure. All mounting fasteners shall be stainless steel. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Electric Actuated Butterfly Valves



Spears® Butterfly Valve Premium Electric Actuation Package

Spears® innovative patented seat design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve offers a full variety of options for greater application versatility. Fully isolated (Dry Stem), solid type 316 stainless steel with optional PTFE coated stems available for extra protection assurance. PVC and CPVC valves are available in Standard or True Lug style for sizes 1-1/2" through 14". Polypropylene valves are available in Standard valve style for sizes 1-1/2" through 24", plus sizes 30" through 60" produced to order. Premium electric actuator utilizes a reversing type motor with UL approved, built in thermal overload protection. Gear train is permanently lubricated 1/2" NPT conduit outlet. Standard 115 VAC connection.



Declutchable Style Shown

Typical Illustration

Butterfly Valve Specifications

Style	Flanged
Material	PVC, CPVC, UV Stabilized PP
Size Range	PVC/CPVC = 1-1/2" - 12" PP = 1-1/2" - 24" (custom 30" - 60")
Pressure Rating	1-1/2" - 12" = 150 psi @ 73°F 14" = 100 psi @ 73°F 16" = 85 psi @ 73°F 18" = 70 psi @ 73°F 20" - 24" = 50 psi @ 73°F
Seats & Seals	Buna-N, EPDM or FKM on PVC/CPVC valves; EPDM or FKM on Polypropylene valves
Bolt Pattern	ANSI Class 125/150

Standard 2-Position Actuator Specifications

Motor Reversing	
Thermal Overload Protection	
Voltage	115 VAC, 60 Hz
Lubrication	Permanent

Note: Contact Spears® for information on valve sizes 14" and larger.

Special Valve Options & Accessories

- PVC & CPVC True-Lug valves w/ factory installed lugs
- PTFE coated stainless steel stem
- Titanium & Hastaloy Stems
- PTFE encased valve seat
- Field installable Lug Insert sets for PVC/ CPVC valves through 12"
- Stem Extensions
- Seat & Seal Replacement Kits
- 30" - 60" Polypropylene valves (contact Spears® for details)

Custom Electric Actuation Options & Accessories

- Modulating (variable positioning)
- Heater & Thermostat
- Additional limit switch sets
- Position indicator
- LED Indicator lights
- Torque sensor
- Declutchable Manual Override
- Duty Cycle Upgrades (75% & 100%)
- NEMA 4x, 7, & 9 Enclosures
- Voltage Options: 24 VAC, 230 VAC, 230 VAC 3-phase 60 Hz, 460 VAC 3-phase 60 Hz, 12 VDC, 24 VDC (see Accessories & Options section for limitations)
- Custom ID Tags

Sample Engineering Specification

All electrically actuated Butterfly valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV stabilized Polypropylene. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 CL 125/150. Disc shall be offset design with Type 316 stainless steel stem. Valves shall be pressure rated at [select from specification] for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. Actuator shall be equipped with [selected options list] as manufactured by Spears® Manufacturing Company.



Pneumatic Actuated Butterfly Valves

Spears® Butterfly Valve Premium Pneumatic Actuation Package

Spears® innovative patented seat design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve offers a full variety of options for greater application versatility. Fully isolated (Dry Stem), solid type 316 stainless steel stems with optional PTFE coated stems available for extra assurance. PVC and CPVC valves are available in Standard or True Lug style for sizes 1-1/2" through 14". Polypropylene valves are available in Standard valve style for sizes 1-1/2" through 24", plus sizes 30" through 60" produced to order. Premium pneumatic actuator is an Air-to-Air (Double Acting; optional Spring Return) featuring twin piston rack and pinion operation with adjustable stops, and permanent lubrication. Manual override is standard. Housing is hard anodized aluminum with epoxy coated aluminum end caps.



Typical Illustration

Butterfly Valve Specifications

Style	Flanged
Material	PVC, CPVC, PP
Size Range	PVC/CPVC = 1-1/2" - 12" PP = 1-1/2" - 24" (custom 30" - 60")
Pressure Rating	1-1/2" - 12" = 150 psi @ 73°F 14" = 100 psi @ 73°F 16" = 85 psi @ 73°F 18" = 70 psi @ 73°F 20" - 24" = 50 psi @ 73°F
Seats & Seals	Buna-N, EPDM or FKM on PVC/CPVC valves; EPDM or FKM on Polypropylene valves
Bolt Pattern	ANSI Class 125/150

Standard 2-Position Actuator Specifications

Type	Dual piston • rack & pinion • adjustable stop
Standard Operation	Air-to-Air (double acting)
Supply Pressure	80 psi
Air Connection	1/4" - 1/8" Depends on Actuator

Note: Contact Spears® for information on valve sizes 14" and larger.

Special Valve Options & Accessories

- "True-Lug" style factory installed lugs (PVC & CPVC valves only)
- PTFE coated stainless steel stem
- Titanium & Hastaloy Stems
- PTFE encased valve seat
- Field installable Lug Insert sets for PVC/CPVC valves through 12"
- Stem Extensions
- Seat & Seal Replacement Kits
- 30" - 60" Polypropylene valves (contact Spears® for details)

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- 60 psi or 40 psi Operating Pressure
- Dec clutchable Manual Override
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
12VDC, 24 VDC, 24VAC, 115VAC, 230VAC
NEMA 4/4x & 4.4x.7/9 rating
- Dual Power Solenoids
- Output Signal Limit Switches
- Standard Limit Switches
- Dome Position Indicator
- Stainless Steel Gauge Sets
- Customized ID Tags

Sample Engineering Specification

All pneumatically actuated Butterfly valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV stabilized Polypropylene. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a nonliner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 CL 125/150. Disc shall be offset design with Type 316 stainless steel stem and hardware. Valves shall be pressure rated at [select from specifications] for water at 73°F. Pneumatic Actuators shall be factory installed, dual piston, rack & pinion design with adjustable stops. Operation shall be Air-to-Air (double acting) for 80 psi supply pressure. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Spears® Diaphragm Valve Premium Electric Actuation Package

This full-featured industrial grade valve is engineered to provide accurate throttling and shut off for chemical processing, industrial, and water treatment applications. Weir type design eliminates entrapped fluids in valve. Excellent for handling of liquids with suspended solids, viscous materials and slurries. Premium electric actuator utilizes a multi-turn reversing motor with UL approved, built in thermal overload protection and permanently lubricated gear train. 1/2" NPT conduit outlet. Standard 115 VAC, 60 Hz.



Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, UV Stabilized PP
Size Range	1/2" - 8"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F 1/2" - 4" Flanged = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F PP: 1/2" - 4" = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F With PTFE Diaphragm: 1/2" - 4" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 8") PP: True Union threaded (1/2" - 2"), Flanged Body (sizes 2-1/2" - 8")

Standard 2-Position Actuator Specifications

Motor Multi-turn reversing	
Thermal Overload Protection	
Voltage	115 VAC, 60 Hz
Lubrication	Permanent

Sample Engineering Specification

All electrically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM or FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" valves, 1/2" - 4" flanged valves and 1/2" - 4" PTFE diaphragm valves to 150 psi, all 6" valves to 100 psi, and all 8" valves to 75 psi for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. Actuator shall be equipped with [selected options list] as manufactured by Spears® Manufacturing Company.

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Electric Actuation Options & Accessories

- Declutchable Manual Override
- Auxiliary Limit Switches
- NEMA 7, 9 & NEMA 4X Enclosures
- Position Indicator Lights (red/green)
- Voltage Options: 12 VDC, 24 VDC, 24 VAC, 230 VAC
(see Accessories & Options section for limitations)
- Custom ID Tags



Unitized Actuated Diaphragm Valves - Pneumatic with Plastic Housing

Spears® Unitized Pneumatic Actuated Diaphragm Valve Package

Industrial grade Weir-type design, excellent for throttling and use with viscous fluids or slurries.

Compact, Light Weight Design

True Union Socket/Thread, SR Thread, or Spigot End Connections

- sizes 1/2"-2" Pressure Rated to 235 psi @ 73°F (23°C)

Flanged Ends (& PTFE diaphragms) - sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F (23°C)

Corrosion Resistant Plastic Housing

Stainless Steel Hardware

90 psi Operating Pressure

Linear Action Operation with Preset Stops

Air-Air, Air-Spring Closed, or Optional Air-Spring Open



Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, PP
Size Range	1/2" - 2"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F Flanged and PTFE Diaphragm 1/2"- 2" = 150 psi @ 73°F PP: 1/2"- 2" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded/SR threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 2") PP: True Union SR threaded (1/2" - 2")

Standard 2-Position Actuator Specifications

Valve Sizes 1/2" - 2":	
Type	Linear action
Standard Operation	Air-to-Air (double acting), Air-to-Spring Closed or Air-to-Spring Open
Supply Pressure	90 psi
Air Connection	1/8"
Body	Polypropylene
Visual Position Indicator	

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Pneumatic Actuation Options & Accessories

- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
- Customized ID Tags

Sample Engineering Specification

All pneumatically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM, FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, 1/2" - 2" flanged valves and 1/2" - 2" PTFE diaphragm valves to 150 psi. Pneumatic Actuators shall be factory installed, linear type with preset stops. Operation shall be Air-to-Air (double acting), Air-to-Spring Closed or Air-to-Spring Open for 90 psi supply pressure range as selected. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Spears® Diaphragm Valve Premium Pneumatic Actuation Package

This full-featured industrial grade valve is engineered to provide accurate throttling and shut off for chemical processing, industrial, and water treatment applications. Weir type design eliminates entrapped fluids in valve. Excellent for handling of liquids with suspended solids, viscous materials and slurries. Premium pneumatic actuators are Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open) Actuator for 1/2" - 2" valves features a packless/glandless linear piston design and one-piece actuator/bonnet constructed from high integrity PES (Polyethersulphone), chemically resistant to virtually all acids, caustics, and solvents. Actuator for 2-1/2" - 4" valves features a linear diaphragm design and chemical resistant Polyester coated housing.



Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type
	• fully repairable
Material	PVC, CPVC, PP
Size Range	1/2" - 6"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F 1/2" - 4" Flanged = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F PP: 1/2" - 4" = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F With PTFE Diaphragm 1/2" - 4" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 6") PP: True Union threaded (1/2" - 2"), Flanged Body (2-1/2" - 6")

Standard 2-Position Actuator Specifications

Valve Sizes 1/2" - 2":	
Type	Linear action
Standard Operation	Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open)
Supply Pressure	80 psi
Air Connection	1/8"
Body	PES (Polyethersulphone)
Valve Sizes 2-1/2" - 4":	
Type	Linear action
Standard Operation	Air-to-Spring and Air to Air
Standard Operating Pressure	80 psi
Air Connection	1/4" (3" & 4" valves)
Body	Polyester coated

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- Visual Position Indicator
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
- Micro Limit Switches
- Custom ID Tags

Sample Engineering Specification

All pneumatically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM, FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" valves, 1/2" - 4" flanged valves and 1/2" - 4" PTFE diaphragm valves to 150 psi, all 6" valves to 100 psi. Pneumatic Actuators shall be factory installed, linear type with preset stops. Operation shall be Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open) for 80 psi supply pressure range. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.



Electric Actuator Options & Accessories

The basic options and accessories listed in this section represent many of the most commonly used for electric actuation, factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories

Options & Accessories	Electro Series Ball Valves	Premium Electric TU Ball Valves	Premium Electric Butterfly Valves	Premium Electric Diaphragm Valves
24 VAC	✓	✓	✓	✓
230 VAC	✓	✓	✓	✓
230 VAC 3-phase, 60Hz	--	✓	✓	✓
230 VAC 3-phase, 50 Hz	--	✓	✓	✓
12 VDC	✓	✓	✓	✓
24 VDC	✓	✓	✓	✓
NEMA 4X, 7, 9 Rating	(4X Standard)	✓	✓	✓
Dec clutchable Manual Override	--	✓	✓	✓
Duty Cycle Upgrade	✓	✓	✓	✓
Spring Return (Fail Safe)	--	✓	✓	--
Positioner Board (modulating)	--	✓	✓	✓
Transmitter	--	✓	✓	✓
"2-Wire" Control Relay	✓	✓	✓	--
Position Indicator (Visual)	✓	✓	✓	--
LED Indicator Lights	--	✓	✓	✓
Heater & Thermostat	--	✓	✓	✓
Limit Switch Sets	--	✓	✓	✓
Torque Sensor	--	✓	✓	✓
Speed Controller	--	✓	✓	✓
Friction Brake	--	✓	✓	--
ID Tag - SS	✓	✓	✓	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.



Standard (2-position) Actuator Voltage Options

Voltage options are listed for each type with 2-position (open/close) actuation. See Modulating Service Option for variable position actuators and applicable voltages.

Electro Series Ball Valves (All 1/2" - 2")

Voltage Options
12 VAC
24 VAC
230 VAC
12 VDC
24 VDC
115 VAC

True Union 2000 Ball Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Diaphragm Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Butterfly Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Enclosure NEMA Rating Options

Standard enclosures are a minimum of NEMA 4. The following NEMA ratings are available for all True Union Ball Valves, Butterfly Valves and Diaphragm Valves (see NEMA Ratings in Terminology & Definitions for additional description detail).

Enclosure Rating	General Description
NEMA 4	Watertight & Dust Tight
NEMA 4X	Watertight & Dust Tight with corrosion resistance
NEMA 7	Explosion Proof (class I, division 1, groups A, B, C, D)
NEMA 9	Explosion Proof (class II, division 1, groups E, F, G)

Declutchable Manual Override Option

Available for all Premium Electric actuated valves.

Valve Type
True Union 2000 Ball Valve
Butterfly Valve
Diaphragm Valve

Slightly different than straight manual override, *Declutchable* Manual Override disengages the actuator gear train for manual operation of the valve. Valves with this option have a hand wheel mounted on top of the actuator for manual valve operation.

Duty Cycle Upgrade Option

Upgrades in duty cycles use heavier motors to handle heat build up from extended operation. Contact Spears® for specific Duty Cycle information.

Spring Return (Fail Safe) Option

An internal spring in the actuator is configured to either open or close upon loss of power supply. Special gear clutch uncouples motor during spring return. Operation can be specified as either fail-open when spring return open is desired or fail-close when spring return close is desired.



Electric Actuator Options & Accessories



“2-Wire” Control Relay

Special control switch setup operates the valve through internally mounted control relay. Valve opens when control switch is open and closes when control switch is closed. Uses 4-wire connection with 2 wires to line voltage and 2 wires to SPST control switch. Available either in normally closed or normally open configuration.



LED Position Indicator Lights

LED (light emitting diode) red/green indicator lights mounted on actuator enclosure to designate open/closed position.



Positioner Board (Modulating)

Modulation is used to control or throttle flow in response to an external control signal. An internally mounted, solid state positioner board accurately controls valve position from open to close. Available in the actuator voltages and input signals shown **Note:** Modulating Service option includes Duty Cycle Upgrade to a minimum of 75%.



Heater and Thermostat

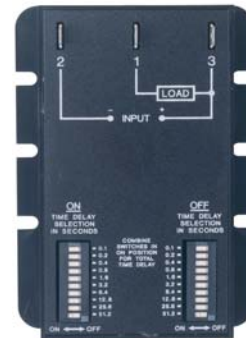
Mounted internally, heats the inside of the enclosure in low temperature environments to prevent condensation and keep internal lubricants fluid. The thermostat activates the heater when the enclosure internal temperature drops below the set point. There are a variety of thermostats available and a set point must be specified at the time of ordering.

Modulating Actuator Voltage	Input Signal
115 VAC	4-20mA, 0 - 5 VDC, 0 - 10 VDC
230 VAC	4-20mA, 0 - 5 VDC, 0 - 10 VDC
24 VAC	4-20mA, 0 - 5 VDC, 0 - 10 VDC
24 VDC	4-20mA, 0 - 5 VDC, 0 - 10 VDC



Auxiliary Limit Switches (Provided in sets of 2)

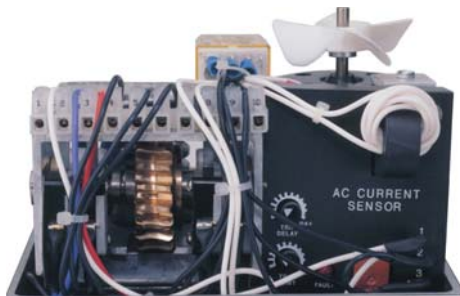
Additional internally mounted single pole double throw limit switch (SPDT) independent from the motor switches. Typically used for indicator lights, auxiliary equipment, etc. Actuation packages accept from 1 to 2 additional sets of auxiliary limit switches as indicated. When ordering replacement sets, specify hole size of cams (either 3/8" or 1/2").



Speed Controller

Internally mounted relays (not shown) and solid state timer allow variable control of valve cycle time (speed) by selecting combinations of ON time and OFF time options. Rate may be slowed, but cannot exceed the standard cycle time specified for the actuator.

Valve Type	Auxiliary Limit Switch Sets
True Union Ball Valve	
1/2" - 2"	1
2-1/2" - 3"	1
4" - 6"	2
Butterfly Valve	
1-1/2"	1
2" - 10"	2
12"	2
Diaphragm Valve - all Sizes	



Torque Sensor

Internally mounted sensor is adjustable to specific torque limits to avoid damage to valve in the event of blockage.



Electric Actuator Options & Accessories



Transmitter

The Transmitter module is normally used with the 4-20mA Positioner Board and the board's power supply. It can also be used as a stand alone feedback transmitter when no position controller is used, but will require an external power supply for stand alone application. This internally mounted module provides a 4-20mA output signal directly proportional to the Positioner Board feedback potentiometer. This signal can be used by a remote instrument to monitor or display actuator position. Zero and span adjustments allow adjustment of the Transmitter's 4-20mA signal to correspond with the zero and span positions set by the Positioner Board.



Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.



Friction Brake

Internally mounted device which is used to eliminate mechanical "coast" of the actuator motor at the end of its cycle. Brakes are standard on all electrically actuated Butterfly Valves and not applicable to Diaphragm Valves.

Pneumatic Actuator Options & Accessories For Ball Valves & Butterfly Valves



The basic options and accessories listed in this section represent many of the most commonly used for Pneumatic actuation of Ball Valves and Butterfly Valves (see next section for Pneumatic Diaphragm Valves) factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories Available

Standard Pneumatic Actuator Features	Premium Pneumatic True Union Ball Valves	Premium Pneumatic Butterfly Valves
Spring Return (Fail Safe)	✓	✓
40 or 60 psi Operating Pressure	✓	✓
Declutchable Manual Override	✓	✓
Pneumatic Positioner	✓	✓
Electro-Pneumatic Positioner	✓	✓
Transmitter	✓	✓
Dome Position Indicator	✓	✓
Mechanical Limit Switches	✓	✓
Output Signal Mechanical Limit Switches	✓	✓
Output Signal Proximity Limit Switches	✓	✓
3 & 4-Way Solenoid Valve	✓	✓
Dual Power 3 & 4-Way Solenoid Valve	✓	✓
Stainless Steel 3-Gauge Set	✓	✓
ID Tag - SS	✓	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.

Spring Return (Fail Safe) (Air-to-Open or Air-to-Close) Option

An internal spring in the actuator is configured to either open or close upon loss of air supply. Spring return can be specified as either Air-to-Open (fail-close) when spring return close is desired or Air-to-Close (fail-open) when spring return open is desired.

Operating Pressure Option

Standard ball and butterfly valve actuators require an 80 psi supply pressure. With this option, the actuator is configured for lower supply pressures of either 40 psi or 60 psi (must specify).



Pneumatic Actuator Options & Accessories For Ball Valves & Butterfly Valves



3 to 15 psi Pneumatic Positioner (for Ball & Butterfly Valves)

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 3-15 psi control signal input. Available with NEMA 4 or 4X rated enclosure mounted on top of actuator with flat top green/black indicator or optional high visibility Dome Indicator. Includes pressure gauge set of one (1) input gauge 0-30 psi and two (2) output gauges 0-160 psi. Optional Stainless Steel gauge set available.



Electro-Pneumatic Positioner 4-20mA, 0-5 VDC, or 0-10 VDC

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 4-20 milliamp (current), 0-5 VDC (resistive), or 0-10 VDC (resistive) control signal input which is converted to a proportional 3 - 15 psi pneumatic signal used by the positioner. Available with NEMA 4, 4X, 7 or Intrinsically Safe NEMA 7 rated enclosure mounted on top of actuator with flat top green/black indicator or dome indicator with green/red 180° high visibility. Includes pressure gauge set of one (1) input gauge 0-30 psi and two (2) output gauges 0-160 psi. Optional Stainless Steel gauge set available.



Dome Indicator

Dome style beacon with high visibility green/red indicator for improved viewing of valve position. Indicator only. Note: Dome indicators may be included with certain selections of positioners or limit switches.



3 & 4-Way Solenoid Valves

This combination valve operates either as a 3-way or 4-way pilot valve mounted to the actuator. The 3-way valve is a normally closed poppet design to insure tight shut-off. These valves are designed for use with spring return actuators. The 4-way valve can be used as either a 4-way 2 position design or a 3-way normally closed design merely by rotating a gasket located in the sub-base prior to assembly to the actuator. The 3-way operation routes the exhaust pressure to the spring side of the actuator to prevent corrosion problems within the actuator. An optional speed control can be purchased. Air inlet connection is 1/4" NPT. Thermoplastic composite enclosure is NEMA 4, 4x (standard) or NEMA 4, 4x, 7, 9 combination with 1/2" male conduit connection. Standard 115 VAC with voltage options of 230 VAC, 24 VAC, 12 VDC, and 24 VDC.

Pneumatic Actuator Options & Accessories For Ball Valves & Butterfly Valves



Dual Power Solenoid Valves

This configuration of 3 & 4-way solenoid valves accepts two separate power sources, one to open and one to close the valve, for use on Air-to-Air (double acting) actuators only.



Limit Switch with Indicator



Output Signal Limit Switches

Mechanical SPDT (2) or DPDT (2)
Proximity SPDT (2) or DPDT (2)

Set of two (2) auxiliary limit switches. Switches deliver a specified output current signal of 4-20mA or resistive signals of 0-5 or 0-10 VDC. Mechanical switches are SPDT or DPDT rated at 10 amp 125/250 VAC. Proximity (non-contact) switches are SPDT or DPDT rated at 1 amp 120 VAC. These limit switches are available with or without 180° visual indicator. Switch enclosure is NEMA 4/4x or NEMA 7/9 rated.



Stainless Steel Gauge Set

Three (3) gauge set. Stainless steel gauge replacement for use on Pneumatic and Electro-Pneumatic Positioners. Includes one (1) input pressure gauge 0-30 psi, and two (2) output pressure gauges 0-160 psi.



Transmitter

The Transmitter is an internally mounted module for use in the Positioner. The module is designed to give a 4-20 milliamp linear output signal with a 0-90° Positioner shaft rotation. The unit is environmentally sealed and loop powered. Transmitter is designed for use in General Purpose Locations and is not approved for Hazardous Locations as classified by the NEC.



Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.



Pneumatic Actuator Options & Accessories For Diaphragm Valves

The basic options and accessories listed in this section represent many of the most commonly used for Pneumatic actuation of Pneumatic Diaphragm Valves (see previous section for Pneumatic Ball Valves and Butterfly Valves) factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories Available

Pneumatic Actuator Features	Premium Pneumatic Diaphragm Valves
Spring Return	✓
80 psi Operating Pressure	✓
Declutchable Manual Override	✓
Pneumatic Positioner	✓
Electro-Pneumatic Positioner	✓
Micro Limit Switch Module	✓
3 & 4-Way Solenoid Valve	✓
Stainless Steel 3-Gauge Set	✓
ID Tag - SS	✓

*Contact Spears® for any desired accessories, options, functions,
or special controls not listed in this guide.*

Spring Return (Fail Safe)

An internal spring in the actuator is configured to either open or close upon loss of air supply. Spring return can be specified as either Air-to-Open when spring return close is desired or Air-to-Close when spring return open is desired.

Operating Pressure (for Diaphragm Valves)

Spears® Diaphragm Valves use a 80 to 90 psi standard operating pressure. Other optional pressures are available. Specify pressure requirements at time of order.

3 to 15 psi Pneumatic Positioner (for Diaphragm Valves)

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 3-15 psi control signal input. Available with NEMA 4x enclosure mounted on top of actuator with 180° visual indicator. Positioner can be top or bottom loading, with or without gauges. Gauge set includes: 1 input pressure gauge 0-30 psi and 2 output pressure gauges 0-160 psi. Optional Stainless Steel gauge set available.



Pneumatic Actuator Options & Accessories For Diaphragm Valves



Electro-Pneumatic Positioner (for Diaphragm Valves), not for air-to-air 4 to 20 mA

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 4-20 milliamp control signal input which is converted to a proportional 3-15 psi pneumatic signal used by the positioner. Available with NEMA 4x, enclosure mounted on top of actuator with 180° visual indicator. Used with air-to-spring only



3-Way Solenoid Valves 4-Way Solenoid Valves (for Diaphragm Valves)

Universal operation design allows pressure to any port. 4-way solenoid valve is used for double acting (air-to-air) actuators. 3-way solenoid valve is used for spring return (fail open/fail close) actuators. Air inlet is 1/4" NPT. Enclosures are molded epoxy NEMA 4, 4x (standard) or NEMA 4/4x/7/9 combination with 1/2" conduit connection and brass body (stainless steel body available by special order). Standard 115 VAC with voltage options of 230 VAC, 24 VAC, 12 VDC, and 24 VDC.



Micro Limit Switch Module (for Diaphragm Valves) SPDT (2) or DPDT (2)

Module of two (2) auxiliary mechanical limit switches. Switches are SPDT rated at 10 amp 125/250 VAC. Switch module includes 180° visual indicator. Switch enclosure is NEMA 4/4x/7/9 rated.



Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.



Additional Actuated Valve Configuration, Options & Accessories Not Specified

Spears® can provide virtually any actuation need for Spears® valves. The following actuated valve configurations, options and accessories not currently specified in this manual are a few of those available on a special order basis. **See Appendix B: Premium Actuated Valve Part Number Selection** for configuration and accessory options. Please contact Spears® for additional technical information or other custom actuation needs. Certain special order options and custom Actuation Packages may require extended lead times. Please contact Spears® for details.

Special Actuated Ball Valves

- Compact 2000 Ball Valves
- Single Entry Ball Valves
- True Union 2000 3-Way Vertical & Horizontal Ball Valves
- Vented Ball Valves

Special Actuated Butterfly Valves

- Tandem 3-Way - two valves operated from one actuator, both closing or both opening at the same time.
- Tandem Diverting - two valves operated from one actuator, one opening while the other closes.
- “No Seat” actuated Butterfly Valves for duct (damper) applications.
- Polypropylene 30" to 60" Actuated Valves (custom produced)

Actuated Gate Valves

- PVC & CPVC Construction
- Sizes 1/2" - 4"
- Socket, Threaded, Flanged End Connections

Special Actuator Options

- Actuators Only
- Actuator Brackets Only
- Actuator Stem Extensions
- Double Powder Coated Electric Enclosures
- Stainless Steel Pneumatic Enclosures
- Electric Spring Return Open or Close with No Override
- Battery Back-up Electric Actuators

Special Switch Sets & Solenoids

- Single Limit Switch & Bracket Only (no actuator) for manual valves
- Double Limit Switch & Bracket Only (no actuator) for manual valves
- Dual Coil 5-Way Solenoid Valves

Replacement Parts

Many replacement parts are available for Spears® electric and pneumatic actuators and valves. Contact Spears® for specific parts needed.



The following valve actuation terminology is provided for better understanding and elimination of miscommunications. Terms and definitions are grouped by related topics and listed in alphabetical order.

GENERAL SYSTEM TERMS

Ambient Temperature - The temperature of the air surrounding the actuator. Generally stated as a maximum and minimum for proper actuator operation. Note that ambient temperature range for an actuator may exceed that of a plastic valve and should not be considered to be the same as the service temperature.

Maximum Line Pressure - The media pressure against which the valve will have to close.

Maximum Service Temperature - Maximum temperature of the media. Service temperature should be considered in selection of the proper thermoplastic valve material for the application.

Media - The material flowing through a valve.

Modulating - Throttling or regulating the flow through a valve by varying the position between open and closed.

On-Off Service - Basic full open or full closed operation to start or stop flow.

Operating Torque - Force required to operate a valve, expressed in inch-pounds or foot-pounds.

Supply Pressure - Facility air pressure supply required to operate pneumatic actuator.

ACTUATOR TERMS

Double Acting - A Pneumatic actuator which uses air to both open and close the valve. Also referred to as “Air-to-Air” operation.

Electric Actuator - An electromechanical device used to actuate (open, close or modulate) a valve. An electric motor and gear train is used to actuate the valve. Numerous application considerations must be made in using an electric actuator. These include, duty cycle, cycle time, supply voltage, operating temperature and enclosure rating (NEMA) for use of electric devices under various environmental conditions.

Fail-Closed - Spring return in a pneumatic actuator which closes the valve upon loss of air pressure. Also referred to as “Air-to-Spring Close” or “Spring-to-Close” operation.

Fail-Open - Spring return in a pneumatic actuator which opens the valve upon loss of air pressure. Also referred to as “Air-to-Spring Open” or “Spring-to-Open” operation.

Pneumatic Actuator - An air operated mechanical device used to actuate (open, close or modulate) a valve. The actuator converts air pressure into mechanical force most commonly using either a piston or diaphragm. The mechanical force output can be either rotational, as in actuation of a ball valve, or linear as commonly used in actuation of a diaphragm valve. Pneumatic actuators are not significantly limited by duty cycles and cycle time (virtually instantaneous) found with electric actuators. However, they may require additional accessories to further control speed of operation and a voltage supply for certain electric signal devices which may be desired.

Spring Return - An actuator using a spring to return the valve to either an open or closed position upon loss of power. Spring returns are most commonly used with pneumatic actuators, but can be used on electric actuators where it is necessary for the valve to open or close by design or by system failure (see also Fail-Close and Fail-Open terms).



Actuation Terminology & Definitions

ACTUATOR ACCESSORY & RATING TERMS

Duty Cycle - The capability of an Electric actuator motor to operate or “cycle” continuously - a 100% Duty Cycle. Ratings less than 100% mean that the actuator motor is capable of intermittent operation, as is the case with most actuation applications. For example, a 25% Duty Cycle means that for each 1-minute of operation, 3-minutes of non-operation is required. Duty cycles greater than 25% are generally needed only when additional work loads are encountered, such as valve modulation or in actuation of larger butterfly valves.

Limit Switches - Electrical switches which may be applied to either electric or Pneumatic actuators to supply a signal that the valve cycle has been completed. In Electric actuators, the primary limit switches are used to control the open and closed position of the valve. Auxiliary limit switches may be used to perform other functions such as starting or stopping a pump. Limit switches are most often mechanical and are activated by physical contact with either a lever or plunger. Proximity switches are electrically tripped without physical contact and may be used with certain computer or micro processor controls.

NEMA Rating - National Electric Manufacturers Association standard for rating electrical component enclosures. The most commonly used NEMA ratings for electric actuator and electrical accessory enclosures are NEMA 4 and NEMA 4X.

NEMA 1: General Purposes - for indoor use without unusual service conditions, primarily to protect components from contact.

NEMA 2: Drip proof - for indoor use with degree of protection against limited amounts of falling water or dirt.

NEMA 3: Rain tight - for outdoor use with protection from windblown dust, rain and sleet, and undamaged by ice formation.

NEMA 4: Watertight and Dust tight - for indoor/outdoor use with a protection from windblown dust, rain or hose directed wash down environments.

NEMA 4X: Watertight and Dust tight - same as NEMA 4 with addition of corrosion resistance.

NEMA 7: Explosion Proof (class I, division 1, groups A, B, C, D) - designed to contain an internal explosion without causing an external hazard when installed in a designated environment group. Group A= atmospheres containing acetylene; Group B = atmospheres containing hydrogen; Group C = atmospheres containing ethyl-ether vapors, ethylene, or cyclopropane; Group D = atmospheres containing gasoline, hexane, naphtha, benzene, butane, propane, alcohol, acetone, benzol, lacquer, solvent vapors or natural gas.

NEMA 9: Explosion Proof (class II, division 1, groups E, F, G) - Dust-ignition-proof enclosures designed to prevent both entrance of dust and external heating capable of igniting dust on the enclosure or in the surrounding atmosphere. Group E = atmospheres containing metal dust including aluminum, magnesium, their commercial alloys, and other metals of similar hazardous characteristics; Group F = atmospheres containing carbon black, coal or coke dust; Group G = atmospheres containing flour, starch, or grain dust.

Positioner - Attachment for either electric or Pneumatic actuators which provides automatic modulating control of the valve position from open to closed. Electric positioners work by comparison of 2-currents, one derived from the input signal and one from the actuator. Pneumatic positioners increase, decrease and balance the air supply according to an input signal from an external control source. Input signals are generated by either a 3 to 15 psi pneumatic signal, or a 4 to 20 milliamp electro-pneumatic signal.

Solenoid Valve - An electro-magnetically operated valve which enables electrical control of air supply to a pneumatic actuator. Solenoids are wired to a manual switch or any electric controller. Double Acting actuators require a 4-way solenoid, Spring-Return actuators require a 3-way solenoid for proper air control. As electrical devices, solenoid valves are available in various NEMA ratings.

Transducer - A device that converts one signal type to another. In actuation controls, the most common use of a transducer is in conversion between electrical signals and pneumatic signals.

Premium Actuated Valve Part Number Selection



The section is provided for formulation of part numbers on custom actuated valve packages. A 3-step process is used to build custom actuated valve part numbers:

Step 1 - Select the desired type, style, options and material of valve from appropriate Valve Selection Table. Specify nominal valve size from Size Code available.

Step 2 -Select the desired actuator style options from the Actuator Selection Tables

Step 3 -Select desired actuator accessories (if any) from the Accessories Selection Tables.

IMPORTANT: Custom accessories are ordered under a separate part number from the actuated Valve Package. Accessory part numbers are ordered individually and factory assembled with selected Actuated Valve Package.

If any accessories are being ordered, add the suffix, “-A” to the end of the Actuated Valve Package part number. This suffix is added only if an Accessory(s) is being selected for add on to the initial Actuated Valve Package.

ACTUATED VALVE PACKAGE PART NUMBER POSITIONS

VALVE CODE	ACTUATOR CODE	SIZE CODE	ACCESSORY DESIGNATION
□ □ □ □ □	□ □ □ □	□ □ □	- A
1 - 2 - 3 - 4 - 5	6 - 7 - 8 - 9	10 - 11 - 12	
		Optional Control Number (custom actuation only)	

Step 1: Valve & Size Code Selection

Spears® actuated valve selection table include Ball Valves (Selection Table 1) Butterfly Valves (Selection Table 2), Diaphragm Valves (Selection Table 3) and Gate Valves (Selection Table 3A). Use the table information to complete the Valve Code in the package part number.

Table 1: BALL VALVES

(Valve Type - End Connector - O-ring - Special Options - Material – Size Selection)

Valve Type	VALVE CODE	RESERVED FOR ACTUATOR	SIZE CODE
	□ □ □ □ □	□ □ □ □ -	□ □ □
	1 - 2 - 3 - 4 - 5	6 - 7 - 8 - 9	10 - 11 - 12
		Material	Size
		1 = PVC	005 = 1/2"
		2 = CPVC	007 = 3/4"
		3 = PP (see note 1)	010 = 1"
		4 = LXT PVC	012 = 1-1/4"
			015 = 1-1/2"
		Special Options	020 = 2"
		0 = None	025 = 2-1/2"
		1 = Lubricant Free (see note 2)	030 = 3"
		2 = Vented Ball	040 = 4"
			060 = 6"
		O-ring	
		0 = Buna-N	
		1 = EPDM	
		2 = FKM	
		3 = PTFE Encapsulated	
		4 = Silicone	
		5 = FKM/ETP	
		6 = AFLAS® TFE/P (FEPM)	
		7 = PTFE/FKM	
		End Connector	
		(see note 1)	
		1 = Socket	
		2 = Thread	
		3 = SR Thread	
		4 = Flanged	
		5 = BSP Thread	
		6 = DIN Plain	
		7 = JIS Plain	
		8 = Flange CL300 Drilling	

Notes:

1 – PP valves available in regular True Union style sizes 1/2" - 4" only, with threaded or SR threaded end connectors only. 1/2" - 2" PVC & CPVC True Union valves ordered as “socket” come with both socket and regular threaded end connectors. 2-1/2" - 6" valves come with socket only.

2 – All Ball Valves are assembled with non-silicone lubricant.

3 – Tandem (Diverting) part number includes two valves operated from one actuator with one opening while the other closes.



Premium Actuated Valve Part Number Selection

Table 2: BUTTERFLY VALVES

(Valve Type - Stem - Seat & O-ring - Special Options - Material – Size Selection)

VALVE CODE					Reserved for Actuator		SIZE CODE		
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7	8	9	10 - 11 - 12
Valve Type					Material			Size (see note 5)	
4 = Std. Butterfly					1 = PVC (see note 1)			015 = 1-1/2"	
5 = True Lug Butterfly					2 = CPVC			020 = 2"	
6 = Tandem 3-Way (see note 6)					3 = PP (see note 2)			025 = 2-1/2"	
7 = Tandem Diverting (see note 7)					Special Options (see note 3)			030 = 3"	
8 = High Purity TFM					0 = None			040 = 4"	
J = Pool Butterfly - white (see note 8)					1 = Zinc plated Lugs (for True Lug)			060 = 6"	
K = Wafer Butterfly					2 = SS 316 Lugs (for True Lug)			080 = 8"	
L = Shaved Std. Butterfly					3 = Non lubricated			100 = 10"	
Stem Material					4 = Zinc lug/ non lubricated			120 = 12"	
1 = SS 316					5 = SS 316 lug/ non lubricated			140 = 14"	
2 = PTFE Coated SS 316					6 = No Seat (duct application)			160 = 16"	
3 = Titanium					7 = Zinc plated Lug Inserts (for Std. Butterfly; see note 9)			180 = 18"	
4 = Hastaloy					8 = SS Lug Inserts (for Std. Butterfly; see note 9)			200 = 20"	
					Seat & O-ring (see note 4)			240 = 24"	
					1 = Buna-N				
					2 = EPDM				
					3 = FKM				
					4 = PTFE Sleeved				
					5 = TFM				
					6 = PTFE Sleeved EPDM				

Notes:

1 – PVC and CPVC valves available through 14" only.

2 – All PP and 14" PVC/CPVC valves available in Standard Butterfly style only.

3 – Lugs specified with True Lug and Lug Insert styles only.

4 – PP valves are standard with EPDM or FKM.

5 – Actuated valve sizes 14" and larger are custom produced to order, contact Spears® Technical Services.

6 – Tandem 3-Way part number includes two valves operated from one actuator, both closing or both opening at the same time.

7 – Tandem Diverting part number includes two valves operated from one actuator with one opening while the other closes.

8 – Pool Butterfly Valves available in sizes 1-1/2" to 12" with SS316 Stem, EPDM Seats, PVC White only. No other options are available.

9 – Lug Inserts are used when Lug Style valve is ordered for Tandem Diverting valve type.

Premium Actuated Valve Part Number Selection



Table 3: DIAPHRAGM VALVES

(Valve Type - End Connector - O-ring - Diaphragm - Material - Size Selection)

VALVE CODE					Reserved for Actuator				SIZE CODE			
□	□	□	□	□	□	□	□	□	-	□	□	□
1 -	2 -	3 -	4 -	5	6 -	7 -	8 -	9		10 -	11 -	12
Valve Type —————					Material (see note 1)				Size (see note 1)			
9 = Diaphragm Valve H = Zero Dead Leg					1 = PVC 2 = CPVC 3 = PP 4 = LXT PVC 5 = PVC/Hastaloy-C Bolts 6 = CPVC/Hastaloy-C Bolts 7 = PVC/Titanium Bolts 8 = CPVC/Titanium Bolts				005 = 1/2" 007 = 3/4" 010 = 1" 012 = 1-1/4" 015 = 1-1/2" 020 = 2" 025 = 2-1/2" 030 = 3" 040 = 4" 060 = 6" 080 = 8"			
End Connector ————— (see note 1) 1 = Socket (True Union) 2 = Thread (True Union) 3 = SR Thread (True Union) 4 = Spigot 5 = Flanged 6 = DIN Plain 7 = JIS 8 = BSP Thread					Diaphragm 1 = Buna-N 2 = EPDM 3 = FKM 4 = Hypalon® (CSM) 5 = PTFE w/EPDM 6 = PTFE w/FKM							
					O-ring (see note 2) 0 = None 1 = EPDM 2 = FKM 3 = PTFE Encapsulated 7 = PTFE Encapsulated/FKM							



Premium Actuated Valve Part Number Selection

Table 3A: GATE VALVES (Special Order Only - Contact Spears® for Availability)
(Valve Type - End Connector - O-ring - Special Options - Material - Size Selection)

VALVE CODE					Reserved for Actuator					SIZE CODE		
□	□	□	□	□	□	□	□	□	-	□	□	□
1 -	2 -	3 -	4 -	5	6 -	7 -	8 -	9		10 -	11 -	12
Valve Type G = Gate Valve				Material (see note 2) 1 = PVC 2 = CPVC							Size (see note 4) 005 = 1/2" 007 = 3/4" 010 = 1" 012 = 1-1/4" 015 = 1-1/2" 020 = 2" 025 = 2-1/2" 030 = 3" 040 = 4"	
				Special Options 0 = None 1 = Lubricant Free (see note 3)								
End Connector (see note 1) 1 = Socket 2 = Thread 3 = SR Thread 4 = Flanged 5 = BSP Thread 6 = DIN Plain				O-ring 1 = Buna-N 2 = EPDM 3 = FKM 4 = PTFE Encapsulated								

Notes:

- 1 – SR thread style available on 3" & 4" size only.
Din Plain metric available in 20 mm - 63 mm only.
- 2 – PVC valves have polypropylene gate wedge, CPVC valves have CPVC gate wedge.
- 3 – Standard valves are assembled with non-silicone lubricant.
- 4 – Valve size 2-1/2" is 3" valve with 2-1/2" reducer bushing.

Premium Actuated Valve Part Number Selection



Step 2: Actuator Code Selection

Spears® actuated valves are available with either electric or pneumatic motors. Actuators are pre matched to each type and size of valve with proper operating torque and cycle time. Additional actuator accessories are selected and are factory installed on the Actuated Valve Package in Step 3 instructions.

Select the applicable options from either the Electric Actuators (Selection Table 4) or Pneumatic Actuators (Selection Table 5) and enter the designated **Actuator Code** portion of the package part number.

Table 4: ELECTRIC ACTUATORS

(Voltage - Enclosure Rating - Manual Override - Duty Cycle)

ACTUATOR CODE					Optional Control Number (not used on basic packages)				
☐	☐	☐	☐	☐	☐	-	☐	☐	☐
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u> - <u>11</u> - <u>12</u>
Reserved for Valve					Reserved for Size				
Voltage (see note 1)					Duty Cycle (see note 3)				
A = 115 VAC 60 Hz					1 = 25%				
B = 230 VAC 60 Hz					2 = 75%				
C = 230 VAC 3-phase 50 Hz (EU)					3 = 100%				
D = 230 VAC 3-phase 60 Hz					4 = 50%				
E = 24 VAC					5 = 70% (custom only)				
F = 12 VDC					6 = 80% (custom only)				
G = 24 VDC					Manual Override (see note 4)				
L = 460 VAC 3-Phase 50 Hz (EU)					0 = None				
M = 460 VAC 3-Phase 60 Hz					1 = Basic Manual Override				
R = 415 VAC 3-Phase 50 Hz (EU)					2 = Declutchable Manual Override				
S = 230 VAC 50 Hz (EU)					3 = Spring Return Open with Declutchable Manual Override (see note 5)				
T = 575 VAC 3-Phase 60Hz (EU)					4 = Spring Return Close with Declutchable Manual Override (see note 5)				
U = 115 VAC 50 Hz (EU)					5 = Spring Return Open no override (see note 5)				
X = Single Indicator Switch Only (see note 2)					6 = Spring Return Close no override (see note 5)				
Y = Double Indicator Switch Only (see note 2)					7 = RCE Battery Backup Actuator				
Z = Actuator Bracket Only (see note 2)					8 = Spring Return Open with Basic Manual Override (see note 5)				
1 = 480 VAC 50 Hz					9 = Spring Return Close with Basic Manual Override (see note 5)				
2 = 480 VAC 60 Hz									
3 = 480 VAC 3-Phase 50 Hz									
4 = 480 VAC 3-Phase 60 Hz									
5 = 380 VAC 3-Phase 60 Hz									
Enclosure									
1 = NEMA 4					7 = NEMA 7 Double Powder Coated				
2 = NEMA 4x					8 = NEMA 9 Double Powder Coated				
3 = NEMA 7					A = NEMA 7 Modulation enclosure (for 1/2"-2" modulated Ball Butterfly)				
4 = NEMA 9					9 = AWWA				
5 = NEMA 4 Double Powder Coated					B = NEMA 6				
6 = NEMA 4x Double Powder Coated					C = NEMA 6P, prolonged submersion at limited depth.				
					D = NEMA 8				

Notes:

- 1 – 460 VAC available on Butterfly Valves only.
- 2 – Bracket & Indicator Switch Only part numbers do not allow any other options (must be Z000, Y000, or X000)
- 3 – **Standard Duty Cycles** vary according to valve type and size as indicated in chart below. Standard Duty Cycles can be *upgraded* only. Note: 50% duty cycle available on non-standard, special order actuators only.

Valve Type	Size Range	25% Duty Cycle	75% Duty Cycle	100% Duty Cycle
Ball Valve	1/2" - 2"		X	
Ball Valve	2-1/2" - 4"	X		
Butterfly Valve	1-1/2" - 10"	X		
Butterfly Valve	12" - 24"			X
Diaphragm Valve	1/2" - 8"	X		

- 4 – Basic Manual Override is standard on Ball Valve sizes 1/2" – 3" with Declutchable Manual Override as an option. Declutchable Manual Override is standard on Ball Valve sizes 4" & larger and all Butterfly Valves. Standard Gate Valve and Diaphragm Valve packages have no override with Declutchable Manual Override as an option. Spring return not available on electric Diaphragm valves.
- 5 – Electric Spring Return Actuators come standard with no type of override. Need to verify if either Declutchable Manual Override or Basic Manual Overrides are available in all applications.



Premium Actuated Valve Part Number Selection

Actuator Only Part Numbers

Individual Premium Electric actuators can be ordered for specific Spears® valve types and sizes. Includes actuator and mounting hardware for specified valve type and size. To specify valve type for actuator only, enter the first digit valve type code followed by zeros ("0") for remaining 4-digits of the valve code section of the part number plus the applicable 3-digit valve size code (see valve selection Tables 1, 2, or 3). Complete the actuator code selection as described in this section. See Step 3 for any desired actuator accessories.

Example: A 115 VAC electric actuator only with NEMA 4 enclosure, basic manual override and 75% duty cycle for 2" standard True Union Ball Valve would have the following part number: 10000A112-020

Optional Control Numbers (custom use) – Electric Actuators

1 = AUMA SA07.5-19A/ AUMA-115 Actuator w/remote pilot station

2 = Rotork AQM105 Actuator

3 = RCE15-5-4-1-15 Remote Control Station w/24 VAC Battery Back-up

4 = RCE10-4-1-5-15 Remote Control Station w/24 VDC Battery Back-up

5 = Oversize Housing

6 = AUMA SG05.1 Actuator

7 = AUMA SG05.1-2 Actuator

B = AUMA SG05.1-3 460VAC 3-phase Actuator, indicator lights, 4-20mA positioner, NEMA 4x

8 = AUMA SA07.1-26B Actuator

H = AUMA SA07.5-38A 115 VAC Single Phase Actuator, (2) Gear Train Limit Switches, Open / Close Torque Switches, Space Heater, Plug & Socket type terminals, Side Mounted hand wheel, Nema 4x enclosure, Reversing starters, Power Supply board, Interface Board - 110 VAC, 3 Push buttons O/S/C, Selector Switch L/O/R, 3 Lights open / fault / close

9 = Actuator Upsize (one size to accommodate accessories)

A = EIM Controls P2N1-3 (460 VA 3-phase Actuator)

C = SURE 25-10, 115 VAC Actuator, Spring return close, w/ modulating 4-20 mA positioner board

D = AUMA SAR07.5-13B/GS63.3, 5000 in.-lb., 460 VAC 3-Phase 60HZ Actuator, indicator lights, 4-20mA positioner, NEMA4x.

E = AUMA SG07.1, 2640 in.-lb., 120VAC Actuator, NEMA 4x/6

F = RCE-40-410-4-115, 115 VAC actuator w/ battery backup

G = Valvcon # IW150HS2DNZN115A. 1-1/2", w/ heater/thermostat, 2 aux limit switches, Device Net card, declutchable manual override, 115VAC

J = RCE 15-5-4-15, 150 in. lb., 115VAC, 5 sec. cycle, 100% duty rating, NEMA 4x/7/9 enclosure, w/battery backup

X = Actuator assembled with Double Containment Valve & Valve Box (for use in "actuator only" part number)

Note: When control number is used on a package with accessories, the dash (-) is dropped before the "A" due to part number limitations.

Premium Actuated Valve Part Number Selection



Table 5: PNEUMATIC ACTUATOR

(Operation - Operating Pressure - Manual Override)

ACTUATOR CODE					Optional Control Number (not used on basic packages)		
☐	☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7	8
Reserved for Valve					Reserved for Size		
Operation Mode					Manual Override		
H = Air-to-Air					(see note 3)		
N = Air-to-Air, Extended Stops					0 = None		
J = Air-to-Spring Close					1 = Basic Manual Override (no operator Hand wheel)		
K = Air-to Spring Open					2 = Declutchable Manual Override (w/Hand wheel)		
O = Air-to-Spring Close, Extended Stops					3 = Manual Override (w/Hand wheel)		
P = Air-to Spring Open, Extended Stops							
W = 3-Way Ball Valve Actuator							
(see note 1)							
Operating (Supply) Pressure					Special Options		
(see note 2)					0 = None		
1 = 80 psi					1 = Polyester Powder Coated		
2 = 60 psi					2 = Stainless Steel Housing & Mounting		
3 = 40 psi					3 = Autocatalytically Nickel Infused (ANI) housing		
4 = 20-100 psi specified (must use with optional Control Number below)					4 = Special Bracketing -TUMB2		
5 = 140 psi (Diaphragm Valve only)					5 = Diaphragm w/Unitized Plastic Actuator		
6 = 150 psi					Housing (1/2" - 2")		
7 = 120 psi							
8 = 90 psi (Diaphragm Valve w/ Plastic Housing, 1/2" - 2"							

Notes:

1 – Bracket only part numbers do not allow any other options (must be Z000); available for Ball Valves only.

2 – Operating pressures (1-2-3) apply to Ball valve actuators.

3 – Basic Manual Override is standard on all Ball Valves and Butterfly Valves with Declutchable Manual Override as an option.

Standard Diaphragm Valve package has no override. No manual override option sizes 1/2" - 2". Declutchable Manual Override are an option on valve sizes 2-1/2" & larger that are equipped with Air-to-Air and Air-to-Spring Closed or Open.

Actuator Only Part Numbers

Individual Premium Pneumatic actuators can be ordered for specific Spears® valve types and sizes. Includes actuator and mounting hardware for specified valve type and size. To specify valve type for actuator only, enter the first digit valve type code followed by zeros ("0") for remaining 4-digits of the valve code section of the part number plus the applicable 3-digit valve size code (see valve selection Tables 1, 2, or 3). Complete the actuator code selection as described in this section. See Step 3 for any desired actuator accessories.

Example: An 80 psi, air-to-air pneumatic actuator only with declutchable manual override for 2" standard Butterfly Valve would have the following part number: 40000H102-020.

Optional Control Numbers (custom use) – Pneumatic Actuators

1 = Downsized actuator for vacuum application.

2 = Habonin brand pneumatic actuator

3 = Customer Requested Upsized Actuator (one size larger than standard)

4 = Saunders 602-1/2 actuator

X = Actuator assembled with Double Containment Valve & Valve Box (for use in "actuator only" part number)

Control Numbers for user specified pressure. Must be used with Operating (Supply) Pressure code 7, #4:

A = 20 psi D = 50 psi G = 80 psi

B = 30 psi E = 60 psi H = 90 psi

C = 40 psi F = 70 psi J = 100 psi

Note: When control number is used on a package with accessories, the dash (-) is dropped before the "A" due to part number limitations.



Premium Actuated Valve Part Number Selection

Step 3: Actuator Accessory Selection

Premium actuator accessories are available for both Electric actuators (Selection Table 7) and Pneumatic actuators (Selection Table 8 and 9). Actuator accessory options are selected and ordered separately as individual Accessory part numbers for the actuated valve. If accessory options are to be ordered, be sure the suffix, “- A ”, was added to the end of the selected Actuated Valve Package part number configured in Step 1 & 2 to designate that the accessories are assembled with the valve package.

A separate part number is used for each accessory ordered. Select the desired Accessory Part Number from the selection tables for each accessory.

Example: An electric actuated valve is desired with a heater and thermostat, an SPDT limit switch set and a 0-5 VDC signal positioner board. From Table 7, the following Accessory part numbers should be ordered with the actuated valve package:

Heater & Thermostat = **A-H1**
 Limit Switch Set = **A-LS1**
 Positioner Board = **A-PB2**

Contact Spears® for any desired accessories or functions not specified in the Accessory Selection Tables

Selection Table 7: Premium Electric Actuator Accessories

Accessory	Description	Accessory Part Number
Heater	Heater & Thermostat - On @ 41°F, Off @ 60.8°F	A-H1
	Heater & Thermostat - On @ 62.6°F, Off @ 80.6°F	A-H2
	Heater & Thermostat - On @ 69.8°F, Off @ 89.6°F	A-H3
	120/220 VAC - Self Regulating	A-H4
Auxiliary Limit Switches	2-SPDT Limit Switch Set (1/2" shaft cam)	A-LS1
	2-SPDT Limit Switch Set (3/8" shaft cam ³)	A-LS2
	2-SPDT Limit Switch Set for Electric Spring Return	A-LS3
Position Indicators	LED Indicator Lights	A-P2
Modulating Positioner Boards	115 VAC 4-20mA	A-PB1
	115 VAC 0-5 VDC	A-PB2
	115 VAC 0-10 VDC	A-PB3
	230 VAC 4-20mA	A-PB4
	230 VAC 0-5 VDC	A-PB5
	230 VAC 0-10 VDC	A-PB6
	24 VAC 4-20mA	A-PB7
	24 VAC 0-5 VDC	A-PB8
	24 VAC 0-10 VDC	A-PB9
	24 VDC 4-20mA	A-PB10
	24 VDC 0-5 VDC	A-PB11
	24 VDC 0-10 VDC	A-PB12
	115 VAC 4-20mA For Electric Spring Return Actuator	A-PB13
Transmitter	4-20mA	A-T1
Torque Sensor	Adjustable Electronic Torque Sensor	A-TS1
Speed Controller	Variable Speed Controller	A-SC1
2"-Wire Control ¹ (operates as solenoid valve)	Control Relay Switch Setup 115 VAC - Normally Closed	A-CR1
	Control Relay Switch Setup 115 VAC - Normally Open	A-CR2
	Control Relay Switch Setup 24 VAC - Normally Closed	A-CR3
	Control Relay Switch Setup 24 VAC - Normally Open	A-CR4
	Control Relay Switch Setup 230 VAC - Normally Closed	A-CR5
	Control Relay Switch Setup 230 VAC - Normally Open	A-CR6
	Control Relay Switch Setup 12 VDC - Normally Closed	A-CR7
	Control Relay Switch Setup 12 VDC - Normally Open	A-CR8
	Control Relay Switch Setup 12 VDC - Normally Closed	A-CR9
	Control Relay Switch Setup 12 VDC - Normally Open	A-CR10

Notes:

1 – “2-Wire” Control is not applicable to Diaphragm Valves

2 – Friction Brake is standard on Butterfly Valves and not applicable to Diaphragm Valves

3 – The A-LS2 is used on 1/2" - 2" basic Ball Valve packages; A-LS1 used on all others.

(CONTINUED NEXT PAGE)

Premium Actuated Valve Part Number Selection



(Selection Table 7: Premium Electric Actuator Accessories - Continued)

Accessory	Description	Accessory Part Number
Friction Brake ²	Mechanical Brake	A-FB1
Lockout Switch	Power disconnect switch activated when n manual override is in use	A-LK1
Remote/Off/Local Control Switch	Remote/off/local, open/close momentary contact push buttons, red (close) and green (open) position indicating lights	A-RS1
Special Hardware	Titanium Bolts	A-B1
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015
Stem Extension	Ball Valve Stem Extension ⁴	A-BVSE-XXX-000
	True Union 2000 Ball Valve Stem Extension	A-BVSE2-XXX-000
	Butterfly Valve Stem Extension	A-BFSE-XXX-000
	Diaphragm Valve Stem Extension	A-DESE-XXX-000

Note:

4 – Stem Extension Part Numbers: Enter size code for “xxx” in part number. Replace “000” with desired length code in part number; length is from top of valve to bottom of actuator.

Selection Table 8: Ball Valve & Butterfly Valve Premium Pneumatic Actuator Accessories

Accessory	Description			Accessory Part Number
PNEUMATIC POSITIONERS	3-15 psi	NEMA 4	Flat-Top Indicator	A-PP1
	3-15 psi	NEMA 4	Dome Indicator	A-PP2
	3-15 psi	NEMA 4	Dome Indicator, Integrated 2-SPDT Mech. Switches	A-PP3
	3-15 psi	NEMA 4x	Dome Indicator, 2-SPDT Switches, 4-20 Transmitter	A-PP4
ELECTRO PNEUMATIC POSITIONERS WITH INDICATOR	4-20mA	NEMA 4	Flat-Top Indicator	A-EP1
	4-20mA	NEMA 4	Dome Indicator	A-EP2
	4-20mA	NEMA 4	Dome Indicator, Integrated 2-SPDT Mech. Switches	A-EP3
	4-20mA	NEMA 7	Flat-Top Indicator	A-EP4
	4-20mA	Intrinsically Safe (CSA/UL) Flat-Top Indicator		A-EP5
	4-20mA	NEMA 7	Dome Indicator	A-EP6
	4-20mA	Intrinsically Safe w/2-SPST Proximity Switches		A-EP22
SOLENOID VALVES	3 & 4-way	115 VAC	NEMA 4/4x	A-SV1
	3 & 4-way	230 VAC	NEMA 4/4x	A-SV2
	3 & 4-way	24 VAC	NEMA 4/4x	A-SV3
	3 & 4-way	12 VDC	NEMA 4/4x	A-SV4
	3 & 4-way	24 VDC	NEMA 4/4x	A-SV5
	3 & 4-way	115 VAC	7/9	A-SV6
	3 & 4-way	230 VAC	7/9	A-SV7
	3 & 4-way	24 VAC	7/9	A-SV8
	3 & 4-way	12 VDC	7/9	A-SV9
	3 & 4-way	24 VDC	7/9	A-SV10
	Dual Coil 3 & 4-way	115 VAC	NEMA 4/4x	A-SV11
	Dual Coil 3 & 4-way	230 VAC	NEMA 4/4x	A-SV12
	Dual Coil 3 & 4-way	24 VAC	NEMA 4/4x	A-SV13
	Dual Coil 3 & 4-way	12 VDC	NEMA 4/4x	A-SV14
	Dual Coil 3 & 4-way	24 VDC	NEMA 4/4x	A-SV15
	Dual Coil 3 & 4-way	115 VAC	NEMA 7/9	A-SV16
	Dual Coil 3 & 4-way	230 VAC	NEMA 7/9	A-SV17
	Dual Coil 3 & 4-way	24 VAC	NEMA 7/9	A-SV18
	Dual Coil 3 & 4-way	12 VDC	NEMA 7/9	A-SV19
	Dual Coil 3 & 4-way	24 VDC	NEMA 7/9	A-SV20
	Stainless Steel 3 & 4-way	115 VAC	NEMA 4/4x	A-SV21
	3-Way 24 VDC Hi Temperature (Class H)	NEMA 4x		A-SV22
	3 & 4-way	230 VAC	NEMA 4/4x 1/2" NPT Din Connector	A-SV23

Note: Pneumatic and Electro-Pneumatic positioners include brass gauges: 1 input gauge @ 0-30 psi and 2 output gauges @ 0-160 psi. Stainless steel gauges may be ordered separately.

(CONTINUED NEXT PAGE)



Premium Actuated Valve Part Number Selection

(Table 8: Ball Valve & Butterfly Valve Premium Pneumatic Actuator Accessories - Continued)

Accessory	Description		Accessory Part Number
LIMIT SWITCH & TRANSMITTER COMBINATION	4-20mA	2-SPDT NEMA 4/4x/7/9	A-LS20
	4-20mA	2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS21
	4-20mA	2-DPDT NEMA 4/4x/7/9	A-LS22
	4-20mA	2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS23
	4-20mA	2-Proximity NEMA 4/4x/7/9	A-LS24
	4-20mA	2-Proximity NEMA 4/4x/7/9 w/ Visual Indicator	A-LS25
LIMIT SWITCHES	2-SPDT	NEMA 4/4x Flat Top	A-LS40
	2-SPDT	NEMA 4/4x w/ Visual Indicator (requires user supplied intrinsic barrier)	A-LS41
	2-SPDT	NEMA 4/4x w/ Green/Red Dome Indicator	A-LS41D
	2-SPDT	NEMA 4/4x w/ Low Profile Indicator	A-LS41L
	2-DPDT	NEMA 4/4x	A-LS42
	2-DPDT	NEMA 4/4x w/ Visual Indicator	A-LS43
	2-Proximity	NEMA 4/4x Flat Top	A-LS44
	2-Proximity	NEMA 4/4x w/Low Profile Indicator (source power requires intrinsic safety barrier or amplifier)	A-LS44L
	2-Proximity	NEMA 4/4x w/ Visual Indicator	A-LS45
	2-Proximity	NEMA 7/9 Flat Top	A-LS46
	2-Proximity	NEMA 7/9 w/ Visual Indicator	A-LS47
	2-Proximity	NEMA 7/9 w/ Low Profile Indicator	A-LS47L
	2-SPDT	NEMA 4/4x/7/9 Flat Top	A-LS48
	2-SPDT	NEMA 4/4x/7/9 w/ Visual Indicator	A-LS49
	2-DPDT	NEMA 4/4x/7/9 Flat Top	A-LS50
	2-DPDT	NEMA 4/4x/7/9 w/ Visual Indicator	A-LS51
	4-SPDT	NEMA 4/4x w/180°Indicator	A-LS52
INDICATORS	Dome Indicator		A-V2
TRANSMITTER	4-20mA Output Transmitter		A-PT1
PRESSURE GAUGE SET	Stainless steel case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 output gauges 0-160 psi		A-G1
	Plastic case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 output gauges 0-160 psi		A-G2
AIR MUFLERS	Standard Sintered Bronze, 40 Micron 1/8" NPT		A-M18
	Standard Sintered Bronze, 40 Micron 1/4" NPT		A-M14
	Speed Control Muffler (Adjustable Air Flow) 1/8" NPT		A-M2V18
	Speed Control Muffler (Adjustable Air Flow) 1/4" NPT		A-M2V14
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)		TAG3-015
Stem Extensions	Ball Valve Stem Extension ¹		A-BVSE-xxx-000
	True Union 2000 Ball Valve Stem Extension ¹		A-BVSE2-xxx-000
	Butterfly Valve Stem Extension ¹		A-BFSE-xxx-000

Notes:

1 – Stem Extension Part Numbers: Enter size code for “xxx” in part number. Replace “000” with the desired length code in part number; length is from top of valve to bottom of actuator.

Premium Actuated Valve Part Number Selection



Table 9: Diaphragm Valve Premium Pneumatic Actuator Accessories

Accessory	Description				Accessory Part Number
PNEUMATIC POSITIONERS	3-15 psi	NEMA 4x	w/Visual Indicator	Top Loading (no gauge)	A-DPP1
	3-15 psi	NEMA 4 x	w/Visual Indicator	Top Loading w/gauges (3)	A-DPP2
	3-15 psi	NEMA 4 x	w/Visual Indicator	Bottom Loading (no gauge)	A-DPP3
	3-15 psi	NEMA 4 x	w/Visual Indicator	Bottom Loading w/gauges (3)	A-DPP4
ELECTRO PNEUMATIC POSITIONERS	4-20 mA	(3-15 psi) NEMA 4 x	w/Visual Indicator	(up to 2")	A-DEP1
	4-20 mA	(3-15 psi) NEMA 4 x	w/Visual Indicator w/SS Gauges	(up to 2")	A-DEP2
	4-20 mA	(3-15 psi) NEMA 4 x	w/Visual Indicator	(2-1/2" & up)	A-DEP3
	4-20 mA	(3-15 psi) NEMA 4 x	w/Visual Indicator w/SS Gauges	(2-1/2" & up)	A-DEP4
	4-20mA	(3-15 psi) NEMA 4 x	w/Dome Indicator w/2-SPDT Limited Switches	(2-1/2" & up)	A-DEP5
3-WAY SOLENOID VALVES	115 VAC	NEMA 4/4x			A-DSV1
	230 VAC	NEMA 4/4x			A-DSV2
	24 VAC	NEMA 4/4x			A-DSV3
	12 VDC	NEMA 4/4x			A-DSV4
	24 VDC	NEMA 4/4x			A-DSV5
	115 VAC	NEMA 7/9			A-DSV6
	230 VAC	NEMA 7/9			A-DSV7
	24 VAC	NEMA 7/9			A-DSV8
	12 VDC	NEMA 7/9			A-DSV9
	24 VDC	NEMA 7/9			A-DSV10
4-WAY SOLENOID VALVES	115 VAC	NEMA 4/4x			A-DSV11
	230 VAC	NEMA 4/4x			A-DSV12
	24 VAC	NEMA 4/4x			A-DSV13
	12 VDC	NEMA 4/4x			A-DSV14
	24 VDC	NEMA 4/4x			A-DSV15
	115 VAC	NEMA 7/9			A-DSV16
	230 VAC	NEMA 7/9			A-DSV17
	24 VAC	NEMA 7/9			A-DSV18
	12 VDC	NEMA 7/9			A-DSV19
	24 VDC	NEMA 7/9			A-DSV20
MICRO ² LIMIT SWITCHES	2-SPDT	NEMA 4	w/180°Visual Indicator		A-DLS20
	2-SPDT	NEMA 7/9	w/180°Visual Indicator		A-DLS25
PROXIMITY LIMIT SWITCHES	2-SPDT	NEMA 4/4X			A-DLS23
LIMIT SWITCHES ³	2-SPDT	NEMA 4			A-DLS24
SPEED CONTROLLER	Variable Speed Controller				A-DPSC1
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)				TAG3-015
Stem Extensions	Diaphragm Valve Stem Extension ¹				A-DPSE-xxx-000
HANDWHEEL OVERRIDE	Handwheel override for 2-1/2" to 6" Linear Diaphragm Actuators				A-DHW2

Notes: 1 – Stem Extension Part Numbers: Enter size code for “xxx” in part number. Replace “000” with the desired length code in part number; length is from top of valve to bottom of actuator.

2 – Micro Limit Switches used on valve sizes 1/2" through 2".

3 – Limit Switches are used on valve sizes 2-1/2" & Larger



Ball Valve Actuation Questionnaire Checklist

Return Fax To Tech Services: (818) 364-6945

Contact Name: _____ Date: _____
Business Name: _____
City: _____ State: _____ Country: _____
Phone: _____ Fax: _____ E-mail: _____
Project Name: _____

Ball Valves:		System Media Pressure (Required)		psi _____ kPa _____ Bar _____	Valve Quantity Each	
		Nominal Size		in _____ mm _____ cm _____		
Ball Valve Type :		Body Material :		O-ring Seals :		End Connector :
☐ True Union Industrial		☐ Three Way Horizontal (See 3-way orientation box below)		☐ EPDM		☐ Socket
☐ True Union Standard		☐ Three Way Vertical (See 3-way orientation box below)		☐ FKM		☐ Flange
☐ Compact		☐ Tandem Three Way		☐ Other		☐ Threaded
☐ True Union Tee Style		☐ Tandem 3-Way Orientation Document Required		☐ Low-Extractable PVC		☐ SR Threaded
☐ Other Valve Type _____				(If Other Explain)		☐ Metric
						☐ DIN
						☐ JIS
						☐ BSP (Thread)
Vertical 3- Way Orientation ☐ Single L Port ☐ Triple L Port ☐ Double L Port ☐ T Port Horizontal 3- Way Orientation ☐ L Port ☐ T Port						
Pneumatic ☐ Not all combinations may be available. FailSafe Type - (Position to which valve cycles upon air loss) ☐ Double Acting (No FailSafe. Stays in last activated position) ☐ Spring Return - Close (FailSafe in closed position upon air loss) ☐ Spring Return - Open (FailSafe in open position upon air loss) ☐ Other: _____ Operating Air Pressure (psi) - (Compressed air supply required to operate actuator) ☐ 80-150 ☐ Other: _____ Override Type - (Override used to cycle valve upon air loss) ☐ Basic ☐ Declutchable ☐ Other: _____ Aux. Limit Switches- (Additional mechanical switches to operate external lights, alarms etc. (set of 2) ☐ SPDT- Mechanical ☐ SPDT- Proximity ☐ DPDT- Mechanical Voltage Signal Type Specify Voltage: _____ Visual Indicator - (Provides local visual valve position indication) ☐ Low Profile ☐ Dome ☐ No Indicator Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle). ☐ Pneumatic Positioner (Air supply required to operate valve) Signal Pressure - (Air pressure required to position the valve) ☐ 3-15 psi ☐ Other: _____ ☐ Electro-Pneumatic Positioner (Air and voltage supply required to operate) Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ With Transmitter - (Sends output signal to PLC to provide valve position) Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids, solids and gases) ☐ 4 ☐ 4x ☐ Other: _____ Solenoid Valve - (Regulates actuator intake/exhaust air supply) ☐ 3 & 4 Way ☐ Dual Coil (Double Acting Actuators only) ☐ Other: _____ Solenoid Valve Voltage ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ ☐ Other Options: _____ _____						
Electric ☐ Not all combinations may be available. ☐ Basic Two Position (90 Degree Travel Standard) ☐ 3 Position 90 ☐ 180 ☐ FailSafe Position (if required) ☐ Fail Open - FailSafe in open position upon power loss ☐ Fail Close - FailSafe in closed position upon power loss Note: On "Fail Safe" Options Two Positions ONLY. Override Not Recommended. Voltage Supply Power: ☐ 115 VAC ☐ 230 VAC ☐ Other: _____ Frequency ☐ 50 Hertz ☐ 60 Hertz Phase ☐ Single ☐ Three Override Type - (Override used to cycle valve upon power loss) ☐ Basic ☐ Declutchable ☐ Other: _____ Duty Cycle (Amount of work valve can accomplish before requiring rest) ☐ 25% ☐ 75% ☐ Other/Min. Requirement : _____ NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids) ☐ 4 ☐ 4x ☐ Other: _____ Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle) ☐ Positioner with Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Transmitter - (Sends output signal to PLC to provide valve position) Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ ☐ Positioner - NO Transmitter Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____ Auxiliary Limit Switches (Additional mechanical switches to operate external lights, alarms etc.) ☐ 2 ☐ 4 ☐ 4 (Set of 2 each) Standard Accessories - All options not available in all actuator combinations ☐ Torque Sensor ☐ Friction Brake ☐ Battery Backup ☐ LED Indicating Lights (red /green) ☐ Speed Control ☐ 2 Wire Control Relay ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F] ☐ Other Options: _____ _____						

Rev. A 2010

Butterfly Valve Actuation Questionnaire Checklist

Return Fax To Tech Services: (818) 364-6945



Contact Name: _____ Date: _____
Business Name: _____
City: _____ State: _____ Country: _____
Phone: _____ Fax: _____ E-mail: _____
Project Name: _____

Butterfly Valves:	System Media Pressure (Required)	psi	_____	kPa	_____	Bar	_____	Valve Quantity Each
	Nominal Size	in	_____	mm	_____	cm	_____	
Butterfly Valve Type :								
Standard	☐							
True Lug	☐	Tandem Diverting	☐					
Pool Valve	☐	Tandem Three Way	☐					
Wafer	☐	(Tandem 3-Way Orientation Document Required)						
Other Valve Type	☐	_____						
Body Material :								
PVC	☐							
CPVC	☐							
Polypropylene	☐							
O-ring Seals :								
Buna-N	☐							
EPDM	☐							
FKM	☐							
Other	☐	(If Other Explain) _____						
Lug Materials :								
SS316	☐							
Zinc	☐							
☐ Other Information: _____								

Pneumatic ☐ Not all combinations may be available.

FailSafe Type - (Position to which valve cycles upon air loss)

☐ Double Acting (No FailSafe. Stays in last activated position)

☐ Spring Return - Close (FailSafe in closed position upon air loss)

☐ Spring Return - Open (FailSafe in open position upon air loss)

☐ Other: _____

Operating Air Pressure (psi) - (Compressed air supply required to operate actuator)

☐ 80-150 ☐ Other: _____

Override Type - (Override used to cycle valve upon air loss)

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches - (Additional mechanical switches to operate external lights, alarms etc. (set of 2))

☐ SPDT - Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - (Provides local visual valve position indication)

☐ Low Profile ☐ Dome

Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle).

☐ **Pneumatic Positioner** (Air supply required to operate valve)

Signal Pressure - (Air pressure required to position the valve)

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** (Air and voltage supply required to operate)

Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - (Sends output signal to PLC to provide valve position)

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids, solids and gases)

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - (Regulates actuator intake/exhaust air supply)

☐ 3 & 4 Way ☐ Dual Coil (Double Acting Actuators only) ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids)

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**

Electric ☐ Not all combinations may be available.

☐ Basic Two Position (90 Degree Travel Standard)

FailSafe Position (if required)

☐ Fail Open - Open (FailSafe in open position upon power loss)

☐ Fail Close - Close (FailSafe in closed position upon power loss)

Note: On "Fail Safe" options two positions ONLY Override Not Recommended.

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - (Override used to cycle valve upon power loss)

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle (Amount of work valve can accomplish before requiring rest)

☐ 25% ☐ 75% ☐ Other/Min. Requirement: _____

NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids)

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle)

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter - (Sends output signal to PLC to provide valve position)

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches (Additional mechanical switches to operate external lights, alarms etc.)

☐ 2 ☐ 4 (Set of 2 each)

Standard Accessories - All options not available in all actuator combinations

☐ Torque Sensor ☐ Torque Sensor

☐ Battery Backup ☐ LED Indicating Lights (red /green)

☐ Speed Control ☐ 2 Wire Control Relay

☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F]

☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:**

Rev. A 2010



Diaphragm Valve Actuation Questionnaire Checklist

Return Fax To Tech Services: (818) 364-6945

Contact Name: _____ Date: _____
Business Name: _____
City: _____ State: _____ Country: _____
Phone: _____ Fax: _____ E-mail: _____
Project Name: _____

Diaphragm Valves: System Media Pressure (Required)			Valve Quantity Each		
Nominal Size	psi	kPa	Bar	in	mm
	in	mm	cm		
Diaphragm Valve Type :			Body Material :		
EPDM ☐			PVC ☐		
FKM ☐			CPVC ☐		
PTFE/FKM ☐			Low-Extractable PVC ☐		
PTFE/EPDM ☐			Polypropylene ☐		
Other Valve Type ☐ _____					
End Connector O-rings 1/2" - 2" :			End Connector :		
EPDM ☐			Socket ☐		
FKM ☐			SR Threaded ☐		
PTFE/FKM ☐			Flange ☐		
PTFE/EPDM ☐			Spigot ☐		
Other ☐ _____					
(If Other Explain)					

☐ Other information: _____					

Not all combinations may be available.

Unitized Pneumatic ☐
Pneumatic ☐

FailSafe Type - (Position to which valve cycles upon air loss)
☐ Double Acting (No FailSafe. Stays in last activated position)
☐ Spring Return - Close (FailSafe in closed position upon air loss)
☐ Spring Return - Open (FailSafe in open position upon air loss)
☐ Other: _____

Operating Air Pressure (psi) - (Compressed air supply required to operate actuator)
☐ 80-116 ☐ Other: _____

Override Type - (Override used to cycle valve upon air loss. Not available in sizes 1/2" - 2")
☐ Basic ☐ Decutchable ☐ Other: _____

Aux. Limit Switches - (Additional mechanical switches to operate external lights, alarms etc. (set of 2))
☐ SPDT - Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type: Specify Voltage: _____

Visual Indicator - (Provides local visual valve position indication)
☐ Low Profile ☐ Dome

Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle).
☐ **Pneumatic Positioner** (Air supply required to operate valve)
Signal Pressure - (Air pressure required to position the valve)
☐ 3-15 psi ☐ Other: _____
☐ **Electro-Pneumatic Positioner** (Air and voltage supply required to operate)
Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
☐ **With Transmitter** - (Sends output signal to PLC to provide valve position)
Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating - (Enclosure rating indicates level of housing ingress protection from fluids and solids)
☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - (Regulates actuator intake/exhaust air supply)
☐ 3 way (Air-to-Spring) ☐ 4 way (Double Acting Actuators only) ☐ Other: _____

Solenoid Valve Voltage
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids, solids and gases)
☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**

Not all combinations may be available.

Electric Multi Turn ☐

Voltage Supply Power:
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - (Override used to cycle valve upon power loss)
☐ Basic ☐ Decutchable ☐ Other: _____

Duty Cycle (Amount of work valve can accomplish before requiring rest)
☐ 25% ☐ 75% ☐ Other: _____

NEMA Rating - (Enclosure rating indicates level of ingress protection from fluids and solids)
☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - (Positioner accepts an input signal from PLC to control valve cycle)
☐ **Positioner with Transmitter**
Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
Transmitter - (Sends output signal to PLC to provide valve position)
Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
☐ **Positioner - NO Transmitter**
Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches (Additional mechanical switches to operate external lights, alarms etc.)
☐ 2 ☐ 4 (Set of 2 each)

Standard Accessories - All options not available in all actuator combinations
☐ Torque Sensor
☐ Battery Backup ☐ LED Indicating Lights (red /green)
☐ Speed Control ☐ 2 Wire Control Relay
☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F]
☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:**

Rev. A 2010



PVC DWV

Drain Waste Vent Fittings



TECHNICAL INFORMATION



Visit our web site
www.spearsmfg.com



PVC DWV Drain Waste Vent Fittings

SPEARS® LINE OF QUALITY PVC DRAIN, WASTE AND VENT (DWV) FITTINGS ARE MANUFACTURED IN STRICT COMPLIANCE TO ASTM D 2665.

STANDARDS & SPECIFICATIONS

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured.

ASTM D 2665	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
ASTM D 3311	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns.
ASTM F 1866	Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.
ASTM D 1784	Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.



NSF International Standard 14 (NSF®-dwv) Certified

NSF International Certified to Uniform Plumbing Code (NSF®-U.P. Code)

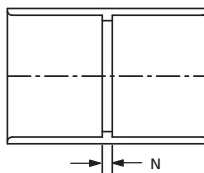
The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

PVC DWV Drain Waste Vent Fittings



P100 Coupling

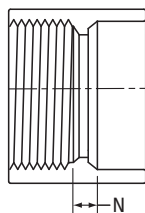
H x H



Part Number	Size	N
P100-015	1-1/2	1/8
P100-020	2	1/8
P100-030	3	3/16
P100-040	4	1/4
P100-060	6	1/4
P100-080	8	1/4
P100-100	10	3/8
P100-120	12	3/8
P100-140	14	3/8

P101 Female Adapter

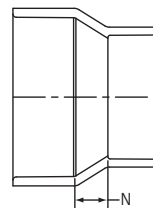
FPT x H



Part Number	Size	N
P101-015	1-1/2	1/4
P101-020	2	1/4
P101-030	3	5/16
P101-040	4	3/8
P101-060	6	11/32

P102 Pipe Increaser - Reducer

H x H



Part Number	Size	N
P102-251	2x1-1/2	11/16
P102-337	3x1-1/2	1-3/32
P102-338	3x2	15/16
P102-420	4x2	1-3/8
P102-422	4x3	15/16
P102-532	6x4	1-7/16
P102-582	8x4	2-11/32
P102-585	8x6	1-3/8
P102-624	10x4	3-3/8
P102-626	10x6	2-9/32
P102-628	10x8	1-5/16
P102-666	12x6	3-1/4
P102-668	12x8	2-1/2
P102-670	12x10	1-11/32
3729-528*	6x2	4-5/8
3729-530*	6x3	6-7/16
3729-578*	8x2	9-1/4
3729-580*	8x3	11-1/16
3729-621*	10x2	11
3729-623*	10x3	16-9/16
3729-661*	12x2	16-3/4
3729-663*	12x3	18-9/16
3729-664*	12x4	15-1/2
3729-691*	14x2	17-7/8
3792-693*	14x3	19-11/16
3729-694*	14x4	16-5/8
3729-696*	14x6	12-1/8
3729-698*	14x8	10-9/16
3729-700*	14x10	4-3/4
3729-702*	14x12	3-1/4

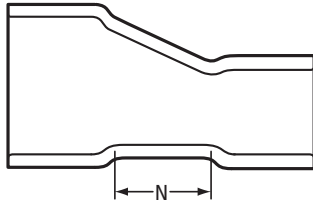
*Fabricated



PVC DWV Drain Waste Vent Fittings

Pipe Increaser - Eccentric Reducer

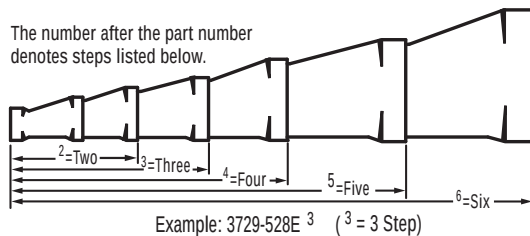
H x H



Part Number	Size	N
3729-420E*	4x2	8-13/16
3729-422E*	4x3	4-1/8
3729-528E ^{3*}	6x2	11-1/4
3729-530E ^{2*}	6x3	10-13/16
3729-532E*	6x4	5-5/8
3729-580E ³	8x3	18-3/16
3729-582E ^{2*}	8x4	13-3/8
3729-585E*	8x6	6-7/8
3729-624E ^{2*}	10x4	15-1/8
3729-626E*	10x6	8-5/8
3729-628E*	10x8	6-13/16
3729-664E ^{3*}	12x4	24-1/8
3729-666E ^{2*}	12x6	17-5/8
3729-668E ^{2*}	12x8	15-13/16
3729-670E*	12x10	6-7/8

Eccentric Reducer Footnotes Multi-Step Configurations

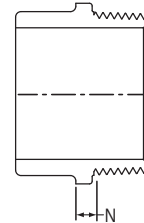
The number after the part number denotes steps listed below.



*Fabricated

P103 Trap Adapter - Male

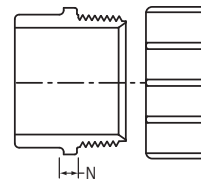
S x SLIP



Part Number	Size	N
P103-015	1-1/2	3/16
P103-020	2	3/16

P103P Trap Adapter - Male

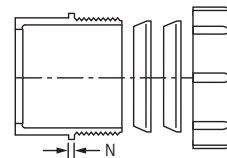
S x SLIP w/Plastic Nut - Built-in Washer



Part Number	Size	N
P103P-212	1-1/2x1-1/4	3/16
P103P-015	1-1/2	3/16
P103P-020	2	3/16

P103R Trap Adapter - Male with 1-1/2 Plastic Nut & Washer and 1-1/2 x 1-1/4 Washer

S x SLIP w/Plastic Nut



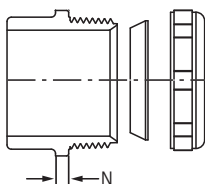
Part Number	Size	N
P103R-015	1-1/2	3/16

PVC DWV Drain Waste Vent Fittings



P103X Trap Adapter - Male

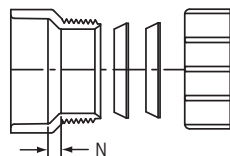
S x SLIP w/Chrome Nut & Washer



Part Number	Size	N
P103X-212	1-1/2x1-1/4	3/16
P103X-015	1-1/2	3/16
P103X-020	2	3/16

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer

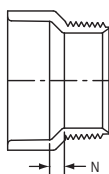
H x SLIP w/Plastic Nut



Part Number	Size	N
P104R-015	1-1/2	3/16

P104 Trap Adapter - Female

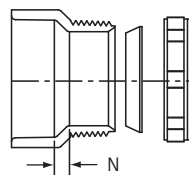
H x SLIP



Part Number	Size	N
P104-015	1-1/2	5/32
P104-020	2	3/16

P104X Trap Adapter - Female

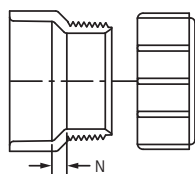
H x SLIP w/Chrome Nut & Washer



Part Number	Size	N
P104X-212	1-1/2x1-1/4	3/16
P104X-015	1-1/2	3/16
P104X-020	2	3/16

P104P Trap Adapter - Female

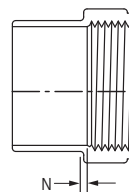
H x SLIP w/Plastic Nut



Part Number	Size	N
P104P-212	1-1/2x1-1/4	3/16
P104P-015	1-1/2	3/16

P105 Fitting Cleanout Adapter

S x FPT



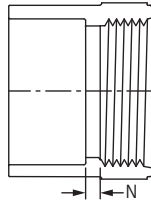
Part Number	Size	N
P105-015	1-1/2	5/32
P105-020	2	1/4
P105-030	3	11/32
P105-040	4	9/32
P105-060	6	3/8
P105-080	8	3/8



PVC DWV Drain Waste Vent Fittings

P105H Female Cleanout Adapter

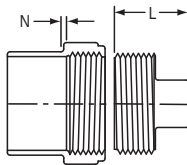
H x FPT



Part Number	Size	N
P105H-040	4	1/4
P105H-060	6	11/32

P105X Fitting Cleanout Adapter w/C.O. Plug

S x FPT

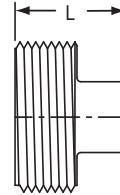


Part Number	Size	L	N
P105X-015	1-1/2	1-3/8	5/32
P105X-020	2	1-17/32	5/32
P105X-030	3	1-1/2	7/32
P105X-040	4	1-25/32	1/4
P105X-060	6	1-31/32	3/8
P105X-080	8	2-1/32	3/8
3978-100*	10	1	0
3978-120*	12	1	0
3978-140*	14	1	0

*Fabricated with Flush C.O. Plugs

P106 Cleanout Plug

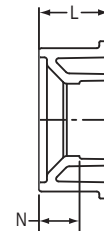
MPT



Part Number	Size	L
P106-015	1-1/2	1-5/16
P106-020	2	1-5/16
P106-025	2-1/2	1-1/2
P106-030	3	1-23/32
P106-040	4	1-7/8
P106-060	6	1-15/16
P106-080	8	2-1/32

P107 Flush Bushing

S x H



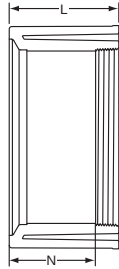
Part Number	Size	L	N
P107-251	2x1-1/2	1-1/16	1/8
P107-337	3x1-1/2	1-3/4	1
P107-338	3x2	1-25/32	1
P107-420	4x2	2	1-3/16
P107-422	4x3	2	1/2
P107-532	6x4	3-7/16	1-11/16
P107-582	8x4	4-19/32	2-13/16
P107-585	8x6	4-9/16	1-9/16
P107-626	10x6	6-1/32	3-1/32
P107-628	10x8	5-5/16	1-5/16
P107-666	12x6	7-1/2	4-1/2
P107-668	12x8	6-29/32	2-7/8
P107-670	12x10	6-1/2	1-7/16

PVC DWV Drain Waste Vent Fittings



P108 Flush Bushing (Cleanout Adapter)

S x FPT



Part Number	Size	L	N
P108-628	10x8	5-11/32	4-3/16
P108-668	12x8	7-1/2	6-3/8

P110 Flush C.O. Plug

MPT

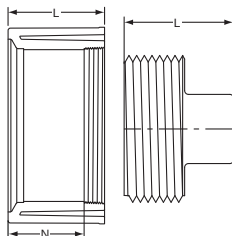


Part Number	Size	L
P110-015	1-1/2	5/8
P110-020	2	5/8
P110-025	2-1/2	3/4
P110-030	3	11/16
P110-040	4	7/8
P110-060	6	31/32

P108X Flush Bushing (Cleanout Adapter)

w/Plug

S x FPT



SEE PART NUMBERS - P108 AND P106

P116 Cap

SOCKET



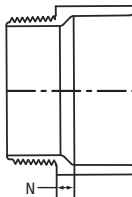
Part Number	Size	L
P116-015	1-1/2	15/16
P116-020	2	1
P116-030	3	1-3/4
P116-040	4	2-1/32
P116-060	6	3-5/16
P116-080	8	6-3/8
3747-100*	10	3-3/4
3747-120*	12	4-1/8
3747-140*	14	5-3/4

*Fabricated

P109 Male Adapter

Will not accept tail piece

MPT x H



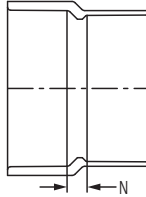
Part Number	Size	N
P109-169	1-1/4x1-1/2	3/16
P109-015	1-1/2	3/16
P109-020	2	3/16
P109-030	3	3/8
P109-040	4	3/8
P109-060	6	11/16



PVC DWV Drain Waste Vent Fittings

P117 Adapter Coupling (Adapts S&D Spigot to DWV Spigot)

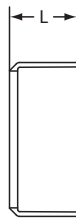
H x H



Part Number	Size	N
P117-040	4	1/2
P117-422	4x3	3/4

P118 Adapter Bushing (Adapts DWV Hub to S&D Spigot)

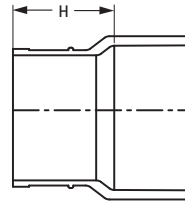
DWV SPIGOT x HUB



Part Number	Size	L
P118-030	3	1-5/16
P118-040	4	2

P119 No-Hub Adapter

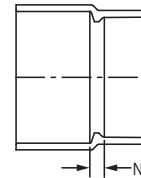
S x H



Part Number	Size	H
P119-015	1-1/2	1-9/16
P119-020	2	1-5/16
P119-030	3	1-13/16
P119-040	4	1-7/8
P119-251	2x1-1/2	1-5/8
P119-422	4x3	2-1/16

P122 Spigot Adapter, Cast Iron

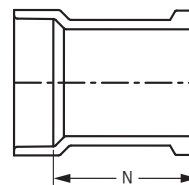
H x H



Part Number	Size	N
P122-040	4x4	9/16

P123 Hub Adapter

H x S



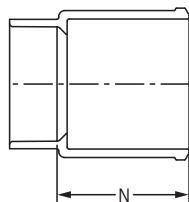
Part Number	Size	N
P123-020	2	3-7/8
P123-030	3	4-1/8
P123-040	4	4-7/16

PVC DWV Drain Waste Vent Fittings



P123R Hub Adapter, Cast Iron, Increaser (Plain End: Joint can be made with compression gasket or plastic lead & seal rope - Do Not use hot lead)

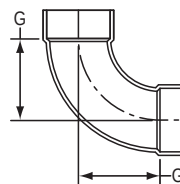
H x S



Part Number	Size	N
P123R-213	1-1/2x2	3-9/16
P123R-342	3x4	4

P300 1/4 Bend

H x H



Part Number	Size	G
P300-015	1-1/2	1-21/32
P300-020	2	2-9/32
P300-030	3	2-7/8
P300-040	4	3-7/8
P300-060	6	4-29/32
P300-080	8	5-29/32
P300-100	10	9-5/8
P300-120	12	10-9/16

P130 Repair Coupling

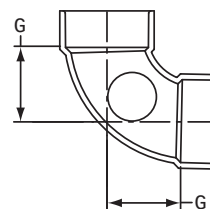
H x H



Part Number	Size	L
P130-015	1-1/2	1-9/16
P130-020	2	1-3/4
P130-030	3	3-3/16
P130-040	4	3-3/4
P130-060	6	6-11/32
P130-080	8	8-3/8
P130-100	10	10-3/8

P300S 1/4 Bend with Side Inlet

ALL HUB



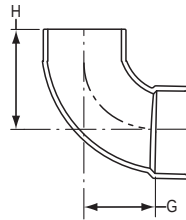
Part Number	Size	G
P300S-338	3x3x2	3-11/32



PVC DWV Drain Waste Vent Fittings

P302 1/4 Bend, Street

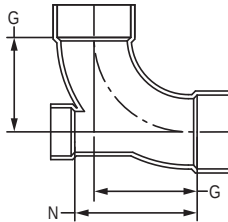
S x H



Part Number	Size	G	H
P302-015	1-1/2	1-9/16	2-13/32
P302-020	2	2-7/32	3-5/32
P302-030	3	3-1/16	4-19/32
P302-040	4	3-7/8	5-5/8
P302-060	6	5	8-11/32
P302-080	8	5-31/32	10-13/32
P302-100	10	9-15/16	15-13/32
P302-120	12	11-3/32	17-7/16

P303 1/4 Bend w/Low Heel Inlet

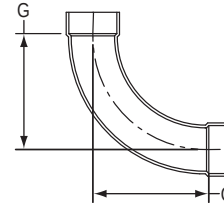
H x H x H



Part Number	Size	G	N
P303-338	3x3x2	2-27/32	4-5/32
P303-420	4x4x2	3-5/16	5

P304 Long Sweep 1/4 Bend

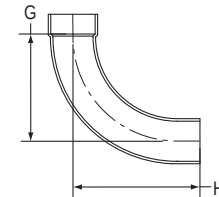
H x H



Part Number	Size	G
P304-015	1-1/2	2-3/4
P304-020	2	2-15/16
P304-030	3	4-1/8
P304-040	4	5-1/32
P304-060	6	8-29/32

P309 Long 1/4 Bend, Street

H x S



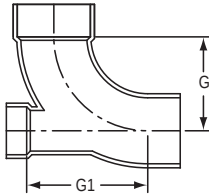
Part Number	Size	G	H
P309-015	1-1/2	2-3/4	3-1/2
P309-020	2	3-11/32	4-1/16
P309-030	3	4-1/16	5-9/16
P309-040	4	4-15/16	6-11/16
P309-060	6	8-29/32	11-29/32

PVC DWV Drain Waste Vent Fittings



P310 1/4 Bend, Street w/Low Heel Inlet

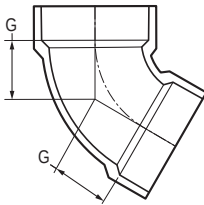
H x S x H



Part Number	Size	G	G1
P310-338	3x3x2	3-1/16	4-5/8

P319 1/6 Bend

H x H

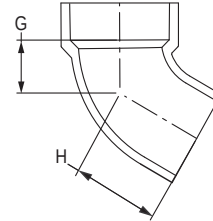


Part Number	Size	G
P319-015	1-1/2	1
P319-020	2	1-5/16
P319-030	3	1-11/16
P319-040	4	2-1/16
3724-060*	6	2-13/16
3724-080*	8	3-3/8
3724-100*	10	4
3724-120*	12	4-3/4
3724-140*	14	10-13/16

*Fabricated

P320 1/6 Bend, Street

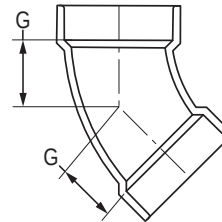
H x S



Part Number	Size	G	H
P320-015	1-1/2	1	1-23/32
P320-020	2	1-5/8	2-1/8
P320-030	3	1-11/32	2-21/32
P320-040	4	1-13/32	3-13/32

P321 1/8 Bend

H x H



Part Number	Size	G
P321-015	1-1/2	1-1/8
P321-020	2	1-1/2
P321-030	3	1-23/32
P321-040	4	2-1/8
P321-060	6	2-5/32
P321-080	8	2-1/16
P321-100	10	2-5/8
P321-120	12	3-1/8
3717-140*	14	3-7/8

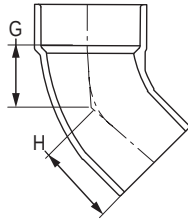
*Fabricated



PVC DWV Drain Waste Vent Fittings

P323 1/8 Bend, Street

H x S

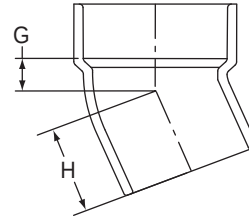


Part Number	Size	G	H
P323-015	1-1/2	31/32	1-13/16
P323-020	2	1-17/32	2-3/16
P323-030	3	1-7/8	3-1/8
P323-040	4	2-3/16	3-15/16
P323-060	6	1-9/16	5-5/32
P323-080	8	2-1/16	6-1/2
3727-100*	10	3-1/8	8-3/8

*Fabricated

P326 1/16 Bend, Street

H x S

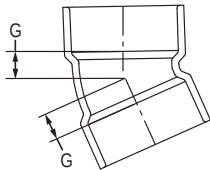


Part Number	Size	G	H
P326-015	1-1/2	1/2	1-5/16
P326-020	2	11/16	1-9/16
P326-030	3	29/32	2-7/32
P326-040	4	1	2-3/4
P326-060	6	1-1/32	4-1/2
P326-080	8	1-1/32	5-17/32
3742-100*	10	13/16	9-9/16
3742-120*	12	2-1/4	11-7/8
3742-140*	14	2-1/2	13-1/2

*Fabricated

P324 1/16 Bend

H x H

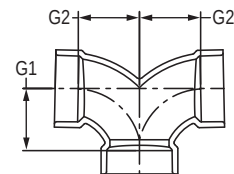


Part Number	Size	G
P324-015	1-1/2	1/2
P324-020	2	11/16
P324-030	3	29/32
P324-040	4	1
P324-060	6	1-5/16
P324-080	8	1-3/8
3716-100*	10	2-3/16
3716-120*	12	2-1/4
3716-140*	14	2-1/2

*Fabricated

P327 Double 1/4 Bend

H x H x H



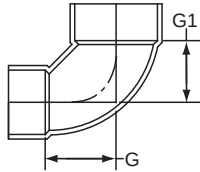
Part Number	Size	G1	G2
P327-015	1-1/2	1-3/4	1-3/4
P327-020	2	2-5/16	2-5/16
P327-030	3	3-1/16	3-1/16
P327-040	4	3-29/32	3-29/32
P327-241	2x1-1/2x1-1/2	1-3/8	4-1/2

PVC DWV Drain Waste Vent Fittings



P329 Closet Bend, Reducing

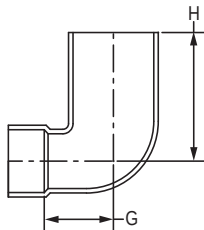
H x H



Part Number	Size	G	G1
P329-342	3x4	3-1/16	2-21/32

P330 Closet Bend, Reducing

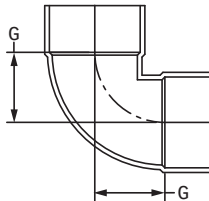
H x S



Part Number	Size	G	H
P330-342	3x4	3-5/8	6

P331 Vent Ell

H x H

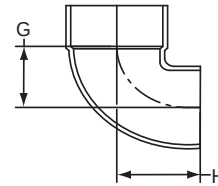


Part Number	Size	G
P331-015	1-1/2	1-3/16
P331-020	2	1-1/2
P331-030	3	1-7/8
P331-040	4	2-1/4
P331-060	6	3-1/2
P331-080	8	4-1/2
P331-100	10	5-3/4
P331-120	12	6-27/32
3706-140*	14	12-1/4

*Fabricated

P333 Vent Ell, Street

H x S

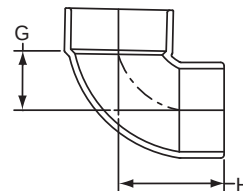


Part Number	Size	G	H
P333-015	1-1/2	1-3/16	2-1/4
P333-020	2	1-1/2	2-3/8
P333-030	3	2-5/16	3-9/16
P333-040	4	3-3/16	4-3/16
3709-060*	6	6-1/8	9-3/8
3709-080*	8	7-1/2	11-3/4
3709-100*	10	8-3/16	13-7/16
3709-120*	12	10-1/2	16-3/4
3709-140*	14	13-15/16	20-15/16

*Fabricated

P335 Trap Elbow (for use with Traps only)

H x S



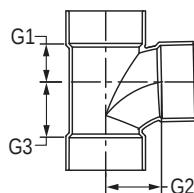
Part Number	Size	G	H
P335-030	3	2-1/8	3-27/32
P335-040	4	2-5/16	4-7/16



PVC DWV Drain Waste Vent Fittings

P400 Sanitary Tee

ALL HUB

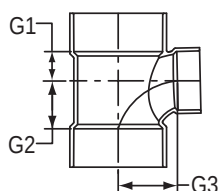


Part Number	Size	G1	G2	G3
P400-015	1-1/2	31/32	1-23/32	1-23/32
P400-020	2	1-11/32	2-5/16	2-5/16
P400-030	3	1-13/16	2-7/8	2-7/8
P400-040	4	2-1/32	3-11/16	3-11/16
P400-060	6	3-7/16	5-1/32	5-1/32
P400-080	8	4-7/16	6	6
P400-100	10	5-1/2	9-29/32	9-29/32
P400-120	12	6-17/32	11	11
3790-140*	14	5-5/16	22-3/4	23-1/16

*Fabricated

P401 Sanitary Tee, Reducing

ALL HUB

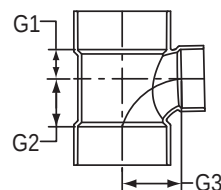


Part Number	Size	G1	G2	G3
P401-241	2x1-1/2x1-1/2	1-3/16	1-15/16	2-3/16
P401-251	2x2x1-1/2	1-1/4	1-27/32	2-3/16
P401-257	2x1-1/2x2	1-3/8	2-5/16	2-5/16
P401-337	3x3x1-1/2	15/16	1-3/4	2-9/16
P401-338	3x3x2	31/32	1-29/32	2-11/16
P401-420	4x4x2	7/8	1-27/32	3-5/32
P401-422	4x4x3	1-3/4	3	3-9/16
P401-532	6x6x4	2-5/32	3-19/32	4-11/16
3790-528*	6x2	3	5-3/8	7-1/16

*Fabricated

P401 Sanitary Tee, Reducing (continued)

ALL HUB



Part Number	Size	G1	G2	G3
3790-530*	6x3	3-1/4	7	9-11/16
3790-578*	8x2	3-3/4	6	8
3790-580*	8x3	3-3/4	7-1/2	10-5/8
3790-582*	8x4	3-7/8	8-7/8	11-1/8
3790-585*	8x6	3-7/8	11-3/4	12-7/8
3790-621*	10x2	3-3/4	6	9
3790-623*	10x3	4-1/16	7-11/16	11-5/8
3790-624*	10x4	4-5/16	9-5/16	12-1/8
3790-626*	10x6	4-15/16	12-13/16	13-7/8
3790-628*	10x8	5-1/4	15-3/4	16-3/16
3790-661*	12x2	4-3/16	6-5/16	10
3790-663*	12x3	4-1/4	7-3/4	12-5/8
3790-664*	12x4	4-5/16	9-3/16	13-1/8
3790-666*	12x6	4-7/8	12-5/8	14-7/8
3790-668*	12x8	5	15-1/2	17-1/8
3790-670*	12x10	5-1/16	18-7/16	20-1/16
3790-691*	14x2	4	6	10-9/16
3790-693*	14x3	4-1/2	8	13-3/16
3790-694*	14x4	4-9/16	9-7/16	13-11/16
3790-696*	14x6	4-5/8	12-3/8	15-7/16
3790-698*	14x8	4-13/16	15-3/16	17-3/4
3790-700*	14x10	4-7/8	18-1/8	20-11/16
3790-702*	14x12	6	22	22-3/8
3790-762*	16x12	5-9/16	21-7/16	23-5/16
3790-792*	18x12	6	21-3/4	24-1/4
3790-822*	20x12	6-1/2	22-1/4	25-1/4
3790-912*	24x12	7-1/2	23	27-1/8

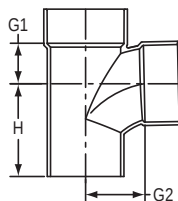
*Fabricated

PVC DWV Drain Waste Vent Fittings



P403 Sanitary Tee, Street

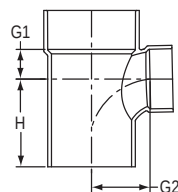
S x H x H



Part Number	Size	G1	G2	H
P403-015	1-1/2	13/16	1-17/32	2-7/16
P403-020	2	1-3/8	2-5/16	3-3/16
P403-030	3	1-7/8	2-15/16	4-3/8
P403-040	4	2-1/4	3-7/8	5-5/8
P403-060	6	3-3/4	4-1/4	7-1/2
P403-080	8	4-13/32	6	9-7/16
P403-100	10	5-15/32	9-15/16	14-9/16
P403-120	12	6-7/16	11-1/16	16-9/32

P404 Sanitary Tee, Street, Reducing

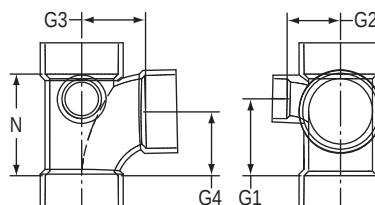
S x H x H



Part Number	Size	G1	G2	H
P404-241	2x1-1/2x1-1/2	1-7/32	2-7/32	2-9/16
P404-251	2x2x1-1/2	1-9/32	2-3/16	2-1/2
P404-257	2x1-1/2x2	1-17/32	2-5/16	2-27/32
P404-337	3x3x1-1/2	7/8	2-1/2	2-3/4
P404-338	3x3x2	1-1/8	2-7/8	2-9/32
P404-420	4x4x2	1-1/8	3-5/16	3-13/16
P404-422	4x4x3	1-3/4	3	5-1/4

P416 Sanitary Tee, with Left Side Inlet

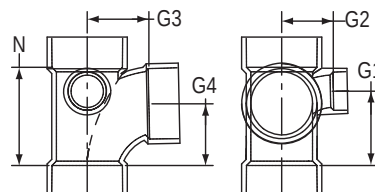
ALL HUB



Part Number	Size	G1	G2	G3	G4	N
P416-337	3x3x3x1-1/2	3-3/4	2-1/2	2-31/32	3-1/16	4-13/16
P416-338	3x3x3x2	3-3/4	2-25/32	2-31/32	3-1/16	4-13/16
P416-420	4x4x4x2	4-1/2	3-1/2	3-3/4	3-1/2	5-7/8

P417 Sanitary Tee, with Right Side Inlet

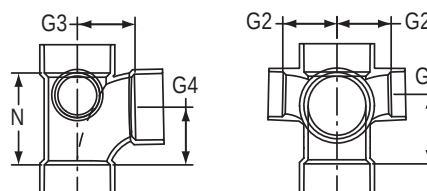
ALL HUB



Part Number	Size	G1	G2	G3	G4	N
P417-337	3x3x3x1-1/2	2-23/32	2-7/16	2-31/32	3-1/32	4-13/16
P417-338	3x3x3x2	3-3/4	2-3/4	2-31/32	3-1/32	4-13/16

P418 Sanitary Tee, with R&L Side Inlets

ALL HUB



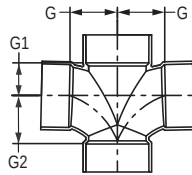
Part Number	Size	G1	G2	G3	G4	N
P418-337	3x3x3x1-1/2	3-23/32	2-19/32	2-31/32	3-1/16	4-13/16
P418-338	3x3x3x2	3-3/4	2-29/32	2-31/32	3-1/16	4-13/16



PVC DWV Drain Waste Vent Fittings

P428 Double Sanitary Tee

ALL HUB

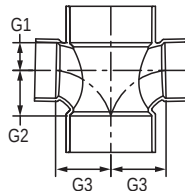


Part Number	Size	G	G1	G2
P428-015	1-1/2	1-11/16	1-5/16	1-5/16
P428-020	2	2-7/32	1-5/16	1-5/16
P428-030	3	3	1-25/32	1-25/32
P428-040	4	3-25/32	2-5/32	2-5/32
3791-060*	6	11-15/16	4-3/16	12-3/16
3791-080*	8	15-3/16	4-5/8	15-5/16
3791-100*	10	19-1/8	5-3/16	18-5/8
3791-120*	12	21-13/16	5-5/8	21-3/4
3791-140*	14	22-3/4	5-5/16	23-1/16

*Fabricated

P429 Double Sanitary Tee, Reducing

ALL HUB

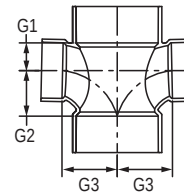


Part Number	Size	G1	G2	G3
P429-251	2x2x1-1/2x1-1/2	1-1/8	1-7/8	2-1/8
P429-337	3x3x1-1/2x1-1/2	27/32	1-11/16	2-15/32
P429-338	3x3x2x2	1-3/16	2-1/8	2-7/8
P429-419	4x4x1-1/2x1-1/2	1-1/32	2	3-7/32
P429-420	4x4x2x2	1-1/8	2	3-1/4
P429-422	4x4x3x3	1-19/32	2-13/16	3-13/32
3791-528*	6x2	3	5-3/8	7-1/16
3791-530*	6x3	3-1/4	7	9-11/16
3791-532*	6x4	3-5/16	8-7/16	10-3/16

P429 Double Sanitary Tee, Reducing

ALL HUB

(continued)



*Fabricated

Part Number	Size	G1	G2	G3
3791-578*	8x2	3-3/4	6	8
3791-580*	8x3	3-3/4	7-1/2	10-5/8
3791-582*	8x4	3-7/8	8-7/8	11-1/8
3791-585*	8x6	3-7/8	11-3/4	12-7/8
3791-621*	10x2	3-3/4	6	9
3791-623*	10x3	4-1/16	7-11/16	11-5/8
3791-624*	10x4	4-5/16	9-5/16	12-1/8
3791-626*	10x6	4-15/16	12-13/16	13-7/8
3791-628*	10x8	5-1/4	15-3/4	16-3/16
3791-661*	12x2	4-3/16	6-5/16	10
3791-663*	12x3	4-1/4	7-3/4	12-5/8
3791-664*	12x4	4-5/16	9-3/16	13-1/8
3791-666*	12x6	4-7/8	12-5/8	14-7/8
3791-668*	12x8	5	15-1/2	17-1/8
3791-670*	12x10	5-1/16	18-7/16	20-1/16
3791-691*	14x2	4	6	10-9/16
3791-693*	14x3	4-1/2	8	13-3/16
3791-694*	14x4	4-9/16	9-7/16	13-11/16
3791-696*	14x6	4-5/8	12-3/8	15-7/16
3791-698*	14x8	4-13/16	15-3/16	17-3/4
3791-700*	14x10	4-7/8	18-1/18	20-11/16
3791-702*	14x12	6	22	22-3/8

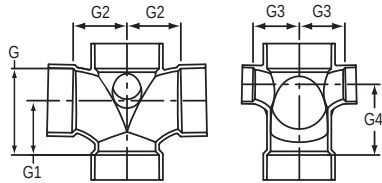
*Fabricated

PVC DWV Drain Waste Vent Fittings



P439 Double Sanitary Tee with R&L Side Inlets

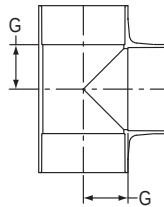
ALL HUB



Part Number	Size	G	G1	G2	G3	G4
P439-338	3x3x3x3x2x2	4-25/32	3-1/32	3-1/32	2-13/16	3-5/8
P439-420	4x4x4x4x2x2	6-1/32	3-27/32	3-7/8	3-1/4	4-15/16

P441 Vent Tee

ALL HUB

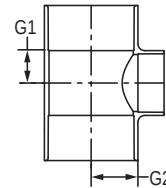


Part Number	Size	G
P441-015	1-1/2	1-3/16
P441-020	2	1-1/2
P441-030	3	1-29/32
P441-040	4	2-11/32
P441-060	6	3-5/8
P441-080	8	4-1/2
P441-100	10	5-13/16
P441-120	12	6-27/32
3701-140*	14	11

*Fabricated

P442 Vent Tee, Reducing

ALL HUB



Part Number	Size	G1	G2
P442-251	2x1-1/2	1-1/2	1-3/16
P442-532	6x4	2-9/16	3-25/32
P442-582	8x4	2-17/32	5-3/32
P442-585	8x6	3-5/8	4-25/32
P442-624	10x4	3-31/32	6
P442-626	10x6	3-25/32	6-3/32
P442-628	10x8	5-25/32	7-9/32
P442-664	12x4	4-7/8	10-11/32
P442-666	12x6	4-7/8	8-31/32
P442-668	12x8	4-7/8	7-11/32
P442-670	12x10	6-13/16	7-3/8
3701-528*	6x2	3-3/8	5-5/16
3701-530*	6x3	4-5/8	6-1/16
3701-578*	8x2	4-1/16	6-1/4
3701-580*	8x3	4-9/16	7
3701-621*	10x2	4-3/8	7-1/4
3701-623*	10x3	4-7/8	8
3701-661*	12x2	4-3/4	8-1/4
3701-663*	12x3	5-1/4	9
3701-691*	14x2	4-3/8	8-13/16
3701-693*	14x3	4-7/8	9-9/16
3701-694*	14x4	5-3/8	9-7/8
3701-696*	14x6	6-3/8	9-15/16
3701-698*	14x8	7-3/8	9-7/8
3701-700*	14x10	8-1/2	10-15/16
3701-702*	14x12	9-1/2	10-3/4

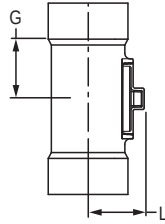
*Fabricated



PVC DWV Drain Waste Vent Fittings

3701 Test Tee

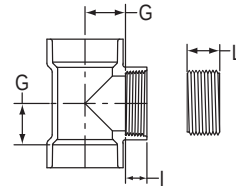
SOC x FPT with Plug



Part Number	Size	G	L
3701-060TEST*	6	5-3/8	5-5/16
3701-080TEST*	8	7-3/8	6-3/16
3701-100TEST*	10	8-5/16	6-3/4
3701-120TEST*	12	9-1/4	8-9/16

*Fabricated (10" & 12" have Flush Plugs)

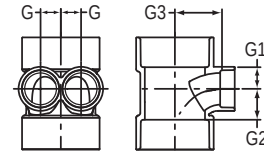
P445X Flush C.O. Tee w/C.O. Plug



SEE PART NUMBERS - P445 AND P110

P447 Horizontal Twin Tee

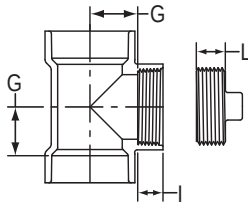
ALL HUB



Part Number	Size	G	G1	G2	G3
P447-337	3x3x1-1/2x1-1/2	1-1/32	1-1/16	1-9/16	2-9/32

P444X Cleanout Tee w/C.O. Plug

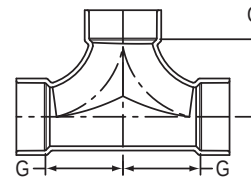
H x H



SEE PART NUMBERS - P445 AND P106

P448 2-Way Cleanout

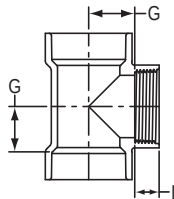
ALL HUB



Part Number	Size	G
P448-030	3	4
P448-040	4	4-13/16

P445 Flush C.O. Tee

H x H x FPT



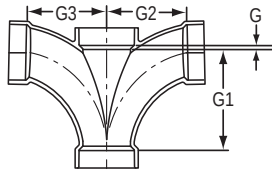
Part Number	Size	G	L
P445-015	1-1/2	1-1/8	5/8
P445-020	2	1-7/16	5/8
P445-030	3	1-21/32	3/4
P445-040	4	2-7/16	7/8
P445-060	6	3-1/2	1-1/32

PVC DWV Drain Waste Vent Fittings



P500 Double Fixture Fitting

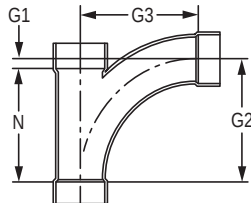
ALL HUB



Part Number	Size	G	G1	G2	G3
P500-020	2x2x2x2	9/16	3-9/16	3-5/16	3-5/16
P500-030	3x3x3x3	1/2	6-3/4	4-1/2	4-1/2
P500-241	2x1-1/2x1-1/2x1-1/2	3/8	3-9/16	2-7/16	2-7/16
P500-251	2x2x1-1/2x1-1/2	1/8	3-1/4	2-25/32	2-25/32
P500-338	3x2x3x3	1/2	6-3/4	4-1/2	4-1/2

P501 Combination Wye and 1/8 Bend (One Piece)

ALL HUB

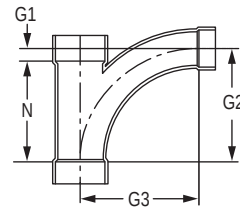


Part Number	Size	G1	G2	G3	N
P501-015	1-1/2	3/8	3-15/16	3-15/16	3-1/2
P501-020	2	11/16	5-1/8	5-1/8	4-7/16
P501-030	3	1-1/16	7-9/16	7-9/16	6-1/2
P501-040	4	1-1/2	10	10	8-1/2
3777-060*	6	15/16	15-7/16	12-9/16	16-3/8
3777-080*	8	1/8	19-13/16	16-1/8	19-15/16
3777-100*	10	3/16	23-5/8	24-1/8	23-13/16
3777-120*	12	5/16	27-11/16	27-3/4	27-3/8
3777-140*	14	1-1/4	29-5/8	29-5/16	28-3/8

*Fabricated

P502 Combination Wye and 1/8 Bend, Reducing (One Piece)

ALL HUB



Part Number	Size	G1	G2	G3	N
P502-251	2x2x1-1/2	7/16	3-15/16	4-3/16	3-1/2
P502-337	3x3x1-1/2	7/16	3-9/16	4-3/4	3-1/2
P502-338	3x3x2	11/16	5-1/8	5-11/16	4-7/16
P502-420	4x4x2	7/32	4-1/2	6-1/8	4-3/32
P502-422	4x4x3	1-1/16	7-9/16	8-1/16	6-1/2
3777-528*	6x2	7/8	7-1/2	8-1/16	8-3/8
3777-530*	6x3	13/16	9-7/16	9-3/8	10-1/4
3777-532*	6x4	3/16	11-9/16	11-3/16	11-3/4
3777-578*	8x2	1-5/8	8-1/8	9-1/16	9-3/4
3777-580*	8x3	1-5/16	9-15/16	10-5/16	11-1/4
3777-582*	8x4	3/4	12	12-1/8	12-3/4
3777-585*	8x6	5/8	15	13-9/16	15-5/8
3777-621*	10x2	1-11/16	8-1/16	10-1/16	9-3/4
3777-623*	10x3	1-5/8	10-1/8	11-3/8	11-3/4
3777-624*	10x4	1-11/16	11-15/16	12-5/8	13-5/8
3777-626*	10x6	1-11/16	16-1/16	14-9/16	17-3/4
3777-628*	10x8	3/8	20-5/8	18-3/16	21
3777-661*	12x2	2-1/16	8-7/16	11	10-1/2
3777-663*	12x3	1-13/16	10-3/16	12-5/16	12
3777-664*	12x4	1-3/16	12-5/16	14-1/8	13-1/2
3777-666*	12x6	1-5/8	15-7/8	15-1/2	17-1/2
3777-668*	12x8	1/8	20-3/8	19-1/8	20-1/2
3777-670*	12x10	1/16	23-7/16	23-3/8	23-1/2
3777-691*	14x2	1-7/8	8-1/8	11-5/8	10
3777-693*	14x3	2-1/16	10-7/16	12-7/8	12-1/2
3777-694*	14x4	1-1/2	12-1/2	14-11/16	14
3777-696*	14x6	1-7/16	15-9/16	16-1/8	17
3777-698*	14x8	1/16	20-1/16	19-3/4	20
3777-700*	14x10	5/8	23-5/8	24-7/16	23
3777-702*	14x12	1/16	28-1/16	27-1/4	28

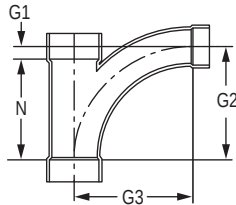
*Fabricated



PVC DWV Drain Waste Vent Fittings

P502 Combination Wye and 1/8 Bend, Reducing (One Piece) (continued)

ALL HUB

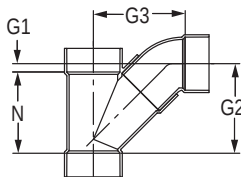


Part Number	Size	G1	G2	G3	N
3777-760*	16x10	3/8	23-5/8	26-5/8	24
3777-762*	16x12	7/16	27-7/16	29-5/16	27
3777-790*	18x10	13/16	23-15/16	27-9/16	24-3/4
3777-792*	18x12	0	27-3/4	30-1/4	27-3/4
3777-820*	20x10	7/8	23-7/8	28-9/16	24-3/4
3777-822*	20x12	9/16	28-3/16	31-3/16	28-3/4
3777-910*	24x10	1-15/16	24-13/16	30-7/16	26-3/4
3777-912*	24x12	1-1/2	29	33-1/8	30-1/2

*Fabricated

P503 Combination Wye and 1/8 Bend (Two Piece)

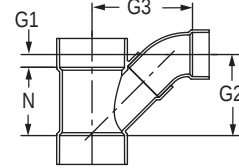
ALL HUB



Part Number	Size	G1	G2	G3	N
P503-030	3	7/8	7-3/8	7-1/2	6-15/32
P503-040	4	7/8	8-15/16	9-1/4	8-1/16
P503-060	6	31/32	10-31/32	11-11/32	9-31/32
P503-080	8	1-1/2	16	16	14-1/2

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)

ALL HUB



Part Number	Size	G1	G2	G3	N
P504-422	4x3	1	7-19/32	8-7/32	6-19/32
P504-530	6x3	5/8	7-9/16	9-5/16	6-29/32
P504-532	6x4	1-3/8	8-7/32	10-3/32	6-27/32
P504-580	8x3	1-1/8	9-1/8	10-3/8	8
P504-582*	8x4	9-1/4	9-1/4	11-1/8	8
P504-585	8x6	1-1/32	11-9/32	12-3/8	10-11/32
P504-623*	10x3	1-1/4	12-1/16	13-15/16	10-13/16
P504-624*	10x4	1-7/16	12	14-1/2	10-9/16
P504-626	10x6	15/16	11-3/4	14-1/16	10-13/16
P504-628	10x8	15/16	14-1/4	15-1/2	13-9/16
P504-668	12x8	1-1/16	20-1/8	19-1/8	19-1/16
P504-670*	12x10	5/8	19-3/4	19-1/2	19-1/16

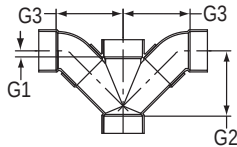
*Bushed

PVC DWV Drain Waste Vent Fittings



P507 Double Combination Wye and 1/8 Bend

ALL HUB

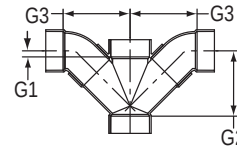


Part Number	Size	G1	G2	G3
P507-015	1-1/2	7/16	4-5/16	4-5/16
P507-020	2	9/16	5-7/16	5-5/8
P507-030	3	27/32	7-11/32	7-11/32
P507-040	4	1-5/32	9-5/32	9-11/32
P507-251	2x1-1/2	13/32	4-9/16	4-3/4
P507-338	3x3x2x2	29/32	5-11/16	6-15/32
P507-420	4x4x2x2	7/8	5-7/8	7-1/32
P507-422	4x4x3x3	1-1/16	7-1/2	8-1/8
3792-060*	6	15/16	15-7/16	12-9/16
3792-080*	8	1/8	19-13/16	16-1/8
3792-100*	10	3/16	23-5/8	24-1/8
3792-120*	12	5/16	27-11/16	27-3/4
3792-140*	14	1-1/4	29-5/8	29-5/16
3792-528*	6x2	7/8	7-1/2	8-1/16
3792-530*	6x3	13/16	9-7/16	9-3/8
3792-532*	6x4	3/16	11-9/16	11-3/16
3792-578*	8x2	1-5/8	8-1/8	9-1/16
3792-580*	8x3	1-5/16	9-15/16	10-5/16
3792-582*	8x4	3/4	12	12-1/8
3792-585*	8x6	5/8	15	13-9/16
3792-621*	10x2	1-11/16	8-1/16	10-1/16
3792-623*	10x3	1-5/8	10-1/8	11-3/8
3792-624*	10x4	1-1/4	12-3/8	13-1/8
3792-626*	10x6	1-11/16	16-1/16	14-9/16
3792-628*	10x8	3/4	20-1/4	17-3/16
3792-661*	12x2	2-1/16	8-7/16	11
3792-663*	12x3	1-13/16	10-3/16	12-5/16
3792-664*	12x4	1-3/16	12-5/16	14-1/8

*Fabricated

P507 Double Combination Wye and 1/8 Bend (continued)

ALL HUB

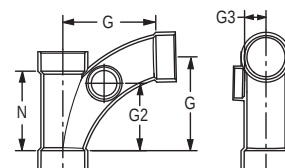


Part Number	Size	G1	G2	G3
3792-666*	12x6	1-5/8	15-7/8	15-1/2
3792-668*	12x8	1/2	20	18-1/8
3792-670*	12x10	1/16	23-7/16	25-1/8
3792-691*	14x2	1-7/8	8-1/8	11-5/8
3792-693*	14x3	2-1/16	10-7/16	12-7/8
3792-694*	14x4	1-1/2	12-1/2	14-11/16
3792-696*	14x6	1-7/16	15-9/16	16-1/8
3792-698*	14x8	5/16	19-11/16	18-11/16
3792-700*	14x10	3/16	23-3/16	25-11/16
3792-702*	14x12	0	28	28-3/8
3792-760*	16x10	3/8	23-5/8	26-5/8
3792-762*	16x12	7/16	27-7/16	29-5/16
3792-790*	18x10	13/16	23-15/16	27-9/16

*Fabricated

P515 Combination Wye and 1/8 Bend with Left Side Inlet

ALL HUB



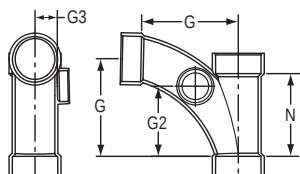
Part Number	Size	G	G2	G3	N
P515-338	3x3x3x2	7-9/16	5-1/2	1-7/8	6-1/2



PVC DWV Drain Waste Vent Fittings

P516 Combination Wye and 1/8 Bend with Right Side Inlet

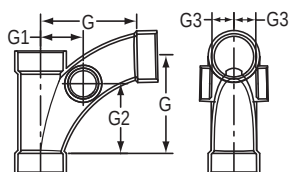
ALL HUB



Part Number	Size	G	G2	G3	N
P516-338	3x3x3x2	7-9/16	5-1/2	1-7/8	6-1/2

P517 Combination Wye and 1/8 Bend with R&L Side Inlets

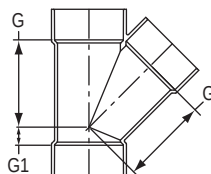
ALL HUB



Part Number	Size	G	G1	G2	G3
P517-338	3x3x3x2	7-9/16	3-5/16	5-1/2	1-7/8

P600 Wye

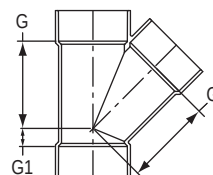
ALL HUB



Part Number	Size	G	G1
P600-015	1-1/2	2-7/8	1-3/32
P600-020	2	3-5/8	1-3/8
P600-030	3	5	1-5/8
P600-040	4	6-1/4	1-7/8
P600-060	6	8	1-3/8
P600-080	8	11-5/16	2
P600-100	10	14-1/16	2-7/16

P600 Wye (continued)

ALL HUB

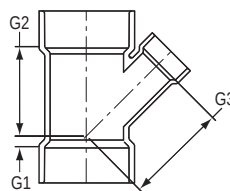


Part Number	Size	G	G1
P600-120	12	16-3/32	2-27/32
3775-140*	14	21-3/16	7-3/16

*Fabricated

P601 Wye, Reducing

ALL HUB



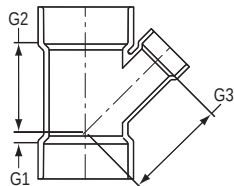
Part Number	Size	G1	G2	G3
P601-241	2x1-1/2x1-1/2	3/4	2-15/16	2-15/16
P601-251	2x2x1-1/2	13/16	3-15/32	3-17/32
P601-257	2x1-1/2x2	1	4-1/2	3-3/8
P601-337	3x3x1-1/2	1/2	3-25/32	4-3/8
P601-338	3x3x2	7/8	4-3/32	4-17/32
P601-419	4x4x1-1/2	3/8	3-9/32	4-3/8
P601-420	4x4x2	5/16	4-5/16	5-11/32
P601-422	4x4x3	21/32	5-1/2	5-29/32
P601-528	6x6x2	3/8	6-9/16	8-5/16
P601-530	6x6x3	1-1/8	6	6-7/8
P601-532	6x6x4	23/32	6-3/16	7-1/8
P601-578	8x8x2	3/8	7-5/8	9-13/16
P601-582	8x8x4	3/8	6-31/32	8-5/16
P601-585	8x8x6	23/32	10-1/32	9-15/16
P601-626	10x10x6	-13/32	11-1/8	12-3/32

PVC DWV Drain Waste Vent Fittings



P601 Wye, Reducing (continued)

ALL HUB

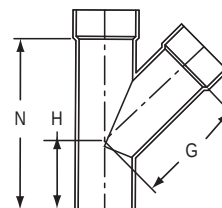


Part Number	Size	G1	G2	G3
P601-628	10x10x8	15/16	12-1/2	12-29/32
P601-670	12x12x10	2-15/16	16-3/16	17-3/16
3775-580*	8x3	1-5/16	9-15/16	10-7/8
3775-621*	10x2	1/2	10-1/4	11-3/16
3775-623*	10x3	1/2	11-1/4	12-5/16
3775-624*	10x4	1-7/16	12-3/16	13-5/16
3775-661*	12x2	1-1/8	11-5/8	12-9/16
3775-663*	12x3	3/8	12-3/8	13-11/16
3775-664*	12x4	3/8	13-1/8	14-11/16
3775-666*	12x6	2-3/8	15-1/8	15-5/8
3775-668*	12x8	3-7/8	16-5/8	17-1/16
3775-691*	14x2	2	12	13-7/16
3775-693*	14x3	3/4	13-1/4	14-9/16
3775-694*	14x4	0	14	15-9/16
3775-696*	14x6	1-1/2	15-1/2	16-1/2
3775-698*	14x8	3	17	17-15/16
3775-700*	14x10	4-1/2	18-1/2	19
3775-702*	14x12	7	21	20-15/16

*Fabricated

P602 Wye, Street

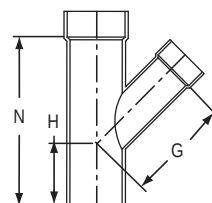
S x H x H



Part Number	Size	G	H	N
P602-015	1-1/2	2-7/8	1-7/8	4-7/16
P602-020	2	3-5/8	2-5/32	5-13/16
P602-030	3	5-1/16	3	8
P602-040	4	6-1/8	5-3/4	10-1/16

P603 Wye, Street, Reducing

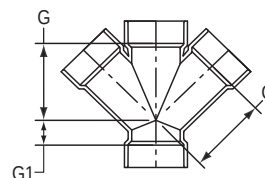
S x H x H



Part Number	Size	G	H	N
P603-251	2x2x1-1/2	3-7/16	2	5-11/32
P603-420	4x4x2	5-9/16	2-7/32	6-9/16
P603-422	4x4x3	6	2-13/16	8-1/16

P611 Double Wye

ALL HUB



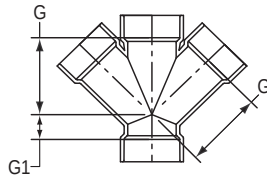
Part Number	Size	G	G1
P611-015	1-1/2	2-7/8	1-1/8
P611-020	2	3-5/8	1-3/8
P611-030	3	6-1/8	1-5/8
P611-040	4	6-11/32	1-27/32



PVC DWV Drain Waste Vent Fittings

P611 Double Wye (continued)

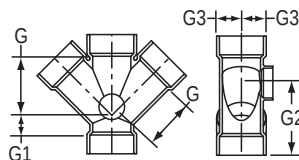
ALL HUB



Part Number	Size	G	G1
P611-060	6	8-5/16	1-25/32
3776-080*	8	14-5/16	5-5/8
3776-100*	10	17-1/4	6-9/16
3776-120*	12	20-1/16	7-5/16
3776-140*	14	21-3/16	7-3/16
*Fabricated			

P611S Double Wye, with 2" Side Inlet

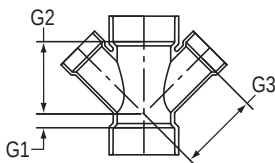
ALL HUB



Part Number	Size	G	G1	G2	G3
P611S-030	3	4-15/16	1-9/16	6-7/16	1-31/32

P612 Double Wye, Reducing

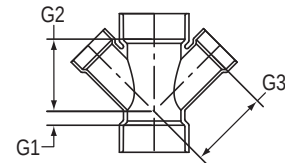
ALL HUB



Part Number	Size	G1	G2	G3
P612-251	2x2x1-1/2x1-1/2	1-1/16	3-5/16	3-7/16
P612-337	3x3x1-1/2x1-1/2	1/2	3-3/4	4-5/16
P612-338	3x3x2x2	7/8	4-1/16	4-5/8
P612-420	4x4x2x2	3/8	4-17/32	5-7/16
P612-422	4x4x3x3	1-1/16	5-13/32	5-7/8
P612-532	6x6x4x4	1-1/8	5-3/4	6-9/16

P612 Double Wye, Reducing (continued)

ALL HUB



Part Number	Size	G1	G2	G3
3776-528*	6x2	7/8	7-1/2	8-7/16
3776-530*	6x3	1-13/16	8-7/16	9-9/16
3776-578*	8x2	9/16	9-3/16	9-3/4
3776-580*	8x3	1-5/16	9-15/16	10-7/8
3776-582*	8x4	2-1/16	10-11/16	11-7/8
3776-585*	8x6	3-1/2	12-1/8	12-13/16
3776-621*	10x2	1/2	10-1/4	11-3/16
3776-623*	10x3	1/2	11-1/4	12-5/16
3776-624*	10x4	1-7/16	12-3/16	13-5/16
3776-626*	10x6	3-1/2	14-1/4	14-1/4
3776-628*	10x8	5-1/8	15-7/8	15-11/16
3776-661*	12x2	1-1/8	11-5/8	12-9/16
3776-663*	12x3	3/8	12-3/8	13-11/16
3776-664*	12x4	3/8	13-1/8	14-11/16
3776-666*	12x6	2-3/8	15-1/8	15-5/8
3776-668*	12x8	3-7/8	16-5/8	17-1/16
3776-670*	12x10	5-3/8	18-1/8	18-1/8
3776-691*	14x2	2	12	13-7/16
3776-693*	14x3	3/4	13-1/4	14-9/16
3776-694*	14x4	0	14	15-9/16
3776-696*	14x6	1-1/2	15-1/2	16-1/2
3776-698*	14x8	3	17	17-15/16
3776-700*	14x10	4-1/2	18-1/2	19
3776-702*	14x12	7	21	20-15/16

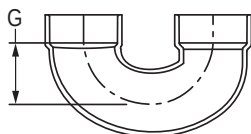
*Fabricated

PVC DWV Drain Waste Vent Fittings



P700 Return Bend

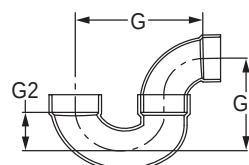
H x H



Part Number	Size	G
P700-015	1-1/2	1-11/32
P700-020	2	2-3/8
P700-030	3	3
P700-040	4	3-25/32
P700-060	6	5
P700-080	8	6-1/8

P706X P-Trap

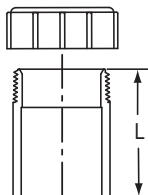
H x H



Part Number	Size	G	G1	G2
P706X-015	1-1/2	4-1/4	3-3/4	1-13/32
P706X-020	2	6-7/16	4-3/4	2-13/32
P706X-030	3	8-11/16	6-15/16	3-1/32
P706X-040	4	11-1/32	8-1/8	3-23/32
P706X-060	6	18-1/2	13-3/8	5
P706X-080	8	23-1/8	16-1/8	6-1/16
P706X-100	10	36-1/4	24-7/8	10
P706X-120	12	40-3/8	27-13/16	11

P704P Tail Piece Adapter

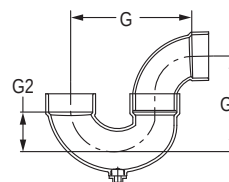
S x SLIP w/Plastic Nut & Built-in Washer



Part Number	Size	L
P704P-015	1-1/2	2-1/2

P707X P-Trap w/Cleanout

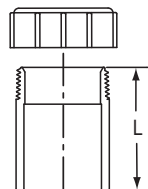
H x H



Part Number	Size	G	G1	G2
P707X-015	1-1/2	4-3/16	3-21/32	1-7/32

P704X Tail Piece Adapter

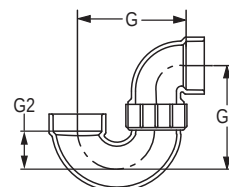
S x SLIP w/Chrome Nut & Washer



Part Number	Size	L
P704X-015	1-1/2	2-1/2

P708P Adjustable P-Trap w/Plastic Nut

H x H



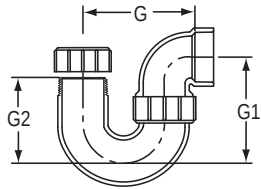
Part Number	Size	G	G1	G2
P708P-015	1-1/2	4-1/4	3-3/4	1-9/16
P708P-020	2	7-1/4	4-3/4	2-13/32



PVC DWV Drain Waste Vent Fittings

P711P L.A. Pattern P-Trap w/Plastic Nut

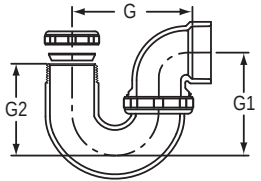
SLIP x H w/Plastic Nut & Washer



Part Number	Size	G	G1	G2
P711P-169	1-1/4x1-1/2	4-11/32	3-3/4	3-1/2
P711P-015	1-1/2	4-11/32	3-3/4	3-1/2

P711X L.A. Pattern P-Trap w/Chrome Nut

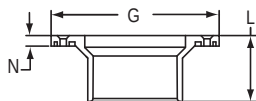
SLIP x H w/Chrome Nut & Washer



Part Number	Size	G	G1	G2
P711X-015	1-1/2	4-1/4	3-3/4	3-1/2

P800 Closet Flange

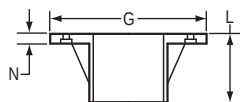
H



Part Number	Size	G	L	N
P800-422	4x3	7	2-3/4	7/16
P800-040	4x4	7-3/32	2	1/4

P800G Closet Flange with Gussets

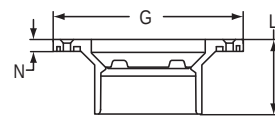
H



Part Number	Size	G	L	N
P800G-040	4	3-3/4	3-1/2	4-1/4

P800KO Closet Flange with Knockout

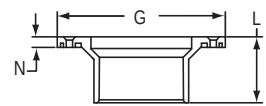
H



Part Number	Size	G	L	N
P800KO-422	4x3	7	2-25/32	7/16

P800S Closet Flange with Stop

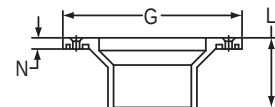
H



Part Number	Size	G	L	N
P800S-422	4x3	7	2-3/4	7/16

P801 Closet Flange, Reducing

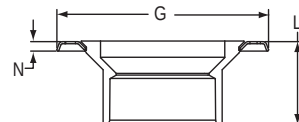
SPIGOT



Part Number	Size	G	L	N
P801-422	4x3	7	2-3/4	1/2

P811 Closet Flange, Adjustable with Metal Ring

H



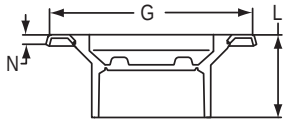
Part Number	Size	G	L	N
P811-422	4x3	7	2-13/16	1-5/16
P811-040	4x4	7	2-1/8	5/16

PVC DWV Drain Waste Vent Fittings



P811KO Closet Flange, Adjustable with Knockout

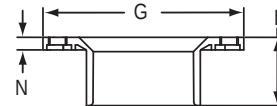
H



Part Number	Size	G	L	N
P811KO-422	4x3	7	2-13/16	1-5/16

P815KO Flush Closet Flange with Knockout

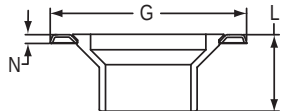
Fits Over 3" Pipe or Inside 4" Pipe



Part Number	Size	G	L	N
P815KO-040	4x4/4x3	7-1/32	2-7/16	15/32

P812 Closet Flange, Adjustable with Metal Ring

SPIGOT

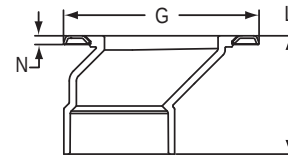


Part Number	Size	G	L	N
P812-040	4	7	2-15/32	15/32
P812-422	4x3	7	2-13/16	1-5/16

P820 Offset Closet Flange with Adjustable Metal Ring

(1-1/2" Offset)

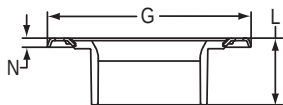
H



Part Number	Size	G	L	N
P820-422	4x3	7	4-1/4	1-15/16

P813 Closet Flange, Adjustable with Metal Ring

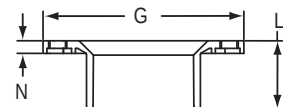
SPIGOT



Part Number	Size	G	L	N
P813-422	4x3	5-5/16	2-1/4	5/16

P815 Flush Closet Flange

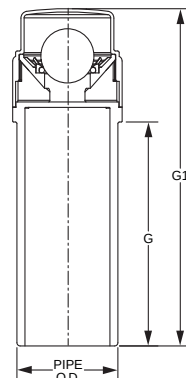
Fits Over 3" Pipe or Inside 4" Pipe



Part Number	Size	G	L	N
P815-040	4x4/4x3	7	2-3/8	1/2

Air Admittance Valve

Spigot



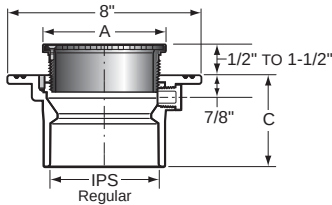
MAX: 6DFU
Drainage
Fixture
Units

Part Number	Size	G	G1
AAV-015	1-1/2	4-1/8	6-1/4



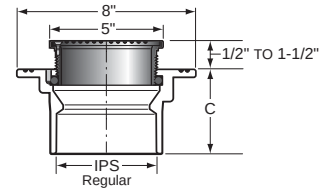
PVC DWV Drain Waste Vent Fittings

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



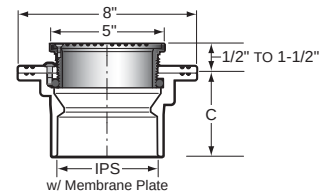
Part Number Regular	Size	A, Nom	IPS	C
P1500-015S	1-1/2x5	5	1-1/2	4-3/16
P1600-015S	1-1/2x6	6	1-1/2	4-3/16
P1700-015S	1-1/2x7	7	1-1/2	4-3/16
P1800-015S	1-1/2x8	8	1-1/2	4-3/16
P1500-020S	2x5	5	2	4
P1600-020S	2x6	6	2	4
P1700-020S	2x7	7	2	4
P1800-020S	2x8	8	2	4
P1500-030S	3x5	5	3	4
P1600-030S	3x6	6	3	4
P1700-030S	3x7	7	3	4
P1800-030S	3x8	8	3	4
P1500-040S	4x5	5	4	3-3/4
P1600-040S	4x6	6	4	3-3/4
P1700-040S	4x7	7	4	3-3/4
P1800-040S	4x8	8	4	3-3/4

Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



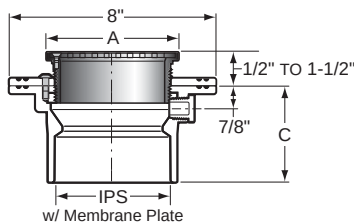
Part Number Regular	Size	IPS	C
P1510-015S	1-1/2x5	1-1/2	4-3/16
P1510-020S	2x5	2	4
P1510-030S	3x5	3	4
P1510-040S	4x5	4	3-3/4

Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



Part Number Membrane Plate	Size	IPS	C
P151M-015S	1-1/2x5	1-1/2	4-3/16
P151M-020S	2x5	2	4
P151M-030S	3x5	3	4
P151M-040S	4x5	4	3-3/4

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar

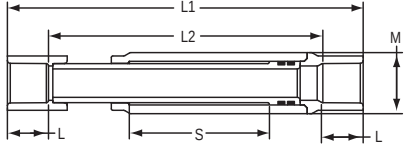


Part Number Membrane	Size	A, Nom	IPS	C
P150M-015S	1-1/2x5	5	1-1/2	4-3/16
P160M-015S	1-1/2x6	6	1-1/2	4-3/16
P170M-015S	1-1/2x7	7	1-1/2	4-3/16
P180M-015S	1-1/2x8	8	1-1/2	4-3/16
P150M-020S	2x5	5	2	4
P160M-020S	2x6	6	2	4
P170M-020S	2x7	7	2	4
P180M-020S	2x8	8	2	4
P150M-030S	3x5	5	3	4
P160M-030S	3x6	6	3	4
P170M-030S	3x7	7	3	4
P180M-030S	3x8	8	3	4
P150M-040S	4x5	5	4	3-3/4
P160M-040S	4x6	6	4	3-3/4
P170M-040S	4x7	7	4	3-3/4
P180M-040S	4x8	8	4	3-3/4

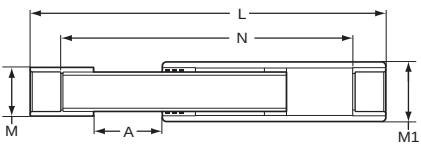
PVC DWV Drain Waste Vent Fittings



Expansion Joint • Socket x Socket • PVC White with EPDM O-ring

	Part Number	Size	L	L1	L2	M	S
	S119-15	1-1/2	1-3/8	11-3/8	8-5/8	2-11/16	4
	S119-20	2	1-1/2	12-1/4	9-1/4	3-3/16	4
	S119-25	2-1/2	1-3/4	15-7/8	12-3/8	3-15/16	6
	S119-30	3	1-7/8	16-1/8	12-3/8	4-9/16	6
	S119-40	4	2-1/4	17-3/4	13-1/4	5-11/16	6
	S119-60	6	3	21-5/16	15-3/16	8-1/4	6

Large Diameter Expansion Joint • Socket x Socket • PVC Gray with EPDM O-ring

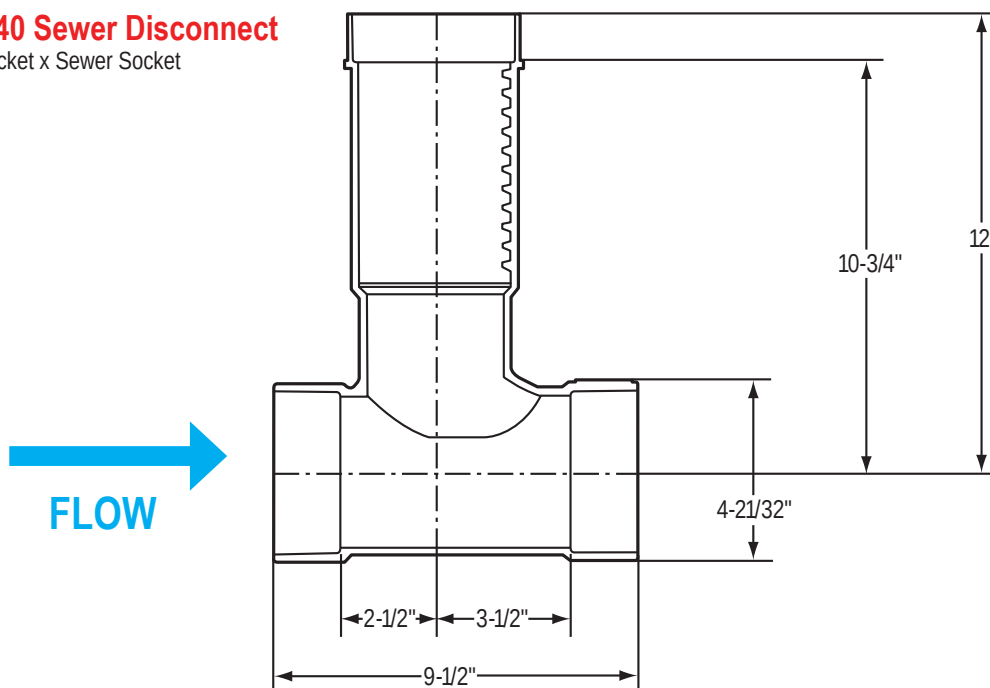
	Part Number	Size	A	L	M	M1	N
	826-080X6	8	3	27-1/4	9-11/16	10-3/4	19-1/4
	826-100X6	10	3	35-7/8	11-13/16	12-3/4	25-7/8
	826-120X6	12	3	39-1/2	14-1/8	16	27-1/2
	826-140X6	14	3	49-3/4	15-5/8	16	34-7/8

Thermal Expansion Compensation

The change in length of pipe with temperature variation should always be considered when installing pipe lines and provisions made to compensate for this change in length. The table below has been prepared to assist you in determining this expansion. This represents the calculated values of pipe length change (ΔL) in inches based on pipe run lengths of 10 to 100 feet and temperature changes of 30°F to 100°F.

SDC-040 Sewer Disconnect

Sewer Socket x Sewer Socket





PVC DWV Drain Waste Vent Fittings

PVC Pipe Thermal Expansion (in)

TEMP. CHANGE Δ T (°F)	LENGTH OF RUN (FT)									
	10	20	30	40	50	60	70	80	90	100
30	0.11	0.22	0.32	0.43	0.54	0.65	0.76	0.86	0.97	1.08
40	0.14	0.29	0.43	0.58	0.72	0.86	1.01	1.15	1.30	1.44
50	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.40	1.62	1.80
60	0.22	0.43	0.65	0.85	1.08	1.30	1.51	1.73	1.94	2.16
70	0.25	0.50	0.76	1.01	1.26	1.51	1.76	2.02	2.27	2.52
80	0.29	0.58	0.86	1.15	1.44	1.73	2.02	2.30	2.59	3.24
90	0.32	0.65	0.97	1.30	1.62	1.94	2.27	2.59	2.92	3.24
100	0.36	0.72	1.03	1.44	1.80	2.16	2.52	2.88	3.24	3.60

Example: Highest temperature expected: 120°F
Lowest temperature expected: 50°F
Total change (ΔT): 70°F
Length of run: 40 feet
From 70° F (ΔT) row, read 1.01 inches length change



CPVC CTS FITTINGS & VALVES COPPER-TUBE SIZE



DESIGN & INSTALLATION GUIDE TECHNICAL INFORMATION



Visit our web site
www.spearsmfg.com



CPVC CTS FITTINGS & VALVES

Certified Safe Alternative to Metal Plumbing Systems



All conventional metal plumbing systems corrode leaving their corrosive wastes for deposit into the water system. CPVC thermoplastic system components never corrode. Spears® EverTUFF® CTS CPVC systems of fittings, pipe, supply stops & valves are Certified lead-free by NSF International (NSF®) for compliance with California and Vermont low-lead plumbing requirements for safe use in drinking water systems. Approved by national, state and municipal building codes*, Spears® CTS CPVC products are ideally suited for hot and cold water distribution systems in residential and commercial structures, as well as recreational vehicles, modular homes and mobile homes.

*Check state and local codes.

Full Line of CTS CPVC Fittings, Pipe, Supply Stops & Ball Valves 1/2" Through 2" Plus Supplemental IPS CPVC in 2-1/2" & Up

EverTUFF® CPVC pipe and fittings are available for most any size project using Copper Tube Size (CTS) in sizes 1/2" through 2". EverTUFF® Schedule 40 and Schedule 80 CPVC Iron Pipe Size (IPS) are available for sizes 2-1/2" and larger for commercial applications such as multi-story installations when adequate design and installation practices have been utilized.

Exceptional Corrosion Resistance

Unlike metal systems, CPVC products never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

Energy Savings

Low heat conductivity minimizes heat loss in hot water systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal systems.

Lower System Costs

Lower material costs than metallic systems, combined with lighter weight and ease of installation, can substantially reduce overall system cost.

Suitable for Commercial Hot Water

CTS CPVC products can handle fluids at service temperatures up to 180°F (82°C). IPS CPVC service temperatures and pressures vary according to pipe size.

CTS CPVC 1/4-Turn Angle Supply Stop



Spears® EverTUFF® lead-free Supply Stops are used at plumbing fixtures to terminate hot and cold water supply. NSF® Certified to ASTM F 1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F Available in 1/2" CTS Socket or Spears® patented Special Reinforced (SR) 1/2" FIPT female thread inlet x 1/2" straight male thread outlet for connection to conventional 1/2" FPT faucet or toilet supply lines with captive seals.

CTS CPVC Ball Valves



Spears® EverTUFF® lead-free Copper-Tube-Size Ball Valves feature one-piece design that never requires adjustment. Standard EPDM O-ring seal and PTFE Seats enable bubble-tight shut off. High impact Polypropylene handle has double stop engagement. 100 psi maximum internal pressure rating at 180°F and NSF® Certified for use in potable water systems.

Spears® EverTUFF® Exclusive Specialty Fittings...

Gasket Sealed Brass-Threaded Transition Fittings



- Eliminates Radial Stress
- Requires NO Thread Sealants
- Eliminates Sealant Incompatibility
- NSF® Certified Lead-Free

Spears® lead-free Gasket-Sealed CTS CPVC Brass-Threaded Transition Fitting design features a special molded-in-place Brass Thread Insert fitted with an elastomer gasket seal at the base of the threads. The gasket sealed design eliminates radial stress and requires no thread sealant.

Special Reinforced (SR) Plastic Threaded Transition Fittings



- Eliminates Split Threads
- Eliminates Leaks Associated with Over and Under Tightening
- Eliminates MIC, Electrolytic & Soil Chemistry Corrosion Problems

Spears® lead-free Patented CTS CPVC Special Reinforced (SR) Fittings reduce problems associated with over tightening of female plastic pipe threads. Not just an added ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up.

Anti-Stress Drop-Ear Fittings & Brackets



Drop Ear 90° Elbow

- Secures plumbing drops against horizontal and vertical movement
- Eliminates fitting damage during installation of plumbing drops



Drop Ear Bracket

Spears® EverTUFF®, The Full-Service CTS CPVC Product Line...

Application

Spears® EverTUFF® Copper-Tube-Size (CTS) products are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR-11 piping systems of CTS outside diameter in hot and cold water distribution systems in nominal pipe size 1/2" through 2". CTS CPVC products can be used in conjunction with Spears® supplemental Schedule 40 and Schedule 80 CPVC Iron-Pipe-Size (IPS) pipe and fittings for sizes 2-1/2" through 12" in commercial multi-story installations. Check state and local codes for application and restrictions.

Working Pressure

Spears® EverTUFF® CTS CPVC fittings, pipe and valves have a continuous working pressure rating of 100 psi at 180°F.

Conformance Standards

Spears® EverTUFF® CTS CPVC fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

Product Certification

Spears® EverTUFF® CTS CPVC pipe and fittings are certified by NSF International (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, to the Uniform Plumbing Code (NSF® U.P.Code) and for use in potable water service. All Spears® EverTUFF® CTS CPVC products are NSF® certified lead-free in accordance with ANSI/NSF® Standard 61, Annex G for compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193.

Sample Engineering Specifications

All fittings, supply stops and valves shall be Copper-Tube-Size (CTS) constructed from CPVC Type IV Cell Classification 23447. All CTS CPVC products shall be produced to applicable requirements of ASTM D 2846 and rated to 100 psi at 180°F, unless specifically designated for cold water service only. All supply stops shall be 1/4 turn angle pattern CTS CPVC with male thread outlets. All ball valves shall be CTS CPVC sealed unit type with EPDM O-ring and double stop Polypropylene handle. All CTS CPVC products shall be certified lead-free for potable water use by NSF International in accordance with NSF®-61 Annex G, as manufactured by Spears® Manufacturing Company.



CPVC CTS FITTINGS & VALVES

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Application

Spears® Copper Tube Size (CTS) Pipe and Fittings are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR 11 piping systems of CTS outside diameter in hot and cold water distribution systems. Check state and local codes for application and restrictions.

Conformance Standards

Spears® CPVC CTS Pipe and Fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

Working Pressure

Spears® CPVC CTS Pipe and Fittings have a continuous working pressure rating of 100 psi at 180°F (400 psi at 73°F).

Product Certification

Spears® CPVC CTS Pipe, Fittings and Special Reinforced (SR) Threaded transition adapters are tested and certified by the National Sanitation Foundation (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, and for safe use in potable water systems under NSF® Standard 14/61.

All Spears® CPVC CTS Pipe and Fittings for CPVC Plastic Hot and Cold Water Distribution Systems in this manual are certified Lead-Free by NSF International under NSF® Standard 61, Annex G. The annex certifies compliance to California California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193. Lead free is defined by these requirements as containing no more than a weighted average lead content of $\leq 0.025\%$.

Testing

Once the system has been installed and allowed to cure properly, the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Failure to do so can cause damage to the piping system and could be harmful to the job site personnel should a failure occur. If a leak is found, the affected product must be cut and discarded. A new section can be installed using couplings or other approved means.

PURPOSE OF THIS MANUAL

This manual is intended for use by specifiers, installers, and users in the selection, design, installation, and inspection of CPVC systems installed using Spears® CPVC products. All information contained within this manual is considered vital to obtain proper system performance and must be read and fully understood before attempting to install these products. If you have any questions about the safe and proper installation of these products, contact Spears® Manufacturing Company 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611 • (800) 862-1499.

HAZARD IDENTIFICATION

Definitions for identifying the various hazard levels are provided below.



This safety alert symbol indicates important safety messages. When you see this symbol, be alert to the possibility of personal injury. Carefully read and fully understand the message that follows.

DANGER

The use of the word "DANGER" identifies an immediate hazard with a likelihood of severe personal injury or death if instructions, including recommended precautions, are not followed.

WARNING

The use of the word "WARNING" identifies the presence of hazards or unsafe practices that could result in severe personal injury if instructions, including recommended precautions, are not followed.

CAUTION

The use of the word "CAUTION" identifies possible hazards or unsafe practices that could result in personal injury, product damage, and/or property damage if instructions, including recommended precautions, are not followed.

NOTICE

The use of the word "NOTICE" identifies special instructions that are important but not related to hazards.



INSTALLER SAFETY INSTRUCTIONS

Read and understand this manual before proceeding with the installation and testing of the Spears® CPVC system. Education and a complete understanding of the instructions provided are requirements for the installer of the Spears® CPVC system. These instructions contain important information. If you need additional copies of this manual, or if you have any questions about the safe installation and use of this system, contact Spears® Manufacturing Company 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611 • (800) 862-1499.

1. Inspect the product. Make sure all parts are included with the shipment and that all necessary tools are available for proper installation.
2. Wear safety glasses, hard hat, and foot protection.
3. Avoid dangerous environments. If using electrically powered tools for installation, make sure the area is free from moisture or wetness that could create unsafe working conditions. Keep work areas well lit. Allow sufficient space for measuring and dry-fitting the system.
4. Prevent back injury. Always practice safe lifting and installation techniques.
5. Use only tools specifically designed for plastic pipe and fittings.
6. Work in a well-ventilated area. Ensure that there is proper ventilation when applying primers and cements and/or soldering materials.
7. Wear protective gloves. PVA-coated protective gloves are recommended when applying solvent cement. If hands contact solvent cement, use a waterless, abrasive soap to remove all residue.
8. When solvent cementing, avoid sources of heat or open flame. **DO NOT** smoke while handling solvent cement.
9. Keep work areas clean. Cluttered areas and slippery floors can create hazardous working conditions.
10. Wear hearing protection. Protect your hearing if you are exposed to long periods of very noisy job-site operations.
11. Keep visitors away. All visitors should be kept a safe distance away from the work area.
12. Follow all manufacturers' recommended precautions when cutting or sawing pipes, or when using any heat, flame, or power tools.

MODEL CODES

Spears® CPVC products meet ASTM D 2846 requirements, as referenced in the current version of the following model codes.

Code	Organization
BOCA National Plumbing Code	Building Officials and Code Administrators International, Inc.
CABO 1- and 2-Family Dwelling Code	Council of American Building Officials
Canadian Plumbing Code	National Research Council, Canada
International Plumbing Code	BOCA, ICBO, SBCCI
National Standard Plumbing Code	National Association of Plumbing-Heating-Cooling Contractors
Standard Plumbing Code	Southern Building Code Congress International Inc.
Uniform Plumbing Code	International Association of Plumbing and Mechanical Officials

LISTING AGENCIES

Standard	Organization
Standards 14 and 61	NSF International (ANSI/NSF®)



CPVC CTS FITTINGS & VALVES

HANDLING AND STORAGE

Spears® CPVC products resist attack from a large group of chemicals that are corrosive to metallic piping. However, care must be taken to avoid contact with chemicals that are harmful to CPVC. Specific chemicals, or chemical vapors, that contact CPVC can weaken or damage the system. Consult with Spears® before using these CPVC products with any questionable materials.

⚠ WARNING

- **DO NOT** expose Spears® CPVC products to edible oils, esters, ketones, or petroleum-based products, such as: cutting oils; packing oils; traditional pipe thread paste or dopes; and certain lubricants. Consult with Spears® before using certain chemicals with these CPVC products.

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Spears® recommends that CPVC products be stored indoors. If storing outdoors, these products must be covered with a non-transparent material to prevent extended sunlight exposure. Brief exposure to direct sunlight on the job site may result in color fade, but it will not affect the material's physical properties. Spears® CPVC fittings should be stored in their original containers to keep them free from dirt and to help reduce the possibility of damage.

⚠ WARNING

- Spears® CPVC products must not be subjected to prolonged sunlight exposure.
- For outdoor storage, products must be stored in their original shipping containers, or they must be covered with a non-transparent material.

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Reasonable care must be exercised in handling Spears® CPVC products. Do not drop these products or allow anything to drop on them. If improper handling results in scratches, splits, or gouges, the damaged fitting or section of piping must be discarded.

SYSTEM LISTINGS, USAGE, AND STANDARDS

Penetrating Fire-Rated Walls and Partitions

Spears® CPVC products can be used within fire-rated buildings, provided all penetrations of fire barriers are constructed so that the fire rating of the barrier is not compromised. Most codes accept penetration sealing systems or devices that are UL Listed or have passed the appropriate ASTM E 119 or E 814 tests. The PPFA manual, "Plastic Pipe in Fire Restrictive Construction" (NER370), provides more information and lists the applicable test reports. In addition, reference can be made to the current issue of the "Underwriters Laboratories Inc. Directories of Fire Resistance – Vol. II" or the "WHI Certification Listings." Before starting an installation, always consult the building codes and local authority having jurisdiction.

⚠ WARNING

- Some fire-stopping systems contain chemicals that can damage CPVC products. Always consult with Spears® and the fire-stop manufacturer concerning compatibility with CPVC products.

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Underslab Installations

Spears® CPVC products are approved for underslab installations (with joints) in all model-plumbing codes. When performing underslab installations, it is important to support the pipe evenly on a smooth surface. The bedding and backfill should be sand or clean soil that is free from sharp rocks and other debris that could damage the pipe.

Underslab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours. The pipe should be sleeved where it penetrates the slab, along with construction joints within the slab.

Spears® CPVC products can be used with pipe manufactured in accordance with ASTM D 2846, which is available in coils for underslab installations. When turning coiled piping up through a slab, into walls, etc., make sure the piping does not kink. Sections of pipe that contain kinks must be cut out and replaced.

Freeze Protection/Sunlight Exposure

CPVC piping must be protected from freezing in all installation locations. Attention shall be paid to local insulating techniques and codes that require a particular method. Use only methods and materials suitable for use with CPVC piping. Where freezing is not an issue, CPVC shall not be installed so as to be subject to direct sunlight after installation and not installed on the surface of a building, unless protected by a covering or a chemically compatible paint, such as water based Latex.

Hose Bibb Installation

Hose bibbs are to be connected only to metal system components which are adequately anchored to the building structure. CPVC plastic systems must terminate in the wall.

Water Heater Connections

Before attempting to use Spears® CPVC products in water heater connections, determine if local plumbing codes contain detailed requirements for connections to gas or electric storage-type heaters. **DO NOT** use Spears® CPVC products with commercial-type, non-storage water heaters.

For areas where local plumbing codes do not have requirements, the following information can be used as a guide for water heater connections:

- On electric water heaters, CPVC can be joined directly to the heater, using metal-to-CPVC transition fittings.
- On high-efficiency gas water heaters that use plastic vent piping, CPVC can be joined directly to the heater in the same way as an electric water-heater connection.
- On all other gas water heaters, there should be at least 6" of clearance between the exhaust flue and any CPVC piping. A minimum of 6" metallic pipe should connect directly to the heater so that the CPVC piping cannot be damaged by the buildup of excessive, radiant heat from the flue.
- A temperature/pressure relief valve should be installed so that the sensing element contacts the water at the top of the heater.
- Spears® CPVC products are approved by all model codes for use as relief-valve drain lines. A metal-to-CPVC transition fitting should be used to connect the piping to the relief valve. Then, the piping should be continued to the outlet. Both horizontal and vertical pressure relief drain should be supported every 3 feet.
- For horizontal runs, slope the piping toward the outlet. Support the piping at 3-foot centers or closer. The piping must discharge to the atmosphere at an approved location.
- Instantaneous water heaters (i.e., under sink units) require at least 6" of metallic pipe connected to heater inlet and no CPVC installed down stream.

BASIC JOINT ASSEMBLY

Cutting the Pipe

CPVC piping can be cut easily with a ratchet cutter, wheel-type plastic piping cutter, a power saw, or any other fine-tooth saw.



Be careful not to split the pipe if using a ratchet-type cutter, especially in temperatures below 50°F. If any damage or cracking is evident, cut off at least 2" of the pipe beyond any visible crack.

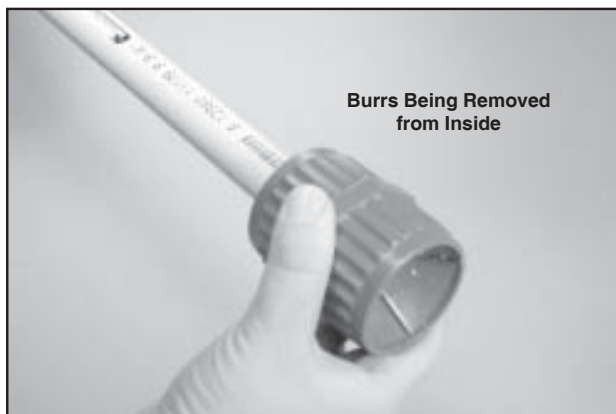
It is important that the cutting tools being used are designed for plastic piping. To ensure that the pipe is cut square, use a miter box when cutting the pipe with a saw. Cutting the pipe as square as possible provides the maximum bonding surface area.



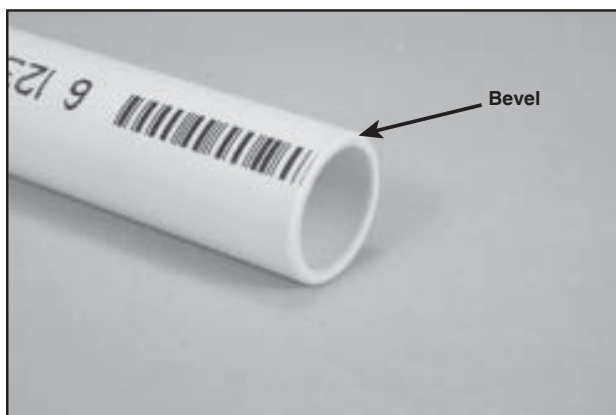
CPVC CTS FITTINGS & VALVES

Deburring

Burrs and filings can prevent contact between the pipe and the fitting during assembly and must be removed from the outside and the inside of the pipe. A chamfering tool or file is suitable for this purpose (refer to photos below).



A slight bevel must be placed at the end of the pipe, as shown below. A slight bevel will ease the entry of the pipe into the socket and minimize the chance of cement being wiped off the fitting.



Fitting Preparation

Using a clean, dry rag, wipe any loose dirt and moisture from the fitting's socket and pipe end. Moisture can slow the cure time, and at this stage of assembly, excessive moisture can reduce joint strength.

⚠ WARNING

- Before assembling any Spears® CPVC products, inspect all components for cuts, scratches, gouges, split ends, or any other irregularities that have occurred during shipping and handling. Failure to follow this instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

Check all mating components to ensure that tolerances and engagements are compatible. **DO NOT** use any components that appear irregular or do not fit properly. Contact Spears® regarding any questions about usability.

Check the dry fit of the pipe and fitting. The pipe should enter the fitting's socket easily 1/4 - 3/4 of the way.

⚠ WARNING

- Always apply a second coat of cement to the pipe for joints that are 1-1/4 inch and larger. Failure to follow these instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

SOLVENT CEMENTING PROCEDURES

Verify the expiration date located on the solvent cement container. The cement can be used for a period of 2 years from the date stamped on the container. When cementing pipe and fittings in extremely cold temperatures, make sure the cement has not "JELLED." Jelled or expired cement must be discarded in an environmentally friendly fashion, in accordance with local regulations. To prolong the life of solvent cement, keep the containers tightly closed when not in use, and cover the container as much as possible during use. If an unopened solvent cement container is subjected to freezing temperatures, the cement may become extremely thick. Place the closed container in a room temperature area where, after a short time period, the cement will return to a usable condition. **DO NOT** attempt to heat solvent cement.

⚠ WARNING

- Before assembling any Spears® CPVC products, verify that the solvent cement is within 2 years of the date stamped on the can and that it does not have a "JELLED" appearance. Jelled or expired solvent cement will not provide the strength needed to make a proper joint. Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

The cement must be applied when the pipes and fittings are clean and free from any moisture and debris.

USING AN APPLICATOR OR NATURAL BRISTLE BRUSH THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, WORK THE CEMENT INTO THE JOINING SURFACES USING A CONTINUOUS, CIRCULAR MOTION.

Apply the cement in the following sequence, as pictured below:

1. Apply a coat to the pipe
2. Apply a coat to the fitting
3. Apply a second coat to the pipe, if required

Avoid puddling the cement on or within the fitting and pipe. Puddled cement causes excess softening and damage to the CPVC material.



Apply a heavy, even coat of cement to the outside of the pipe end. Work the cement into the joining surfaces using a continuous, circular motion.



Apply a medium coat to the fitting socket. Avoid getting cement in other sockets or threaded connections.

A second application of cement must be applied to the pipe end if a 1-1/4 inch and larger joint is being prepared.

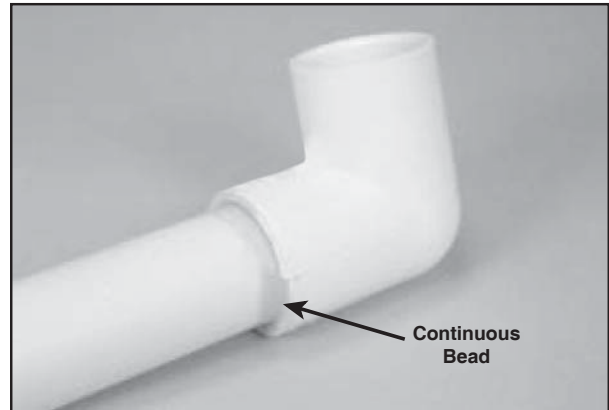
WARNING

- Always apply a second coat of cement to the pipe for joints that are 1-1/4 inch and larger.
 - Avoid puddling the cement on the pipe or within the fitting.
 - Avoid getting cement into other sockets or threaded connections.
- Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

Joint Assembly

Immediately insert the pipe into the fitting's socket while rotating the pipe 1/4 turn. Align the fitting in the proper orientation at this time. Make sure the pipe bottoms out at the fitting's stop.

Hold the assembly for 10 to 15 seconds to ensure initial bonding occurs. A bead of cement must be present around the pipe and fitting juncture. If this bead is not continuous around the socket's shoulder, insufficient cement was applied.



If insufficient cement was applied, the joint must be cut out and discarded, and a new joint must be assembled.

Any cement, in excess of the bead, can be wiped off with a dry, clean rag.

Set and Cure Times

- The set and cure times for CPVC solvent cement depend on pipe size, temperature, relative humidity, and tightness of fit. Drying time is faster for drier environments, smaller pipe sizes, high temperatures, and tighter fits.
- Special care must be taken when assembling Spears® CPVC products in low temperatures (below 40°F) or high temperatures (above 80°F).
- Extra set and handling times must be allowed in colder temperatures. When cementing pipe and fittings in cold temperatures, make sure the cement has not "JELLED." Jelled cement must be discarded.
- In higher temperatures, make sure both surfaces to be joined are still wet with cement during assembly.
- The assembly must be allowed to set, without any stress on the joint, for 5 minutes.
- Following the initial set period, the assembly can be handled carefully by avoiding stress on the joint.

Refer to the following table for minimum cure times before pressure testing.



CPVC CTS FITTINGS & VALVES

MINIMUM CURE TIMES FOR SOLVENT CEMENT BEFORE PRESSURE TESTING

150-psi Maximum Test Pressure

Piping Size	Ambient Temperature During Cure (Relative Humidity 60% or Less)		
Nominal Diameter inches	60°F to 100°F	40°F to 60°F	0°F to 40°F
1/2	15 minutes	20 minutes	30 minutes
3/4	15 minutes	20 minutes	30 minutes
1	15 minutes	20 minutes	30 minutes
1-1/4	15 minutes	20 minutes	30 minutes
1-1/2	30 minutes	45 minutes	1 hour
2	30 minutes	45 minutes	1 hour

⚠ WARNING

- Make sure the cement is allowed to cure, according to the times listed in the chart, for the pipe size and ambient temperature.

Failure to follow this instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

TRANSITION JOINTS AND FITTINGS

CPVC pipe can be connected to copper, brass, valves, and other materials using a variety of transition fittings including unions, compression fittings, specially reinforced male and female adapters, flanged joints, grooved joints and other readily available transition fittings.

Do not thread CPVC pipe and do not use regular CPVC female threaded fittings. Regular CPVC male threaded fittings shall only be used on cold water applications. Spears® Special Reinforced Male Adapters, CPVC Lined Brass-Threaded Male Adapters, Special Reinforced Female Adapters and Gasket Sealed Brass-Threaded Female Adapters are recommended for hot water applications and threaded transitions to metal pipe. All approved threaded CPVC joints must be accessible. (See also Water Heater Connections section for additional installation details.)

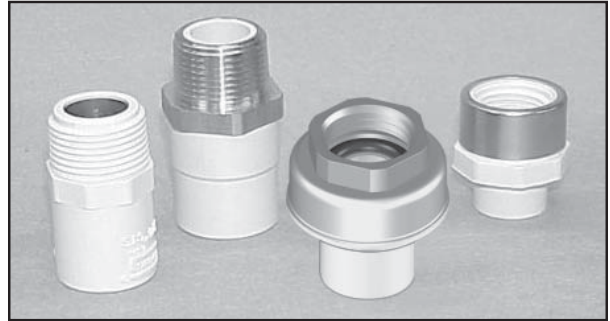
Standard compression fittings with brass ferrules can be used; however, PTFE tape must be applied over the brass ferrule to compensate for the dissimilar thermal expansion rates between the brass and CPVC. Caution must be exercised to prevent over tightening of compression fittings. Use extreme care when soldering any metal system to prevent flame contact with or heat distortion in CPVC pipe and fittings.

Assembling Gasket Sealed Brass-Threaded Female Adapter Connections

Threaded connections using Spears® Gasket Sealed Brass-Threaded Female Adapters with O-ring seal at the base of the fitting thread are designed to be assembled without thread sealants. **DO NOT** use ANY thread sealants, tape or paste, in these joints. Thread hand tight and tighten snug. This produces a leak-free, reliable seal without problems associated with incompatible thread pastes or improperly applied tape (TFE) sealants.

⚠ WARNING

- DO NOT** use ANY thread sealants on Gasket Sealed Brass-Threaded Female Adapter. Sealants, especially tape (TFE), may prevent proper joint make-up and result in leaks.
- DO NOT** over tighten. Wrench over tightening of joints may result in fitting damage.



Assembling Standard Threaded Connections

Threaded connections using standard tapered threads (including Spears® Special Reinforced Female Adapters, Special Reinforced Male Adapters, Brass-Threaded and Regular Male Adapters) require the application of a thread sealant that is compatible with CPVC material. Spears® recommends the use of Spears® Blue 75 Thread Sealant. **DO NOT** use ANY thread sealants on Spears® Gasket Sealed Brass-Threaded Female Adapters (see above).

⚠ WARNING

- Use only thread sealants recommended by Spears®. Other joint compounds or pastes may contain substances that could cause stress cracks in CPVC or brass materials.

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

Apply sealant to the male threads only. Make sure all threads are covered. **DO NOT** clog the waterway with excess sealant.

If PTFE tape is used, Spears® recommends a thickness of at least .0025" that meets or exceeds military specification, MIL-T-27730A. **DO NOT** use a combination of tape and thread sealant on the same joint.

Apply PTFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 - 3 wraps are sufficient to produce a watertight connection.

⚠ WARNING

- DO NOT** use more than five wraps of PTFE tape. Excessive tape can cause bunching, resulting in fractures of the plastic fitting or the brass insert due to excessive hoop stress.

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Factory testing has indicated that 10 - 25 ft-lbs of torque is adequate to obtain a leak-free seal. Use only a smooth-jawed wrench or strap wrench when installing threaded connections.



WARNING

- Tools with teeth **MUST NEVER** be applied to any part of a CPVC fitting. The teeth can damage and weaken CPVC material.
- Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

ENGINEERING DATA SECTION

Pipe and Fitting Specifications

CPVC pipe is produced in SDR 11 dimensions using copper tube size (CTS) outside diameters, as specified in ASTM D 2846. Spears® fittings are produced in SDR 11 dimensions, in accordance with ASTM D 2846. The combined pipe and fitting system is NSF listed for potable water. In addition, the system meets test requirements of the Uniform Building Code.

SDR 11 (Ref. ASTM D 2846)			Weight lbs/ft
Size Nominal inches	Average OD inches	Average ID inches	
1/2	0.625	0.469	.090
3/4	0.875	0.695	.149
1	1.125	0.901	.240
1-1/4	1.375	1.105	.353
1-1/2	1.625	1.309	.489
2	2.125	1.716	.829

Pressure Ratings

The Spears® CPVC system, including the joint, has a continuous rated working pressure of 100 psi at 180°F or 400 psi at 73°F. CPVC systems have the capability to withstand short-term temperature/pressure increases above 100 psi at 180°F, as evidenced by their ability to consistently surpass the 48 hour, 150 psi Uniform Building Code test at 210°F. CPVC pipe should not be used where temperatures will consistently exceed 180°F.

Pressure-Temperature De-Rating Factors For CTS CPVC 4120 SDR 11 Piping Systems

°F	Factor	Rating, PSI
73	1.00	400
80	1.00	400
90	0.91	360
100	0.82	325
120	0.65	260
140	0.50	200
160	0.40	160
180	0.25	100

The pressure de-rating factor is the same for all pipe sizes.

Example: Determine the maximum allowable operating pressure for a CTS CPVC piping system with an operating temperature of 140°F. Using de-rating factor of 0.50 for 140° From the above chart, the maximum allowable operating pressure = 400 x 0.50 = 200 psi.

Hydraulic Design

Friction Loss – Friction loss through CPVC pipe is most commonly obtained by the use of the Hazen-Williams equations as expressed below for water:

$$f = .2083 \times \frac{(100)^{1.852}}{C} \times \frac{G^{1.852}}{di^{4.8655}}$$

where:

f = friction head of feet of water per 100' for the specific pipe size and I.D.

C = a constant for internal pipe roughness. 150 is the commonly accepted value for CPVC pipe.

G = flow rate of gallons per minute (U.S. gallons).

di = inside diameter of pipe in inches.

Compared to other materials on construction for pipe, thermo-plastic pipe smoothness remains relatively constant throughout its service life.

Flow Velocities – Velocities for water in feet per second at different GPM's and pipe inside diameters can be calculated as follows:

$$V = .3208 \frac{G}{A}$$

where:

V = velocity in feet per second

G = gallons per minute

A = inside cross sectional area in square inches

While these systems can operate with flow velocities in excess of 10 feet per second, a maximum of 8 feet per second velocity is recommended to extend system life.

The following table lists Friction Loss and Flow Velocities for SDR 11 CTS CPVC Pipe at different flow rates.



CPVC CTS FITTINGS & VALVES

FRICTION LOSS AND FLOW VELOCITY FOR SDR 11 CTS CPVC PIPE

Friction head and friction loss are per 100 feet of pipe.

Gallons Per Minute	1/2 in.			3/4 in.			1 in.			1-1/4 in.			1-1/2 in.			2 in.		
	Pressure Loss PSI Per 100 Ft.	Head Loss Feet of Water Per 100 Ft.	Velocity Feet Per Second	Pressure Loss PSI Per 100 Ft.	Head Loss Feet of Water Per 100 Ft.	Velocity Feet Per Second	Pressure Loss PSI Per 100 Ft.	Head Loss Feet of Water Per 100 Ft.	Velocity Feet Per Second	Pressure Loss PSI Per 100 Ft.	Head Loss Feet of Water Per 100 Ft.	Velocity Feet Per Second	Pressure Loss PSI Per 100 Ft.	Head Loss Feet of Water Per 100 Ft.	Velocity Feet Per Second	Pressure Loss PSI Per 100 Ft.	Head Loss Feet of Water Per 100 Ft.	Velocity Feet Per Second
1	1.38	3.19	1.71	0.22	0.50	0.80	0.06	0.15	0.48	3.94	3.23	3.94	1.71	2.31	2.31	0.76	0.49	1.35
2	5.00	11.53	3.42	0.79	1.82	1.60	0.23	0.53	0.96	8.35	4.84	8.35	3.62	3.47	2.03	1.61	1.03	2.03
3	10.59	24.43	5.13	1.67	3.85	2.40	0.49	1.12	1.44	14.23	6.46	14.23	6.17	4.63	2.70	2.74	1.76	2.70
4	18.04	41.62	6.83	2.84	6.55	3.20	0.83	1.91	1.93	21.51	8.07	21.51	9.33	5.78	3.38	4.15	2.66	3.38
5	27.27	62.91	8.54	4.29	9.91	4.00	1.25	2.89	2.41	30.15	9.68	30.15	13.07	6.94	4.05	5.81	3.73	4.05
6	38.23	88.12	10.25	6.02	13.89	4.79	1.76	4.05	2.89	40.11	11.30	40.11	17.39	8.09	4.73	7.73	4.96	4.73
7	50.86	117.32	11.96	8.01	18.47	5.59	2.34	5.39	3.37	51.37	12.91	51.37	22.27	9.25	5.40	9.90	6.35	5.40
8	65.13	150.23	13.67	10.26	23.66	6.39	2.99	6.90	3.85	63.89	14.52	63.89	27.70	10.41	6.08	12.31	7.89	6.08
9	81.00	186.85	15.38	12.76	29.42	7.19	3.72	8.58	4.33	77.66	16.14	77.66	33.66	11.56	6.75	14.96	9.60	6.75
10	98.45	227.11	17.08	15.50	35.76	7.99	4.52	10.43	4.82	92.65	17.75	92.65	40.16	12.72	7.43	17.85	11.45	7.43
15				32.85	75.78	11.99	9.58	22.11	7.22						8.10	20.97	13.45	8.10
20				55.97	129.11	15.98	16.33	37.67	9.63						9.46	27.90	17.89	9.46
25							24.69	56.94	12.04						10.61			10.61
30							34.60	79.82	14.45						12.16			12.16
35							46.03	106.19	16.86						13.51			13.51
40															16.89			16.89
45																		
50																		
55																		
60																		
70																		
80																		
90																		
100																		
125																		

Hanger/Support Spacing

Since CPVC pipe is rigid, it requires fewer supports than flexible, plastic systems.

Vertical runs should be supported at each level so that the weight of the run is not placed on a fitting or a joint.

Horizontal runs require support every 3 feet for 1/2" - 1" diameter pipe and every 4 feet for 1-1/4" and larger diameters. Support spacing should be in accordance with applicable local codes.

Horizontal runs must be braced so that the stress loads (caused by bending or snaking) will not be placed on a fitting or a joint. Hanger support spacing information is shown in Table A.

Spears® recommends that hangers, designed for supporting CPVC, be used to support CPVC piping. However, some hangers, designed for steel pipe, may be used if their suitability is clearly established. These hangers must be selected to accommodate the specific pipe size. In addition, they cannot contain rough or sharp edges that contact the pipe, and they must not bind the pipe from axial movement that is caused by expansion and contraction.

Table A - Hangers and Supports
Reference CPVC ASTM D 2846 Systems

Pipe Size (CTS) Nominal inches	Maximum Support Spacing Feet	Water-filled Weight lbs/ft
1/2	3	0.153
3/4	3	0.294
1	3	0.486
1-1/4	4	0.726
1-1/2	4	1.014
2	4	1.733

⚠ WARNING

Horizontal runs and vertical risers of CPVC piping require additional support and provision for expansion and contraction, compared to metal piping systems. Systems must be designed and installed by qualified personnel, in accordance with the properties and capabilities of the material.

Failure to follow these instructions could cause joint or system failure, resulting in serious personal injury and/or property damage.

Material Properties

Table I
Modulus of Elasticity and Stress vs. Temperature

Property	Temperature °F							
	73	80	90	100	110	120	140	150
Modulus of Elasticity "E" x 10 ⁵ psi	3.900	3.840	3.780	3.700	3.460	3.210	3.050	2.840
Working Stress "S" psi	1900	1785	1630	1485	1345	1270	950	875

Table II
Physical and Thermal Properties

Property		CPVC	ASTM
Specific Gravity	"Sp. Gr."	1.51	D 792
IZOD Impact Strength (ft-lbs/inch of notch)		5.0	D 256A
Modulus of Elasticity, psi	"E"	3.9 x 10 ⁵	D 638
Ultimate Tensile Strength, psi		8,000	D 638
Compressive Strength, psi	"σ"	9,000	D 695
Poisson's Ratio	"ν"	.35 - .38	—
Working Stress @ 73°F, psi	"S"	1,900	D 1598
Hazen-Williams "C" Factor	"C"	150	—
Coefficient of Linear Expansion in/(in °F)	"e"	3.2 x 10 ⁻⁵	D 696
Thermal Conductivity BTU/(hr °F ft/in ²)	"k"	0.95	C 177
Upper Temperature Limit	"°F"	205	
Flammability		Flame Retardant	
Electrical Conductivity		Non-Conductor	



CPVC CTS FITTINGS & VALVES

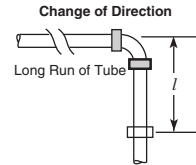
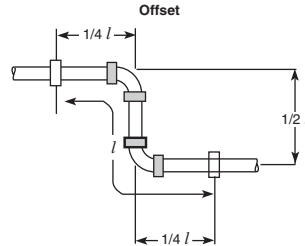
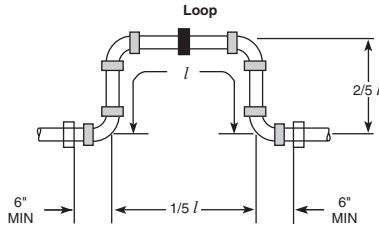
Expansion and Contraction

⚠ WARNING

Horizontal runs and vertical risers of CPVC piping require additional support and provision for expansion and contraction, compared to metal piping systems. Systems must be designed and installed by qualified personnel, in accordance with the properties and capabilities of the material.

Failure to follow these instructions could cause joint or system failure, resulting in serious personal injury and/or property damage.

Expansion Loop Offset Configurations



= Hanger or Guide = Restraint

Hangers or guides should only be placed in the loop, offset or change of direction as indicated above. Piping supports should restrict lateral movement and should direct axial movement into the expansion loop.

CPVC, like all piping materials, expands and contracts with changes in temperature. The coefficient of linear expansion for CPVC is 3.2×10^{-5} in./in./°F. A 25°F change in temperature will cause an expansion of 1" for a 100-ft straight length. For most installation and operating conditions, expansion and contraction can be accommodated at changes of direction. Based on the following chart, an offset or loop is required on a long, straight run.

Table III: Thermal Expansion in inches

Temp Change ΔT °F	Length of Run in feet													
	5	10	15	20	25	30	35	40	45	50	70	90	120	160
Thermal Expansion ΔL (inches)														
20	0.04	0.08	0.12	0.15	0.19	0.23	0.27	0.31	0.35	0.38	0.54	0.69	0.92	1.23
30	0.06	0.12	0.17	0.23	0.29	0.35	0.40	0.46	0.52	0.58	0.81	1.04	1.38	1.84
40	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.61	0.69	0.77	1.08	1.38	1.84	2.46
50	0.10	0.19	0.29	0.38	0.48	0.58	0.67	0.77	0.86	0.96	1.34	1.73	2.30	3.07
60	0.12	0.23	0.35	0.46	0.58	0.69	0.81	0.92	1.04	1.15	1.61	2.07	2.76	3.69
70	0.13	0.27	0.40	0.54	0.67	0.81	0.94	1.08	1.21	1.34	1.88	2.42	3.23	4.30
80	0.15	0.31	0.46	0.61	0.77	0.92	1.08	1.23	1.38	1.54	2.15	2.76	3.69	4.92
90	0.17	0.35	0.52	0.69	0.86	1.04	1.21	1.38	1.56	1.73	2.42	3.11	4.15	5.53
100	0.19	0.38	0.58	0.77	0.96	1.15	1.34	1.54	1.73	1.92	2.69	3.46	4.61	6.14

$\Delta L = 12 \text{ el } (\Delta T)$

$e = 3.2 \times 10^{-5} \text{ in./in./°F}$ (Coefficient of Linear Expansion – Table II)

L = Length of Run in feet

ΔT = Temperature Change in °F

Example:

How much will a 40-ft run of 2" CPVC pipe expand if the expected ambient temperature will range from 45°F to 85°F?

$\Delta L = 12 \text{ el } (\Delta T)$

$\Delta L = 12 (.000032) \times 40 \times 40$

$\Delta L = .61"$

Table IV: Expansion Loop Length in inches

Nominal Pipe Size	Avg. O.D.	Length of Run in feet													
		5	10	15	20	25	30	35	40	45	50	70	90	120	160
		Length of Loop (inches) Temperature Change (ΔT) = 100°F - 30°F = 70°F													
1/2	0.625	6	8	10	11	13	14	15	16	17	18	21	24	27	32
3/4	0.875	7	9	11	13	15	16	18	19	20	21	25	28	32	38
1	1.125	8	11	13	15	17	18	20	21	23	24	28	32	37	43
1-1/4	1.375	8	12	14	17	19	20	22	24	25	26	31	35	41	47
1-1/2	1.625	9	13	16	18	20	22	24	26	27	29	34	38	44	51
2	2.125	10	15	18	21	23	25	27	29	31	33	39	44	51	58

Note: Table IV is based on 70°F temperature change. Values rounded.

$$L = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

L = Length of Expansion Loop in inches

E = Modulus of Elasticity at 100°F (Table I)

D = Average OD of Pipe

ΔL = Change in Length of Pipe Due to Change in Temperature (Table III)

S = Working Stress at 100°F (Table I)

CPVC CTS FITTINGS & VALVES



Example: How much expansion can be expected in a 200-ft run of 2" CPVC pipe? How long should the expansion loop be to compensate for the expansion (the expected temperature range will be from 40°F to 110°F)?

First Find:

ΔT = (Change in Temperature)
 $\Delta T = T_2 - T_1$
 $\Delta T = 110^\circ\text{F} - 40^\circ\text{F}$
 $\Delta T = 70^\circ\text{F}$

To Find

ΔL = (Amount of Expansion in inches from Table III)
 $\Delta L = \Delta L \text{ of } 160 \text{ ft with a } \Delta T \text{ of } 70^\circ\text{F} + \Delta L \text{ of } 40 \text{ ft. with a } \Delta T \text{ of } 70^\circ\text{F}$
 $\Delta L = 4.30" + 1.08"$
 $\Delta L = 5.38"$
— OR —
 $\Delta L = 12 \text{ eL } (\Delta T)$
 $e = 3.2 \times 10^{-5} \text{ (from Table II)}$
 $L = \text{Length of Run in Feet}$
 $\Delta T = \text{Change in Temperature in } ^\circ\text{F}$
 $\Delta L = 12 \times 0.00032 \times 200 \times 70$
 $\Delta L = 5.38"$

$$I = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

I = Length of Expansion Loop in inches
 E = Modulus of Elasticity at 110°F (Refer to Table I)
 D = Average OD of Pipe
 ΔL = Change in Length of Pipe Due to Change in Temperature
 S = Working Stress at 110°F (Refer to Table I)

To find the length of the expansion loop or offset in inches:

$$I = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

I = Length of Expansion Loop in inches
 E = Modulus of Elasticity at Maximum Temperature from Table I
 D = Average Outside Diameter of the Pipe from Table IV
 S = Working Stress at Maximum Temperature from Table I
 ΔL = Change in Length of Pipe Due to Change in Temperature from Table III

$$I = \sqrt{\frac{3 \times 346,000 \times 2.125 \times 5.38}{2 \times 1345}}$$

$$I = \sqrt{4412}$$

$$I = 66.4$$



CPVC CTS FITTINGS & VALVES

CPVC Piping System Guidelines for Commercial Hot & Cold Water Distribution Applications

EverTUFF® CPVC Systems provide highly sustainable, cost effective alternatives to metal piping in commercial multi-story applications for hot and cold water distribution. EverTUFF® CPVC pipe and fittings are available for most any size project using Copper Tube Size (CTS) CPVC in sizes 1/2" through 2" and in supplemental Schedule 40 and Schedule 80 CPVC Iron Pipe Size (IPS) for sizes 2-1/2" through 12".

EverTUFF® CPVC Systems meet applicable code requirements and are fully suitable for use in multi-story installations where adequate design and installation practices have been utilized. The following overview includes, but is not limited to, general considerations that *must* be addressed in all CPVC system designs and installations.

WARNING: Failure to follow proper industry established design and installation practices and requirements for CPVC systems may result in system failure, severe personal injury and/or property damage. The following are general guidelines for issues that must be addressed with use of CPVC in commercial water distribution systems. All design criteria applicable to thermoplastics should be reviewed and approved by a licensed engineering professional.

Product Capability & Ratings

EverTUFF® CPVC CTS piping is produced in Standard Dimensional Ratio (SDR) of 11, where the ratio of wall thickness to outside diameter of the pipe is a constant of 11. This produces the same pressure rating for all sizes.

Available Sizes: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"

Pressure Rating: 100 psi @ 180°F

Applicable Standard: ASTM D 2846 for CPVC Copper Tube Size (CTS) Hot & Cold Water Distribution Systems

Potable Water Certification: ANSI/NSF® Standard 61

EverTUFF® Industrial CPVC IPS piping produced in Schedule 40 or Schedule 80 dimensions can be used for larger pipe sizes. Pressure ratings will vary according to diameter and water temperature. The appropriate Schedule piping (40 or 80) must be selected according to application and system requirements.

Supplemental Available Sizes: 2-1/2", 3", 4", 6", 8", 10", 12"

Pressure Ratings: According to pipe size and temperature; specified in ASTM F 441

Applicable Standard: Pipe - ASTM F 441 for CPVC Schedule 40 & Schedule 80 Pipe

Fittings – ASTM F 439 for CPVC Schedule 80 Fittings

Potable Water Certification: ANSI/NSF® Standard 61

Piping Support & Spacing

Hanger and support spacing for horizontal runs of Spears® EverTUFF® CPVC piping varies according to pipe diameter and water temperature. Local code requirements generally affect minimum spacing for CPVC piping and must be verified. Additional support should be provided for valves, flanges, expansion joints or other sources of load concentration. Hangers and straps designed for CPVC should be used, but some hangers designed for steel pipe can be used if suitable. Use only smooth straps or hangers that do not place rough or sharp edges against the pipe. Do not anchor CPVC piping too tight to supports in order to allow movement caused by expansion and contraction, bind or restrict movement.

Vertical runs (risers) must be properly supported to prevent excessive loading on the lower fitting or other stress concentration areas. Maintain vertical piping in straight alignment with supports at each floor level, or at 10 feet (3.05 m) intervals, whichever is less. Hangers and clamps suitable for this purpose include riser clamps or double bolt type clamps that provide a floating system which allows pipe movement due to thermal expansion and contraction when installed. Clamps and hangers must not compress, distort, cut, abrade or exert compressive stresses on the pipe; the use of riser clamps that utilize compression to support the pipe weight are not recommended.

Wall Penetration

Where Spears® EverTUFF® CPVC pipe passes through metal studs, protection must be used to prevent abrasion and reduce noise. Plastic insulators, rubber grommets, pipe insulation or similar devices may be used for this purpose.

Where penetrations of fire barriers are required, Spears® EverTUFF® CPVC piping can be used with Fire-Stop penetration sealing systems approved for use with CPVC. Most codes accept penetration sealing systems or devices that are UL Listed or have passed the appropriate ASTM E 119 or E 84 tests. Before starting an installation, always consult the building codes and local authority having jurisdiction.

Thermal Expansion & Contraction

Expansion and contraction in CPVC thermoplastic systems differs significantly from that of metal systems and can result in major problems if not adequately considered. Spears® EverTUFF® CPVC piping will expand or contract about 1 inch per 50 feet of length with a 50-degree temperature change. This movement must be accommodated in system design or else a system can literally push or pull itself apart. Thermal expansion is a primary concern in hot water lines.

Expansion and contraction expectations must be calculated according to standard industry practices. For most installation and operating conditions, movement accommodation can be made at system changes of direction, through use of use of telescoping expansion joints, an offset or loop on a long straight runs. Telescoping expansion joint needs must be properly calculated and the telescoping units properly aligned and installed. While only one properly sized expansion loop is required in any straight run, two or more properly sized smaller expansion loops can be used to conserve space as required.



Hydraulic Design

Spears® EverTUFF® CPVC piping systems must be sized based on industry standard hydraulic calculations for factors such as friction loss and flow velocity. Surge protection must also be considered.

Friction loss through CPVC pipe is typically determined by the use of the Hazen-Williams equations with a C Factor (internal roughness) of 150. Friction loss and flow velocity tables are also available for both CTS CPVC and Schedule 40 or Schedule 80 IPS CPVC piping.

While hot and cold water CTS CPVC systems can operate with flow velocities of 8 feet per second. A maximum velocity of 5 feet per second is recommended for Schedule 40 or Schedule 80 IPS CPVC systems. System flow velocity should always be maintained close to 5 feet per second in mixed CTS/IPS CPVC systems. Hydraulic designs, and value engineered changes should always be reviewed by a licensed engineering professional.

System Connections

Proper system connections are critical to maintaining system integrity and reliability. It is essential that all installation personnel be thoroughly trained in joining methods.

Solvent Cement Joints are the primary method of making connections between CPVC components. Solvent cements specifically approved to ASTM F 493 for CPVC and for use with ASTM D 2846 systems should be used on CTS CPVC installations. ASTM Standards permit the use of "One-step" (primerless) cements; however, local codes must be checked since some require use of both a primer and cement in CPVC joints. Larger Schedule 40 or Schedule 80 IPS joints should be made using an ASTM F 493 approved CPVC cement and primer. Manufacturer's instructions for cement/primer application, initial set times and applicable cure time in accordance with pipe size and temperature must be followed. Proper sized cement applicators should always be utilized (i.e., no less than 1/2 the pipe diameter). On 6" and larger IPS pipe come-alongs or other mechanical helpers are recommended to assist in joint assembly.

Threaded Transitions to metal systems must be made with appropriate fittings designed for plastic-to-metal connections. Spears® offers a variety of transition fittings including metal threaded adapter and the superior Special Reinforced (SR) Female Plastic Thread fittings for the best transition joints.

The chemical compatibility of any thread sealant, pastes, or lubricants with CPVC must be verified. Spears® recommends the use of Spears® **Blue 75™** Thread Sealant that has been tested for compatibility. If TFE sealant tape is used, it must be selected and applied correctly, according to manufacturer's instructions.

Flanged Connection can be used when properly assembled; a full-faced 1/8" thick elastomer gasket must be used. Flange alignment and system support is critical to prevent adverse stress loads. Flange bolts must **NEVER** be used to draw a flanged system connection together. Flange bolts, nuts, and washers must be properly selected and incrementally tightened in sequence to torque according to flange manufacturer's specifications. Thermoplastic flanges are typically rated at 150 psi for water at 73°F and must be de-rated for systems operating at elevated temperatures (i.e., hot water lines).

Hot Water Heater & Boiler Connections

Connection of CPVC CTS systems to hot water heaters must be made in accordance with code requirements. Typically, 6" metal nipples are required for direct connection to tanks, but approved CPVC CTS piping can be used for connection to temperature/pressure relief valves.

Schedule 80 IPS CPVC Boiler Connections generally *should not* be made directly to the boiler. Most boilers do not have suitable temperature variation control. Connections must assure that the temperature-pressure does not exceed the capability of the CPVC material.

System Pressure Testing

Hydrostatic pressure testing should commence only after all set and cure times for solvent cemented joints have been satisfied. The system should be pressure tested in accordance with local code requirements following industry accepted practices for thermoplastic systems.

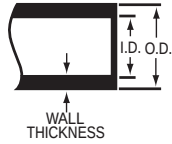
Under slab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours.

In freezing temperatures the system should be adequately purged of water after testing to avoid damage from freezing.



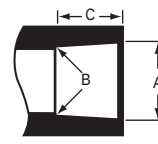
CPVC CTS FITTINGS & VALVES

CPVC 41, SDR 11 PIPE DIMENSIONS (CTS) ASTM D 2846, D 2846M



Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/2	0.625	± 0.003	0.068
3/4	0.875	± 0.003	0.080
1	1.125	± 0.003	0.102
1-1/4	1.375	± 0.003	0.125
1-1/2	1.625	± 0.004	0.148
2	2.125	± 0.004	0.193

CPVC 41, SDR 11 SOCKET DIMENSIONS (CTS) ASTM D 2846, D 2846M



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance In.	
1/2	0.633	0.619	± 0.003	0.500
3/4	0.884	0.870	± 0.003	0.700
1	1.135	1.121	± 0.003	0.900
1-1/4	1.386	1.372	± 0.003	1.100
1-1/2	1.640	1.622	± 0.004	1.300
2	2.141	2.123	± 0.004	1.700

Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch.

L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

W = Height of cap; ± 1/16 inch.

COPPER TUBE SIZE (CTS) CPVC PIPE

Nominal Pipe Size In.	AVG. O.D.	AVG. I.D.	MIN. Wall	MAX. W.P. P.S.I. *	LBS./FT.	Lgths./Carton
1/2	0.625	0.469	0.068	400	.090	50
3/4	0.875	0.695	0.080	400	.149	25
1	1.125	0.901	0.102	400	.240	15
1-1/4	1.375	1.105	0.125	400	.353	10
1-1/2	1.625	1.309	0.148	400	.489	6
2	2.125	1.716	0.193	400	.829	4

Standard Length - 10 Feet • All pipe is packed in boxes sold in carton quantities only.

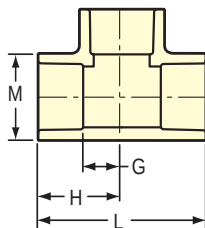
Pipe has UL 94 V-O rating • • For water, non shock, at 73.4°F with solvent welded joints.

CPVC CTS FITTINGS & VALVES



TEE

Socket x Socket x Socket

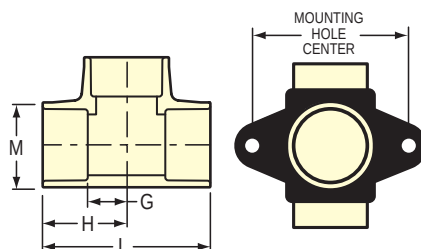


Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
4101-005	1/2	13/32	15/16	1-27/32	27/32	.03
4101-007	3/4	17/32	1-1/4	2-1/2	1-3/32	.06
4101-010	1	21/32	1-9/16	3-5/32	1-3/8	.12
4101-012	1-1/4	25/32	1-7/8	3-25/32	1-11/16	.18
4101-015	1-1/2	29/32	2-7/32	4-15/32	1-15/16	.29
4101-020	2	1-5/32	2-7/8	5-25/32	2-9/16	.63

DROP EAR TEE

(Fitting With Bracket)

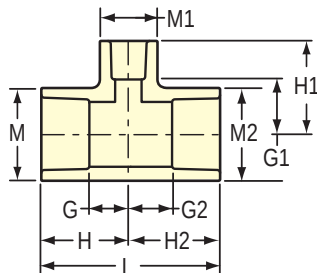
Socket x Socket x Socket



Part Number	Size	G	H	L	M	Mounting Hole Center	Approx. Wt. (Lbs.)
DE4101-005	1/2	13/32	15/16	1-7/8	27/32	1-3/4	.04

REDUCING TEE

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-074	1/2x1/2x3/4	7/16	13/32	31/32	31/32	1-1/8	31/32	1-15/16	27/32	1-3/32	27/32	.04

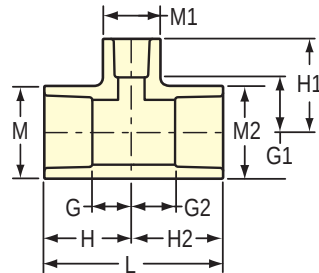


CPVC CTS FITTINGS & VALVES

REDUCING TEE

Socket x Socket x Socket

(continued)



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-094	3/4x1/2x1/2	7/16	17/32	7/16	1-5/32	1-1/32	31/32	2-1/8	1-3/32	27/32	27/32	.05
4101-095	3/4x1/2x3/4	1/2	17/32	19/32	1-7/32	1-1/4	1-1/8	2-11/32	1-3/32	1-3/32	27/32	.06
4101-101	3/4x3/4x1/2	13/32	17/32	13/32	1-1/8	1-1/32	1-1/8	2-1/4	1-3/32	7/8	1-3/32	.05
4101-102 ¹	3/4x3/4x1	1-1/8	11/16	1-13/16	1-27/32	1-19/32	1-13/16	3-21/32	1-11/32	1-11/32	1-11/32	.16
4101-120 ¹	1x1/2x1/2	11/16	1-5/16	1-1/4	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.20
4101-121 ¹	1x1/2x3/4	11/16	1-1/8	1-1/4	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.18
4101-122 ¹	1x1/2x1	11/16	11/16	1-1/4	1-19/32	1-19/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.15
4101-124 ¹	1x3/4x1/2	11/16	1-5/16	1-1/16	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.18
4101-125	1x3/4x3/4	17/32	11/16	17/32	1-15/32	1-13/32	1-1/4	2-23/32	1-11/32	1-3/32	1-3/32	.08
4101-126 ¹	1x3/4x1	11/16	15/16	1-1/16	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.13
4101-130	1x1x1/2	13/32	11/16	13/32	1-11/32	1-7/32	1-11/32	2-21/32	1-3/8	7/8	1-3/8	.07
4101-131	1x1x3/4	9/16	11/16	9/16	1-15/32	1-13/32	1-15/32	2-15/16	1-3/8	1-3/32	1-3/8	.09
4101-138 ¹	1-1/4x1/2x1/2	13/16	1-11/16	1-21/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-139 ¹	1-1/4x1/2x3/4	13/16	1-1/2	1-21/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-142 ¹	1-1/4x1/2x1-1/4	13/16	27/32	1-21/32	1-29/32	1-15/16	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.24
4101-146 ¹	1-1/4x3/4x1/2	13/16	1-11/16	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-147 ¹	1-1/4x3/4x3/4	13/16	1-1/2	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.31
4101-148 ¹	1-1/4x3/4x1	13/16	1-5/16	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.29
4101-149 ¹	1-1/4x3/4x1-1/4	25/32	25/32	1-7/16	1-29/32	1-29/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.26
4101-156 ¹	1-1/4x1x1/2	13/16	1-21/32	1-1/4	1-29/32	2-3/16	2-5/32	4-1/16	1-21/32	1-21/32	1-21/32	.30
4101-157 ¹	1-1/4x1x3/4	13/16	1-1/2	1-9/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.29
4101-158 ¹	1-1/4x1x1	13/16	1-5/16	1-9/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.27
4101-159 ¹	1-1/4x1x1-1/4	13/16	27/32	1-9/32	1-29/32	1-15/16	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.22
4101-166	1-1/4x1-1/4x1/2	11/32	27/32	13/32	1-17/32	1-11/32	1-17/32	3-9/16	1-21/32	7/8	1-21/32	.12
4101-167	1-1/4x1-1/4x3/4	17/32	13/16	17/32	1-21/32	1-17/32	1-21/32	3-5/16	1-21/32	1-1/8	1-21/32	.13
4101-168	1-1/4x1-1/4x1	11/16	13/16	11/16	1-25/32	1-3/4	1-25/32	3-19/32	1-21/32	1-3/8	1-21/32	.15
4101-169 ¹	1-1/4x1-1/4x1-1/2	1-7/16	15/16	2-1/32	2-17/32	2-1/4	2-17/32	5-1/16	1-31/32	1-31/32	1-31/32	.41
4101-173 ¹	1-1/2x1/2x1/2	15/16	2-1/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-174 ¹	1-1/2x1/2x3/4	15/16	1-27/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-175 ¹	1-1/2x1/2x1	11/16	1	1-13/16	2	1-29/32	2-11/32	4-11/32	1-31/32	1-3/8	1-31/32	.48
4101-176 ¹	1-1/2x1/2x1-1/4	15/16	1-15/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.45
4101-177 ¹	1-1/2x1/2x1-1/2	15/16	15/16	2-1/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.39
4101-182 ¹	1-1/2x3/4x1/2	15/16	2-1/32	1-27/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49

¹ Outlet sized with bushing

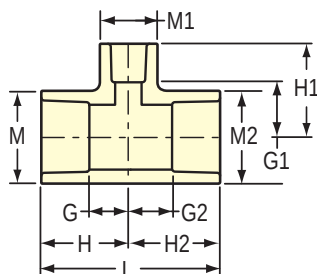
CPVC CTS FITTINGS & VALVES



REDUCING TEE

Socket x Socket x Socket

(continued)



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-184 ¹	1-1/2x3/4x3/4	15/16	1-27/32	1-27/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-185 ¹	1-1/2x3/4x1	1-1/32	1-5/8	1-27/32	2-1/4	2-9/16	2-9/16	4-23/32	1-31/32	1-31/32	1-31/32	.48
4101-186 ¹	1-1/2x3/4x1-1/4	3/4	1-7/16	1-5/16	2-9/16	2-9/16	2-1/4	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-188 ¹	1-1/2x3/4x1-1/2	15/16	15/16	1-27/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.39
4101-193 ¹	1-1/2x1x1/2	15/16	2-1/32	1-21/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-194 ¹	1-1/2x1x3/4	15/16	1-27/32	1-21/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-195 ¹	1-1/2x1x1	15/16	1-21/32	1-21/32	2-1/4	2-9/16	2-9/16	4-27/32	1-31/32	1-31/32	1-31/32	.48
4101-196 ¹	1-1/2x1x1-1/4	15/16	1-15/32	1-11/16	2-1/4	2-9/16	2-19/32	4-27/32	1-31/32	1-31/32	1-31/32	.44
4101-197 ¹	1-1/2x1x1-1/2	15/16	15/16	1-21/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.38
4101-199 ¹	1-1/2x1-1/4x1/2	1-3/8	2-1/32	2-1/32	2-1/2	2-9/16	2-1/4	4-23/32	1-31/32	1-31/32	1-31/32	.45
4101-201 ¹	1-1/2x1-1/4x3/4	15/16	1-27/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-202 ¹	1-1/2x1-1/4x1	15/16	1-21/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-203 ¹	1-1/2x1-1/4x1-1/4	15/16	1-15/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.41
4101-204 ¹	1-1/2x1-1/4x1-1/2	15/16	15/16	1-15/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.35
4101-209 ¹	1-1/2x1-1/2x1/2	11/16	1-1/2	2	2	2-3/16	2	4	1-31/32	1-3/8	1-31/32	.28
4101-210 ¹	1-1/2x1-1/2x3/4	11/16	1-7/16	2	2	2-5/32	2	4	1-31/32	1-3/8	1-31/32	.26
4101-211	1-1/2x1-1/2x1	11/16	31/32	11/16	2	1-29/32	1-31/32	3-31/32	1-15/16	1-3/8	1-15/16	.22
4101-212 ¹	1-1/2x1-1/2x1-1/4	15/16	1-7/16	2-7/32	2-1/4	2-17/32	2-7/32	4-15/32	1-31/32	1-31/32	1-31/32	.35
4101-213 ¹	1-1/2x1-1/2x2	1-29/32	1-3/16	1-29/32	3-7/32	2-7/8	3-19/32	6-13/16	2-9/16	2-9/16	2-9/16	1.01
4101-216 ¹	2x1/2x1/2	1-3/16	2-11/16	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-217 ¹	2x1/2x3/4	1-3/16	2-1/2	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-218 ¹	2x1/2x1	1-3/16	2-5/16	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-219 ¹	2x1/2x1-1/4	1-3/16	2-1/8	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-220 ¹	2x1/2x1-1/2	1-3/16	1-29/32	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-221 ¹	2x1/2x2	1-3/16	1-5/32	2-5/8	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.82
4101-222 ¹	2x3/4x1/2	1-3/16	2-11/16	2-11/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-223 ¹	2x3/4x3/4	1-3/16	2-1/2	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-224 ¹	2x3/4x1	1-3/16	2-5/16	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-225 ¹	2x3/4x1-1/4	1-5/32	2-1/16	2-7/16	2-7/8	3-5/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-226 ¹	2x3/4x1-1/2	1-3/16	1-29/32	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-227 ¹	2x3/4x2	1-3/16	1-5/32	2-7/16	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.83
4101-228 ¹	2x1x1/2	1-3/16	2-11/16	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-229	2x1x3/4	1-23/32	2-1/2	2-1/4	2-7/8	3-3/16	3-7/32	6-3/32	2-9/16	2-9/16	2-9/16	1.04
4101-230 ¹	2x1x1	1-3/16	2-5/16	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.05

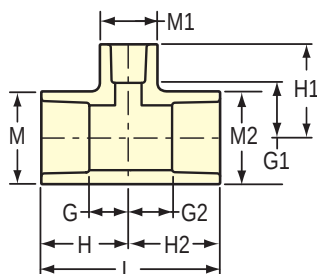
¹ Outlet sized with bushing



CPVC CTS FITTINGS & VALVES

REDUCING TEE (continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-231 ¹	2x1x1-1/4	1-3/16	2-1/8	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-232 ¹	2x1x1-1/2	1-3/16	1-29/32	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-233 ¹	2x1x2	1-3/16	1-5/32	2-1/4	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.83
4101-234 ¹	2x1-1/4x1/2	1-3/16	2-11/16	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-235 ¹	2x1-1/4x3/4	1-3/16	2-1/2	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-236 ¹	2x1-1/4x1	1-3/16	2-5/16	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-237 ¹	2x1-1/2x1/2	1-3/16	2-11/16	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-238 ¹	2x1-1/2x3/4	1-3/16	2-1/2	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-239 ¹	2x1-1/2x1	1-3/16	2-5/16	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-240 ¹	2x1-1/2x1-1/4	1-3/16	2-1/8	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-241 ¹	2x1-1/2x1-1/2	1-5/32	1-7/8	1-7/8	2-7/8	3-3/16	3-3/16	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-242 ¹	2x1-1/4x1-1/4	1-3/16	2-1/8	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-243 ¹	2x1-1/4x1-1/2	1-3/16	1-29/32	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-244 ¹	2x1-1/4x2	1-5/32	1-1/2	2-3/32	2-7/8	3-7/32	3-3/16	6-1/16	2-9/16	2-9/16	2-9/16	.82
4101-247 ¹	2x2x1/2	21/32	1-7/8	21/32	2-3/8	2-13/32	2-3/8	4-25/32	2-9/16	1-3/8	2-9/16	.48
4101-248 ¹	2x2x3/4	11/16	1-5/8	11/16	2-13/32	2-11/32	2-13/32	4-25/32	2-17/32	1-13/32	2-17/32	.46
4101-249	2x2x1	11/16	1-9/32	11/16	2-13/32	2-3/16	2-13/32	4-25/32	2-17/32	1-3/8	2-17/32	.43
4101-250 ¹	2x2x1-1/4	1-5/32	2-3/8	1-5/32	2-7/8	3-7/32	2-7/8	5-25/32	2-9/16	2-9/16	2-9/16	.90
4101-251	2x2x1-1/2	31/32	1-1/4	31/32	2-11/16	2-9/16	2-11/16	5-3/8	2-17/32	1-31/32	2-17/32	.52
4101-257 ¹	2x1-1/2x2	1-3/16	1-5/32	1-27/32	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.80

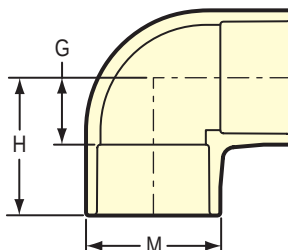
¹ Outlet sized with bushing

CPVC CTS FITTINGS & VALVES



90° ELBOW

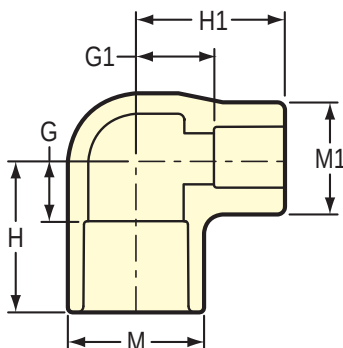
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4106-005	1/2	13/32	15/16	27/32	.02
4106-007	3/4	17/32	1-1/4	1-1/8	.05
4106-010	1	21/32	1-9/16	1-3/8	.08
4106-012	1-1/4	3/4	1-7/8	1-11/16	.13
4106-015	1-1/2	29/32	2-7/32	2	.22
4106-020	2	1-5/32	2-7/8	2-19/32	.49

REDUCING 90° ELBOW

Socket x Socket



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4106-101	3/4x1/2	3/8	1/2	1-3/32	1-1/32	1-3/32	27/32	.04
4106-131 ¹	1x3/4	21/32	1	1-9/16	1-3/8	1-3/8	1-3/8	.10
4106-167 ¹	1-1/4x3/4	13/16	1-1/2	1-29/32	2-7/32	1-21/32	1-21/32	.20
4106-168 ¹	1-1/4x1	13/16	1-5/16	1-29/32	2-7/32	1-21/32	1-21/32	.18
4106-209 ¹	1-1/2x1/2	15/16	2-1/32	2-1/4	2-17/32	1-31/32	1-31/32	.32
4106-210 ¹	1-1/2x3/4	15/16	1-27/32	2-1/4	2-9/16	1-31/32	1-31/32	.32
4106-211 ¹	1-1/2x1	15/16	1-21/32	2-1/4	2-19/32	1-31/32	1-31/32	.31
4106-212 ¹	1-1/2x1-1/4	15/16	1-13/32	2-1/4	2-17/32	1-31/32	1-31/32	.28
4106-247 ¹	2x1/2	1-3/16	2-11/16	2-29/32	3-3/16	2-9/16	2-9/16	.67
4106-248 ¹	2x3/4	1-3/16	2-7/16	2-29/32	3-5/32	2-9/16	2-9/16	.68
4106-249 ¹	2x1	1-3/16	2-9/32	2-29/32	3-3/16	2-9/16	2-9/16	.68
4106-250 ¹	2x1-1/4	1-3/16	2-1/16	2-29/32	3-5/32	2-9/16	2-9/16	.67
4106-251 ¹	2x1-1/2	1-3/16	1-29/32	2-29/32	3-7/32	2-9/16	2-9/16	.65

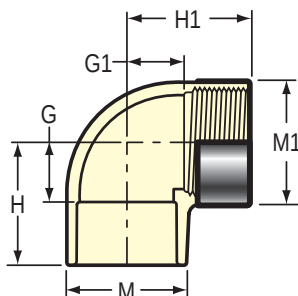
¹ Outlet sized with bushing



CPVC CTS FITTINGS & VALVES

SPECIAL REINFORCED 90° ELBOW – LEAD FREE

Socket x SR Fipt

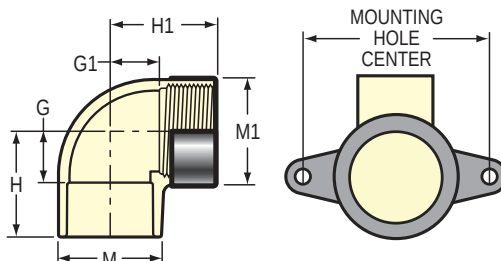


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4107-005SR	1/2	13/32	13/32	15/16	1-5/32	27/32	1-7/32	.06

ZINC DROP EAR SPECIAL REINFORCED 90° ELBOW – LEAD FREE

(One Piece Unit)

Socket x SR Fipt – Zinc Collar

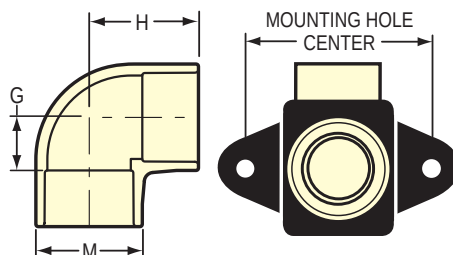


Part Number	Size	G	G1	H	H1	M	M1	Mounting Hole Center	Approx. Wt. (Lbs.)
DEZ4107-005SR	1/2	1/4	3/8	25/32	1-5/32	27/32	1-7/32	2-1/16	.15

DROP EAR 90° ELBOW

(Fitting With Bracket)

Socket x Socket



Part Number	Size	G	H	M	Mounting Hole Center	Approx Wt. (Lbs.)
DE4106-005	1/2	1/4	25/32	27/32	1-3/4	.03

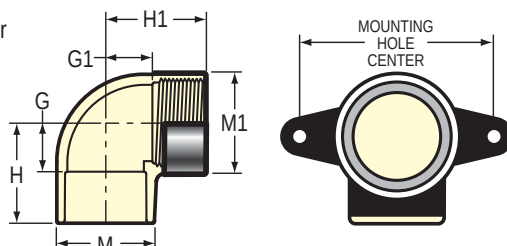
CPVC CTS FITTINGS & VALVES



DROP EAR SPECIAL REINFORCED 90° ELBOW – LEAD FREE

(Fitting With Bracket)

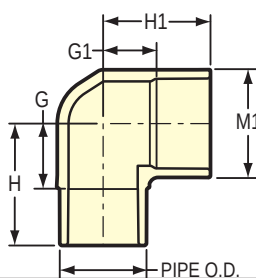
Socket x SR Fipt – Stainless Steel Collar



Part Number	Size	G	G1	H	H1	M	M1	Mounting Hole Center	Approx Wt. (Lbs.)
DE4107-005SR	1/2	13/32	15/32	15/16	1-5/32	27/32	1-7/32	2-1/32	.07

90° STREET ELBOW

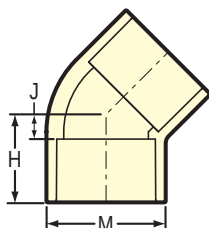
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Pipe O.D.	Approx. Wt. (Lbs.)
4109-005	1/2	17/32	3/8	1-1/16	7/8	7/8	5/8	.02
4109-007	3/4	19/32	17/32	1-5/16	1-1/4	1-1/32	7/8	.05
4109-010	1	25/32	21/32	1-13/16	1-9/16	1-11/32	1-1/8	.09

45° ELBOW

Socket x Socket



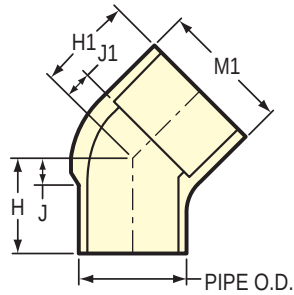
Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4117-005	1/2	23/32	7/32	27/32	.02
4117-007	3/4	31/32	7/32	1-1/8	.04
4117-010	1	1-7/32	9/32	1-3/8	.06
4117-012	1-1/4	1-15/32	11/32	1-11/16	.11
4117-015	1-1/2	1-3/4	7/16	1-31/32	.18
4117-020	2	2-1/4	17/32	2-9/16	.37



CPVC CTS FITTINGS & VALVES

45° STREET ELBOW

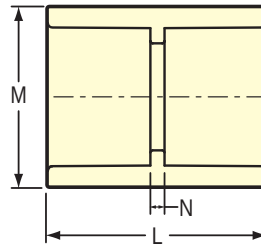
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Pipe O.D.	Approx. Wt. (Lbs.)
4127-005	1/2	3/4	23/32	7/32	7/32	27/32	5/8	.02
4127-007	3/4	1	1	9/32	9/32	1-3/32	7/8	.04
4127-010	1	1-5/16	1-11/32	3/8	7/16	1-3/8	1-1/8	.06

COUPLING

Socket x Socket



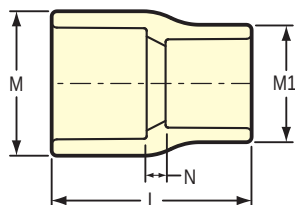
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4129-005	1/2	1-5/32	27/32	1/8	.02
4129-007	3/4	1-9/16	1-1/16	1/8	.03
4129-010	1	1-15/16	1-3/8	1/8	.04
4129-012	1-1/4	2-3/8	1-21/32	3/32	.08
4129-015	1-1/2	2-3/4	1-31/32	1/8	.13
4129-020	2	3-9/16	2-9/16	1/8	.29

CPVC CTS FITTINGS & VALVES



REDUCER COUPLING

Socket x Socket

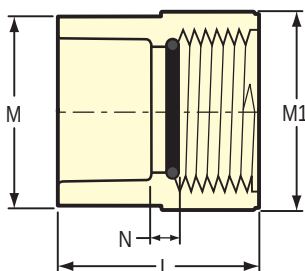


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4129-101	3/4x1/2	1-11/32	1-3/32	27/32	1/8	.02
4129-130 ¹	1x1/2	2-7/32	1-11/32	1-11/32	25/32	.09
4129-131	1x3/4	1-3/4	1-11/32	1-3/32	1/8	.04
4129-166 ¹	1-1/4x1/2	2-5/8	1-21/32	1-21/32	1	.14
4129-167 ¹	1-1/4x3/4	2-5/8	1-21/32	1-21/32	13/16	.15
4129-168 ¹	1-1/4x1	2-5/8	1-21/32	1-21/32	5/8	.13
4129-209 ¹	1-1/2x1/2	3-1/16	1-31/32	1-31/32	1-7/32	.24
4129-210 ¹	1-1/2x3/4	3-1/16	1-31/32	1-31/32	1-1/32	.23
4129-211 ¹	1-1/2x1	3-1/16	1-31/32	1-31/32	27/32	.23
4129-212 ¹	1-1/2x1-1/4	3-1/16	1-31/32	1-31/32	21/32	.19
4129-247 ¹	2x1/2	3-27/32	2-9/16	2-9/16	1-19/32	.49
4129-248 ¹	2x3/4	3-27/32	2-9/16	2-9/16	1-13/32	.50
4129-249 ¹	2x1	3-27/32	2-9/16	2-9/16	1-7/32	.50
4129-250 ¹	2x1-1/4	3-27/32	2-9/16	2-9/16	1-1/32	.49
4129-251 ¹	2x1-1/2	3-27/32	2-9/16	2-9/16	13/16	.47

¹ Outlet sized with bushing

FEMALE ADAPTER with GASKET

Socket x NPSC



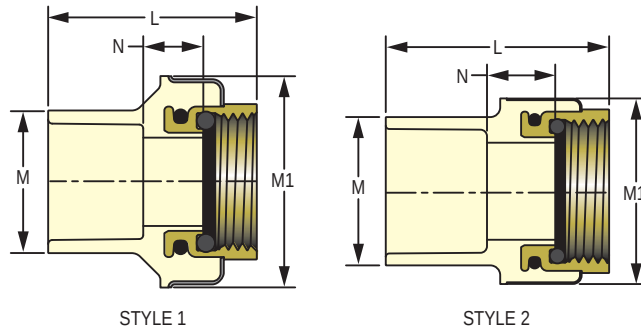
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-005OR	1/2	1-11/32	27/32	1-3/16	7/32	.04
4135-007OR	3/4	1-9/16	1-3/32	1-3/8	7/32	.05
4135-010OR	1	1-29/32	1-11/32	1-11/16	3/8	.09



CPVC CTS FITTINGS & VALVES

GASKET SEALED BRASS FEMALE ADAPTER – LEAD FREE

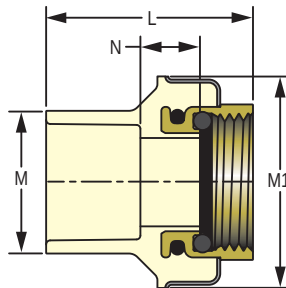
Socket x Gasket FIPT – Use NO Thread Sealant



Part Number	Size	L	M	M1	N	Style	Approx. Wt. (Lbs.)
4135-005BRG	1/2	1-1/2	27/32	1-7/16	9/16	1	.12
4135-007BRG	3/4	1-9/16	1-3/32	1-5/8	15/32	1	.13
4135-010BRG	1	2-1/32	1-11/32	1-23/32	5/8	2	.21
4135-012BRG	1-1/4	2-7/32	1-21/32	2-1/16	19/32	2	.30
4135-015BRG	1-1/2	2-7/16	1-15/16	2-7/16	5/8	2	.41
4135-020BRG	2	2-27/32	2-17/32	3	19/32	2	.54

GASKET SEALED BRASS FEMALE ADAPTER – LEAD FREE

Socket x Gasket FIPT – Use NO Thread Sealant



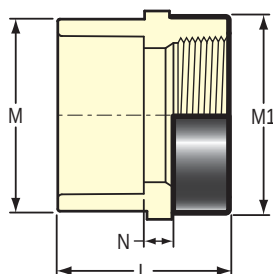
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-101BRG	3/4 x 1/2	1-9/16	1-3/32	1-7/16	7/16	.12
4135-130BRG	1 x 1/2	1-3/4	1-11/32	1-7/16	13/32	.13

CPVC CTS FITTINGS & VALVES



SPECIAL REINFORCED FEMALE ADAPTER – LEAD FREE

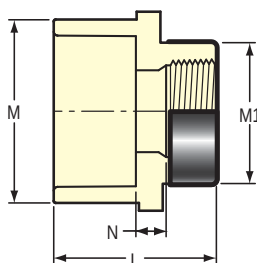
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-005SR	1/2	1-3/8	27/32	1-7/32	3/32	.05
4135-007SR	3/4	1-19/32	1-3/32	1-3/8	1/8	.06
4135-010SR	1	1-15/16	1-3/8	1-23/32	1/8	.10

SPECIAL REINFORCED REDUCING FEMALE ADAPTER – LEAD FREE

Socket x SR Fipt

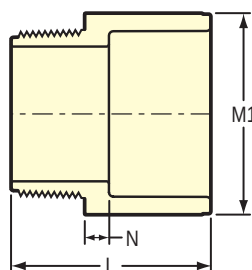


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-131SR	1x3/4	1-27/32	1-13/32	1-3/8	3/16	.08

MALE ADAPTER

Mipt x Socket

For Cold Water Service Only



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005	1/2	1-9/32	27/32	3/16	.02
4136-007	3/4	1-17/32	1-3/32	1/8	.04
4136-010	1	1-7/8	1-11/32	7/32	.05
4136-012	1-1/4	2-9/32	1-21/32	5/16	.09
4136-015	1-1/2	2-15/32	1-31/32	5/16	.13
4136-020	2	2-31/32	2-17/32	3/8	.25

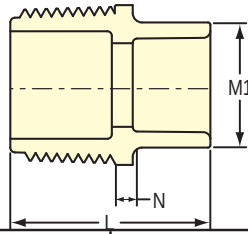


CPVC CTS FITTINGS & VALVES

REDUCING MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

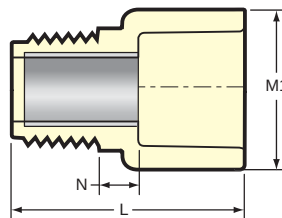


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-074	1/2x3/4	1-17/32	1-3/32	5/32	.03
4136-101	3/4x1/2	1-11/32	27/32	1/8	.02

REINFORCED MALE ADAPTER – LEAD FREE

(Internal Stainless Steel Reinforced)

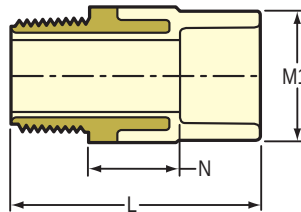
R Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005R	1/2	1-23/32	27/32	17/32	.04
4136-007R	3/4	1-15/16	1-3/32	9/16	.06
4136-010R	1	2-3/8	1-11/32	11/16	.11

TRANSITION MALE ADAPTER – LEAD FREE

Brass Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005BR	1/2	2	27/32	25/32	.14
4136-007BR	3/4	2-1/4	1-3/16	27/32	.21
4136-010BR	1	2-11/16	1-3/8	29/32	.38
4136-012BR	1-1/4	2-31/32	1-21/32	31/32	.61
4136-015BR	1-1/2	3-3/16	1-15/16	1-1/32	.74
4136-020BR	2	3-21/32	2-17/32	31/32	.97

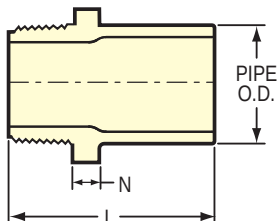
CPVC CTS FITTINGS & VALVES



MALE ADAPTER

Mipt x Spigot

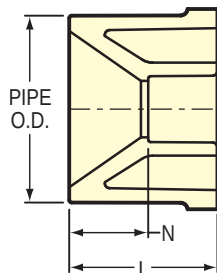
For Cold Water Service Only



Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4161-005	1/2	1-5/16	3/16	5/8	.02

REDUCER BUSHING

Spigot x Socket



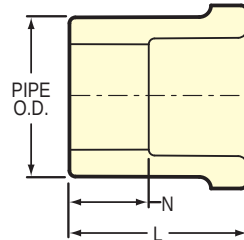
Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4137-101	3/4x1/2	27/32	1/8	7/8	.02
4137-130	1x1/2	1-1/8	5/8	1-1/8	.05
4137-131	1x3/4	1-1/16	7/16	1-1/8	.02
4137-166	1-1/4x1/2	1-13/32	7/8	1-3/8	.06
4137-167	1-1/4x3/4	1-3/8	21/32	1-3/8	.06
4137-168	1-1/4x1	1-5/16	3/8	1-3/8	.04
4137-209	1-1/2x1/2	1-21/32	1-1/8	1-5/8	.10
4137-210	1-1/2x3/4	1-5/8	29/32	1-5/8	.10
4137-211	1-1/2x1	1-19/32	21/32	1-5/8	.09
4137-212	1-1/2x1-1/4	1-19/32	7/16	1-5/8	.06
4137-247	2x1/2	2	1-15/32	2-1/8	.20
4137-248	2x3/4	2	1-9/32	2-1/8	.21
4137-249	2x1	2	1-3/32	2-1/8	.21
4137-250	2x1-1/4	1-31/32	7/8	2-1/8	.21
4137-251	2x1-1/2	2-1/32	23/32	2-1/8	.19



CPVC CTS FITTINGS & VALVES

TRANSITION BUSHING

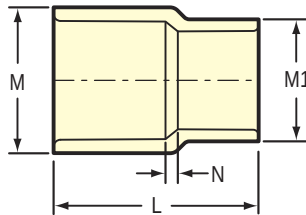
IPS Spigot x CTS Socket



Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4140-005	1/2	15/16	13/32	27/32	.02
4140-007	3/4	1-1/8	1/2	1-1/16	.02
4140-010	1	1-3/8	15/32	1-5/16	.04
4140-012	1-1/4	1-17/32	3/8	1-21/32	.07
4140-015	1-1/2	1-21/32	5/16	1-29/32	.08
4140-020	2	1-27/32	1/8	2-3/8	.10

TRANSITION COUPLING

IPS Socket x CTS Socket



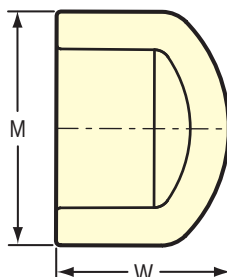
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4141-007	3/4	1-27/32	1-5/16	1-3/32	1/8	.04
4141-010	1	2-5/32	1-19/32	1-3/8	1/8	.07

CPVC CTS FITTINGS & VALVES



CAP

Socket



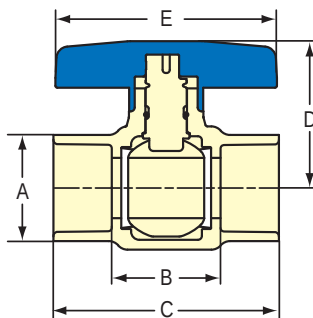
Part Number	Size	M	W	Approx. Wt. (Lbs.)
4147-005	1/2	27/32	25/32	.01
4147-007	3/4	1-1/16	1-3/32	.02
4147-010	1	1-3/8	1-9/32	.04
4147-012	1-1/4	1-21/32	1-19/32	.06
4147-015	1-1/2	1-31/32	1-29/32	.10
4147-020	2	2-9/16	2-13/32	.21

CTS BALL VALVES

w/EPDM O-ring Seals

Socket x Socket

100 psi Maximum
Internal Pressure @ 180°F



Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)	Cv Values
1922-005	1/2	1-7/32	1-1/16	2-3/32	1-11/32	2	.09	37
1922-007	3/4	1-9/16	1-11/32	2-25/32	1-3/4	2-23/32	.16	84
1922-010	1	1-7/8	1-9/16	3-3/8	2-3/8	3-1/2	.27	151
1922-012	1-1/4	2-13/32	1-15/16	4-3/16	2-25/32	3-3/4	.47	229
1922-015	1-1/2	2-27/32	2-3/8	5-1/32	3-5/32	4-9/32	1.05	330
1922-020	2	3-17/32	2-3/4	6-3/16	3-27/32	5	1.38	598

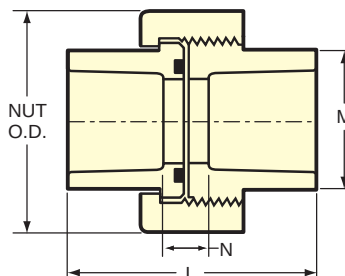


CPVC CTS FITTINGS & VALVES

CTS UNION

w/EPDM O-ring Seals
Socket x Socket

Pressure Rating
100 psi @ 180°F

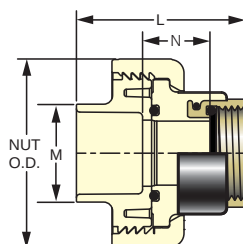


Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
4197-005	1/2	2-3/16	1-1/32	1-5/32	1-25/32	.13
4197-007	3/4	1-3/4	1-3/32	5/16	1-23/32	.08
4197-010	1	2-13/32	1-17/32	9/16	2-1/2	.27

GASKET SEALED BRASS ADAPTER UNION – LEAD FREE

w/EPDM O-ring Seals
Socket x Gasket FIPT With Elastomer Seal

Pressure Rating
100 psi @ 180°F

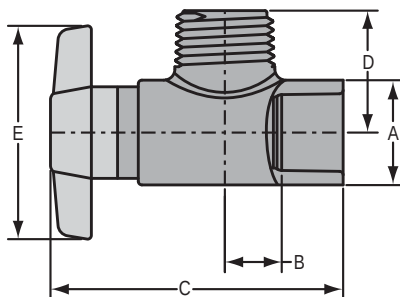


Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4199-005BRG	1/2	1-5/8	2-1/8	3/4	2-1/8	---
4199-007BRG	3/4	1-7/8	2-5/16	3/4	2-5/16	---
4199-010BRG	1	2-3/8	2-5/8	15/16	2-5/8	---

1/4 - TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
Socket x NPT

Pressure Rating
100 psi @ 180°F



Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7722-005	1/2	27/32	7/16	2-13/32	1	1-3/4	.06

CPVC CTS FITTINGS & VALVES

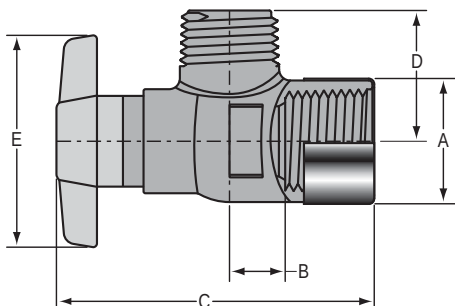


1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals

SR Fipt x NPT

Pressure Rating
100 psi @ 180°F



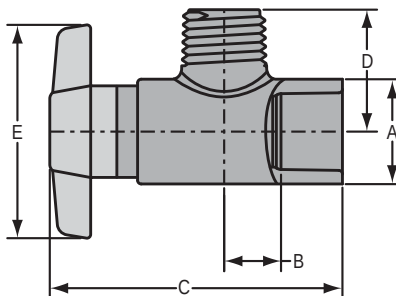
Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7721-005SR	1/2	1	15/32	2-21/32	1	1-3/4	.10

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals

Socket x 3/8" O.D. Comp. For Flex Tube Only

Pressure Rating
100 psi @ 180°F



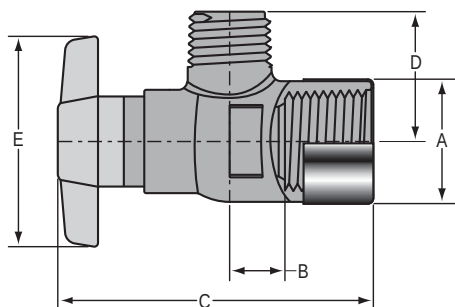
Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7722-073	1/2 x 3/8	7/8	7/16	2-3/8	7/8	1-3/4	.05

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals

SR Fipt x 3/8" O.D. Comp. For Flex Tube Only

Pressure Rating
100 psi @ 180°F



Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7721-073SR	1/2 x 3/8	1-1/32	15/32	2-5/8	31/32	1-3/4	.09



LOW-EXTRACTABLE PIPING

For Ultra-pure Water Systems



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



Visit our web site
www.spearsmfg.com



Low-extractable piping for ultra-pure water systems

Spears® low-extractable piping systems provide a cost-effective alternative to other piping materials typically used for ultra-pure water applications in the semiconductor, electronics, biotechnology and other industries. Lower material costs combined with fast, reliable installation greatly reduce installation costs – resulting in significant savings without jeopardizing water quality.

In addition to significant cost savings, these piping systems offer several other advantages for ultra-pure water applications. These include: non-contaminating material with extremely low-extractable contaminants (particularly Total Oxidizable Carbon and trace metals), ultra-smooth interior walls, strong Schedule 80 dimensions, specialty one-step solvent-cement joining system that cures fast, and unique translucency for visual inspection of joint integrity.

Spears® low-extractable Piping Systems offer unique advantages for many ultra-pure water applications

- Complete line of pipe, fittings and valves
IPS Sizes 1/2" – 6" diameters
- Strong Schedule 80 dimensions for pressure service
- Advanced low-extractable material significantly reduces leachable contamination compared to conventional PVC and other piping materials.
- Exceptionally smooth interior walls reduce particle contaminants
- Fast, reliable installation with simple, inexpensive joining methods
- Proprietary one-step fast setting joining method reduces TOC contamination and rinses up quickly
- Good chemical/corrosion resistance, high-impact strength, low thermal conductivity
- Bagged, sealed and boxed on-line for use in high-purity environments
- High Quality
- Low Maintenance
- Cost Effective



Low-Extractable Piping

Materials

Spears® low-extractable piping is produced from an innovative PVC compound that has been specifically formulated to reduce leachable contamination when exposed to ultra-pure water environments. Minor ingredients necessary for processing have been scrupulously selected to address their potential for contamination, and are then carefully blended in precise ratios. This results in a much cleaner material than conventional PVC compounds, and compares favorably to alternate materials typically used for UPW piping applications. This has been validated with extensive static and dynamic leach studies during exposure to 18.2 megohm ultra-pure water conducted by a reputable third party. Refer to testing data on the following pages for comparative evaluation of leachable contaminants obtained from common UPW piping materials.

Spears® low-extractable material meets the toxicological requirements of NSF International Standard 61 as being safe for use in potable water applications, and also complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations as being safe for use in food contact applications.

Processing

Processing conditions for converting this material into pipe form are as critical as the selection of the material itself to ensure that the physical properties of the finished product are optimized. Correct processing techniques ensure proper dispersion and fusion of the compound, resulting in a homogenous melt with uniform properties. Great care is also taken during this process using proprietary techniques to address surface finish characteristics. Optimizing processing conditions and providing smooth internal surfaces greatly reduce the potential for extractable and particle contaminant.

Spears® low-extractable pipe is cut square, purged to remove shavings, sealed in polybags and boxed on-line at time of manufacture to minimize contamination. Contact Spears® for availability of additional cleaning options.

Joining

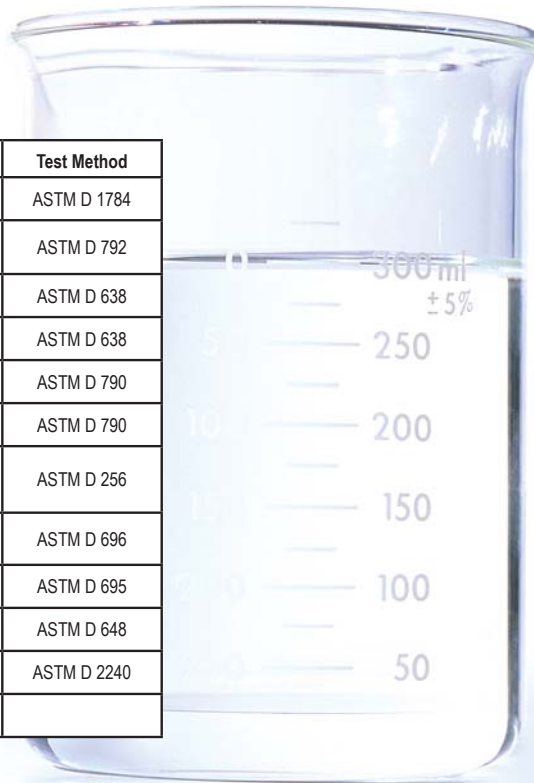
The Spears® low-extractable system utilizes a one-step solvent-cementing system specifically formulated for use with this product. Unlike conventional PVC solvent cements, this system contains fewer contaminants and cures quickly, reducing the potential for TOC contamination. Joining is accomplished quickly and efficiently utilizing inexpensive tools, thereby greatly reducing labor and installation costs.

Physical Properties

Although the extractable contaminants of this Spears® piping are much lower than those of conventional PVC piping, the physical properties are very similar. As a result, these products exhibit the well-known physical characteristics and other benefits of conventional PVC piping, such as good chemical and corrosion resistance, low thermal conductivity, high strength-to-weight ratio, good impact resistance, and ease of installation.

Physical Properties

Property	Value	Test Method
Cell Classification	12343	ASTM D 1784
Specific Gravity	1.327 g/cu. Cm @ 73°F	ASTM D 792
Tensile Strength @ yield	6720 psi	ASTM D 638
Tensile Modulus of Elasticity	384,200 psi	ASTM D 638
Flexural Strength @ yield	11,440 psi	ASTM D 790
Flexural Modulus of Elasticity	378,000 psi	ASTM D 790
Izod Impact (avg of 2 complete breaks) (avg of 3 partial & 2 complete breaks)	1.3 ft-lbs / inch 10.9 ft-lbs / inch	ASTM D 256
Coefficient of Linear Thermal Expansion	3.89×10^{-5} in / in °F	ASTM D 696
Compressive Strength	8732	ASTM D 695
Heat Distortion Temperature	152°F	ASTM D 648
Hardness, Shore D	82.2 ± 3	ASTM D 2240
Maximum Temp Use	140°F	



Low-Extractable Piping



Testing

Spears® low-extractable piping has been subjected to extensive low-level defection testing during exposure to UPW by a reputable independent laboratory. Tests under both static and on-line dynamic (flowing) conditions analyze leachable micro contamination (TOC, anions, cations and trace metals) as well as resistivity and particles.

Static Leach Analysis

Detailed extractable analysis is conducted on piping samples after seven-day static leach utilizing 18.2 megohm ultra-pure water at ambient temperature. Static leach of large pipe samples (120-square-inch wet surface area) is representative of a piping system "off-line" for an extended period of time. Under these conditions the effects of UPW can be extremely aggressive, severely affecting the amount of leachable contaminants present within the piping material.

Element	Pipe Material						
	DL (Detection Limit) ppb	Spears®	High Purity PVDF	High Purity PP	Brand X Clean PVC	Conv. PVC	CPVC
TOC	5	59	90	94	1176	*	50
Fluoride	2	*	77	*	*	*	*
Chloride	0.25	2.33	1.0	0.66	2.45	0.84	49.54
Aluminum	0.05	0.30	2.3	0.68	0.54	3.10	1.16
Barium	0.01	0.04	0.24	0.09	0.01	0.22	0.05
Calcium	3	7	*	12	206	2787	15
Magnesium	0.02	0.81	0.66	1.0	2.15	11.15	2.17
Sodium	0.06	0.83	0.51	0.18	0.49	1.23	23.22
Tin	0.02	0.93	*	*	0.15	0.51	1.19
Zinc	0.06	0.49	0.47	0.96	*	0.51	1.19

* = Below Detection Limit

- All samples pre-rinsed identically with UPW prior to test.
- Independent Laboratory Extractable Analysis (Balazs Analytical Laboratory)
- Seven-Day Static Leach @ ambient temperature
- 450ml 18.2 megohm ultra-pure water
- 120-square-inch wet surface contact area
- Based on 1" diameter pipe without solvent-cemented joint
- Concentration units expressed as ug/L of Leachate (ppb)

Dynamic Leach Analysis

Spears® low-extractable piping was subjected to on-line dynamic flow analysis with 18.2 megohm UPW to evaluate particles, TOC, resistivity, anions, cations, and trace metals. This testing utilized solvent-cemented flange assemblies (spool piece) to see the effect that the cement had on TOC, resistivity and particle generation in a freshly assembled pipe section. Grab samples were also pulled periodically (at start-up, five minutes, 50 minutes and five hours) to analyze anions, cations and trace metals under flowing conditions. Flanges were assembled utilizing specially formulated one-step cement and allowed to cure 24 hours prior to testing. Dynamic testing revealed that piping assemblies did not contribute significantly to particle generation or leachable contamination under flowing conditions throughout the test duration.

Dynamic Test Description

Ambient temperature dynamic leach utilizing 18.2 megohm UPW flowing at 9.35 GPM (turbulent flow). 1" diameter pipe 30" long, solvent-cemented flanges each end (approximately 82-square-inch wet surface contact area). Approximately 1-1/2 grams of specially formulated one-step cement used in assembly of components. Solvent-cemented assembly was allowed to cure 24 hours prior to start-up. Dynamic test was conducted for a period of five hours.

Leachable Contamination

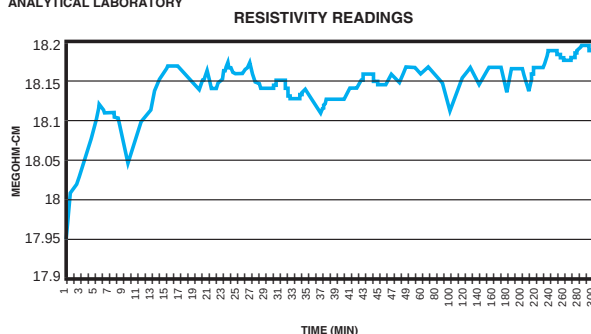
Anions/Cations – IC grab sample analysis revealed low levels of sulfate (0.15 ppb) five minutes into the test, and low levels of ammonium at 50 minutes (0.05 ppb) and five hours (0.07ppb) into the test. All other IC contaminants were below the limit of detection.

Trace Metals – Of the 68 trace metal contaminants evaluated, all were below the limit of detection with the exception of aluminum, detected at 0.012 ppb at the five-minute interval. This element remained below the limit of detection throughout the remainder of the leach.

Resistivity

Resistivity measured 17.95 megohms at the start of the leach and rose quickly to 18.12 megohms during the first 6 minutes. Resistivity readings continued to rise until reaching the background level of 18.2 megohms after five hours of leaching.

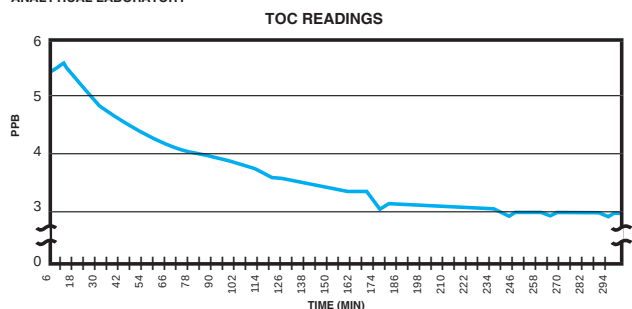
Balazs
ANALYTICAL LABORATORY



Total Oxidizable Carbon (TOC)

Dynamic testing revealed that after four hours of leaching, TOC readings reached and maintained the background levels throughout the test duration. This data confirmed the fast cure time of specially formulated one-step cement. Conventional solvent cements and primers used for joining typically effect TOC contamination as a result of the leach.

Balazs
ANALYTICAL LABORATORY





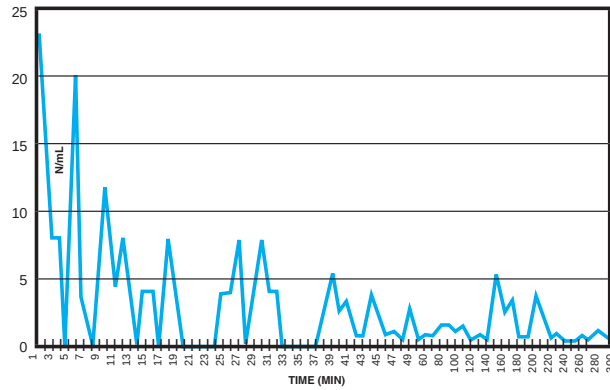
Low-Extractable Piping

Particles

Dynamic testing revealed that average particle counts decreased rapidly during the first six minutes of the leach. After 12 minutes of leaching the average smallest particles measured (0.05 size range) were representative of the background levels.

Balazs
ANALYTICAL LABORATORY

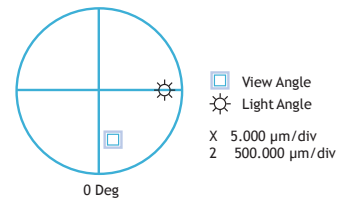
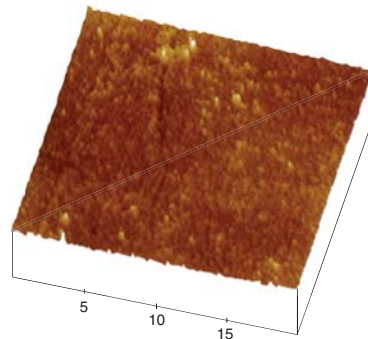
0.05u PARTICLE READING



Surface Analysis

Digital Instruments Nanoscope

Scan Size 20.00µm
Scan Rate 1.001HZ
Number of Samples 512
Image Data Height
Data Scale 500.0µm

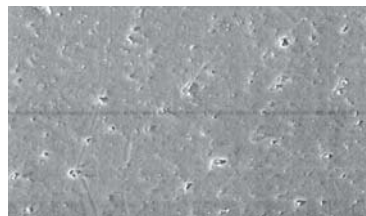


Spears® low-extractable piping has a non-porous, exceptionally smooth interior surface that greatly reduces the potential for extractable and particle contamination while impeding bacterial growth. The components (pipe and fittings) exhibit an average Roughness Analysis value of: $Ra \leq 0.25 \mu\text{m}$ ($\leq 10 \mu\text{inch}$)

Internal Roughness Comparison

Spears® low-extractable piping has been evaluated side-by-side with other common piping materials at various magnifications for surface roughness comparison.

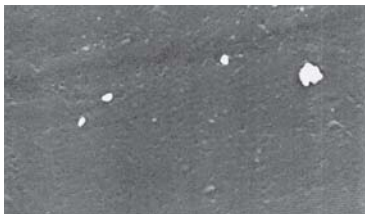
Conventional PVC 300x



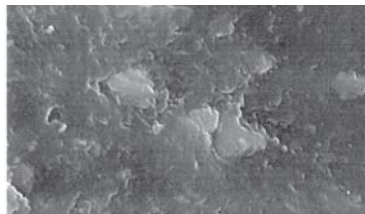
Spears® Low-extractable 300x



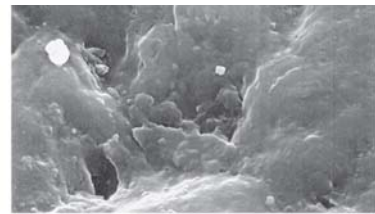
Spears® Low-extractable 5000x



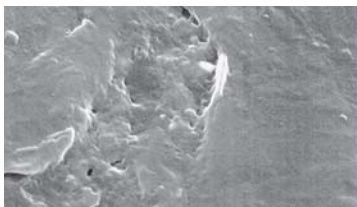
Conventional PVC 5000x



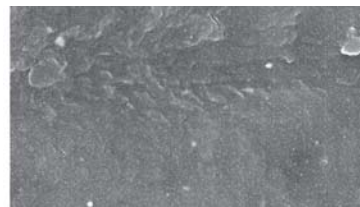
CPVC 5000x



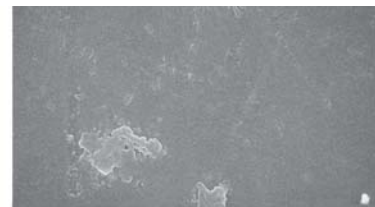
Polypropylene 5000x



Brand X Clean PVC 5000x



PVDF 5000x



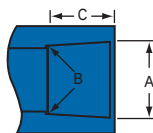
System Components

Spears® fitting and valve components are manufactured from the same low-extractable material. This provides entire system consistency and compatibility, while ensuring that extractable contamination is kept to a minimum. Leading-edge stress analysis technology is applied in the design of fitting and valve components to optimize strength and performance in critical applications.

Fittings

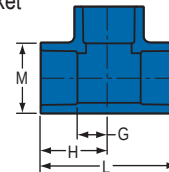
High-quality Spears® low-extractable components are designed to yield optimum performance for each fitting. Material reinforcement is uniformly placed in stress-concentration areas for substantially improved pressure-handling capability. Specialty transition fittings incorporate a stainless steel retaining ring that provides a strong, leak-tight seal for plastic-to-metal transitions while reducing problems associated with overtightening. The reinforced design reduces radial stress encountered with typical threaded connections, thereby eliminating the need for system pressure de-rating traditionally associated with non-reinforced plastic threaded joints.

STANDARD SCHEDULE 80 SOCKET DIMENSIONS ASTM D 2467



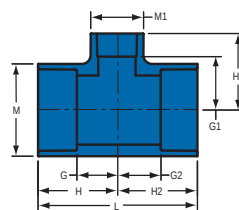
Size (in.)	Entrance A	Bottom B	Minimum Socket Length C	Tolerance (In.)
1/2	.848	.836	.875	± .004
3/4	1.058	1.046	1.000	± .004
1	1.325	1.310	1.125	± .005
1-1/4	1.670	1.655	1.250	± .005
1-1/2	1.912	1.894	1.375	± .006
2	2.387	2.369	1.500	± .006
3	3.516	3.492	1.875	± .008
4	4.518	4.491	2.250	± .009
6	6.647	6.614	3.000	± .011

Tee Socket x Socket x Socket



Part #	Size (in.)	G	H	L	M	Weight (lbs.)
801-005BL	1/2	9/16	1-1/2	2-15/16	1-3/16	.11
801-007BL	3/4	11/16	1-11/16	3-3/8	1-13/32	.17
801-010BL	1	27/32	2	4	1-11/16	.28
801-012BL	1-1/4	7/8	2-1/8	4-1/4	2-3/32	.39
801-015BL	1-1/2	1-5/32	2-9/16	5-1/8	2-5/16	.55
801-020BL	2	1-7/16	2-15/16	5-7/8	2-7/8	.90
801-030BL	3	2-1/16	3-31/32	7-15/16	4-7/32	2.38
801-040BL	4	2-5/8	4-7/8	9-3/4	5-1/4	3.43
801-060BL	6	3-13/16	6-13/16	13-5/8	7-5/8	10.79

Reducing Tee Socket x Socket x Socket



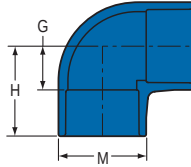
Part #	Size (in.)	G	G1	G2	H	H1	H2	L	M	M1	Weight (lbs.)
801-131BL	1x1x3/4	23/32	27/32	23/32	1-27/32	1-27/32	1-27/32	3-11/16	1-11/16	1-3/8	.23
801-211BL	1-1/2x1-1/2 1	7/8	1-3/16	7/8	2-1/4	2-5/16	2-1/4	4-1/2	2-3/8	1-11/16	.46
801-249BL	2x2x1	7/8	1-7/16	7/8	2-3/8	2-9/16	2-3/8	4-3/4	2-7/8	1-3/4	.58
801-251BL	2x2x1-1/2	1-3/16	1-7/16	1-3/16	2-11/16	2-13/16	2-11/16	5-3/8	2-7/8	2-3/8	.80
801-338BL	3x3x2	1-1/2	1-15/32	1-1/2	3-5/16	3-11/32	3-5/16	6-5/8	4-3/16	2-7/8	1.56
801-422BL	4x4x3	2-1/16	2-21/32	2-1/16	4-11/32	4-15/32	4-11/32	8-11/16	5-7/32	4-3/16	3.09
801-530BL	6x6x3	2-11/16	4-9/16	2-11/16	5-9/16	6-3/8	5-9/16	11-1/8	7-1/2	5-3/16	6.34
801-532BL	6x6x4	2-11/16	3-3/4	2-11/16	5-9/16	5-15/16	5-9/16	11-1/8	7-1/2	5-1/4	7.43



Low-Extractable Piping

90° Elbow

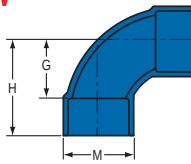
Socket x Socket



Part #	Size (in.)	G	H	M	Weight (lbs.)
806-005BL	1/2	9/16	1-15/32	1-3/16	.08
806-007BL	3/4	11/16	1-11/16	1-7/16	.12
806-010BL	1	13/16	1-31/32	1-23/32	.19
806-012BL	1-1/4	1-1/32	2-5/16	1-31/32	.33
806-015BL	1-1/2	1-3/32	2-15/32	2-11/32	.54
806-020BL	2	1-7/16	2-15/16	2-7/8	.61
806-030BL	3	2-1/16	3-31/32	4-5/32	1.57
806-040BL	4	2-19/32	4-27/32	5-1/4	2.80
806-060BL	6	3-23/32	6-3/4	7-19/32	8.59

Sweep Elbow

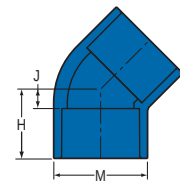
Socket x Socket



Part #	Size (in.)	G	H	M	Weight (lbs.)
806-005SBL	1/2	27/32	1-23/32	1-3/16	.07
806-007SBL	3/4	1-1/32	2-1/32	1-13/32	.11
806-010SBL	1	1-5/16	2-7/16	1-23/32	.19
806-012SBL	1-1/4	1-9/16	2-13/16	2-3/32	.28
806-015SBL	1-1/2	1-3/4	3-1/8	2-11/32	.37
806-020SBL	2	2-5/16	3-13/16	2-7/8	.61

45° Elbow

Socket x Socket



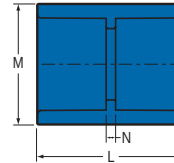
Part #	Size (in.)	H	J	M	Weight (lbs.)
817-005BL	1/2	1-1/8	1/4	1-3/16	.06
817-007BL	3/4	1-11/32	11/32	1-13/32	.09
817-010BL	1	1-7/16	11/32	1-23/32	.15
817-012BL	1-1/4	1-11/16	13/32	2-3/32	.21
817-015BL	1-1/2	1-27/32	7/16	2-3/8	.30
817-020BL	2	2-5/32	21/32	2-7/8	.48
817-030BL	3	2-27/32	31/32	4-1/8	1.13
817-040BL	4	3-3/8	1-3/32	5-1/4	2.24
817-060BL	6	4-7/8	1-7/8	7-9/16	5.37

All Spears® low-extractable fittings are produced in strict dimensional compliance with ASTM D 2467 to Schedule 80 dimensions. Spears® components produced to these dimensions ensure that strong, leak-tight connections with exceptional pressure-bearing capability can be assembled quickly using inexpensive joining tools. Refer to charts below for dimensional and weight data of available fittings.

NOTE: The information contained in this publication is based on current data and product design at time of publication and may be subject to change. Additional components and configurations may be added periodically due to our continued commitment to product-line improvements.

Coupling

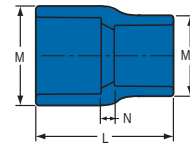
Socket x Socket



Part #	Size (in.)	L	M	N	Weight (lbs.)
829-005BL	1/2	1-7/8	1-3/16	1/8	.07
829-007BL	3/4	2-1/8	1-13/32	1/8	.10
829-010BL	1	2-3/8	1-23/32	1/8	.12
829-012BL	1-1/4	2-23/32	2-7/32	7/32	.22
829-015BL	1-1/2	2-7/8	2-11/32	3/32	.31
829-020BL	2	3-1/8	2-7/8	1/16	.31
829-030BL	3	4	4-3/16	3/16	.82
829-040BL	4	4-3/4	5-5/16	1/4	1.51
829-060BL	6	6-1/4	7-11/16	1/4	3.45

Reducer Coupling

Socket x Socket



Part #	Size (in.)	L	M	M1	N	Weight (lbs.)
829-101BL	3/4 x 1/2	1-13/32	1-13/32	1-3/16	7/32	.06
829-131BL	1 x 3/4	2-13/32	1-23/32	1-13/32	1/4	.10
829-168BL	1-1/4 x 1	2-23/32	2-3/32	1-23/32	3/8	.17
829-211BL	1-1/2 x 1	2-7/8	2-11/32	1-15/16	3/8	.23
829-212BL	1-1/2 x 1-1/4	2-13/16	2-3/8	2-3/32	5/32	.21
829-249BL	2 x 1	3-1/8	2-7/8	1-23/32	17/32	.28
829-251BL	2 x 1-1/2	3-7/32	2-27/32	2-11/32	7/32	.30
829-338BL	3 x 2	4	4-5/32	2-27/32	11/16	.68
829-420BL	4 x 2	4-5/8	5-9/32	2-7/8	13/16	1.20
829-422BL	4 x 3	4-5/8	5-1/4	4-1/8	1/2	1.25
829-532BL	6 x 4	6-5/8	7-5/8	5-5/16	1-7/16	3.20

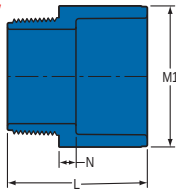
Low-Extractable Piping



Fittings

Male Adapter

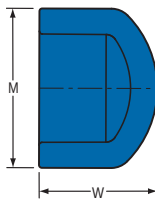
Mipt x Socket



Part #	Size (in.)	L	M	N	Weight (lbs.)
836-005BL	1/2	1-13/16	1-3/16	3/16	.04
836-007BL	3/4	1-29/32	1-13/32	1/4	.06
836-010BL	1	2-1/4	1-3/4	7/32	.10
836-012BL	1-1/4	2-1/2	2-1/8	9/32	.15
836-015BL	1-1/2	2-9/16	2-13/32	1/4	.19
836-020BL	2	2-23/32	2-29/32	9/32	.27
836-030BL	3	3-23/32	4-7/32	3/8	.75
836-040BL	4	4-3/8	5-3/16	1/2	1.13

Cap

Socket

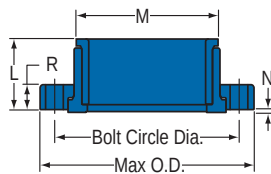


Part #	Size (in.)	M	W	Weight (lbs.)
847-005BL	1/2	1-3/16	1-7/32	.03
847-007BL	3/4	1-3/8	1-13/32	.05
847-010BL	1	1-11/16	1-19/32	.08
847-012BL	1-1/4	2-3/32	1-27/32	.16
847-015BL	1-1/2	2-11/32	2	.16
847-020BL	2	2-27/32	2-9/32	.35
847-030BL	3	4-5/32	3-1/32	.84
847-040BL	4	5-7/32	3-9/16	1.43
847-060BL	6	7-1/2	4-7/8	3.17

Flange Van Stone Style

(Two Piece)

Socket



Part #	Size (in.)	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Max O.D.	Weight (lbs.)
854-005BL	1/2	1-1/32	1-7/32	5/32	17/32	2-3/8	4	1/2	3-1/2	.19
854-007BL	3/4	1-1/8	1-7/16	5/32	9/16	2-3/4	4	1/2	3-7/8	.26
854-010BL	1	1-9/32	1-3/4	5/32	5/8	3-1/8	4	1/2	4-1/4	.36
854-012BL	1-1/4	1-13/32	2-5/32	5/32	11/16	3-1/2	4	1/2	4-5/8	.46
854-015BL	1-1/2	1-17/32	2-7/16	3/16	3/4	3-7/8	4	1/2	5	.56
854-020BL	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	6	.85
854-030BL	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	7-1/2	1.66
854-040BL	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	9	2.68
854-060BL	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	11	4.54

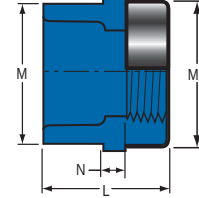
NOTE: Spears® low-extractable flanges maximum working pressure 150 psi non-shock @ 73° F

Special

Reinforced

Female Adapter

Socket x SR Fipt



Part #	Size (in.)	L	M	M1	N	Weight (lbs.)
835-005SRBL	1/2	1-3/4	1-5/32	1-3/16	3/16	.07
835-007SRBL	3/4	1-7/8	1-13/32	1-3/8	1/8	.08
835-010SRBL	1	2-5/32	1-23/32	1-23/32	3/32	.12
835-012SRBL	1-1/4	2-5/16	2-1/8	2-1/16	3/16	.19
835-015SRBL	1-1/2	2-7/16	2-13/32	2-7/16	7/32	.26
835-020SRBL	2	2-11/16	3	3-3/32	9/32	.43
835-030SRBL	3	3-1/2	4-1/4	4-9/32	7/32	.89
835-040SRBL	4	3-31/32	5-7/32	5-7/32	1/4	1.29

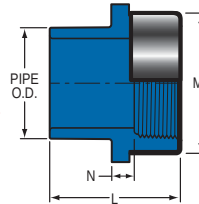
Special

Reinforced

Reducing

Female Adapter

Spigot x SR Fipt



Part #	Size (in.)	L	M1	N	Weight (lbs.)
878-072SRBL	1/2 x 1/4	1-13/32	27/32	3/16	.03
878-098SRBL	3/4 x 1/4	1-27/32	27/32	9/32	.05
878-128SRBL	1 x 1/4	2-3/8	27/32	21/32	.08

Threaded Connections

Use only quality grade PTFE tape as a thread sealant for Spears® low-extractable applications. **Warning:** some pipe joint compounds or PTFE pastes may contain substances that could cause stress cracking to plastics and increase the potential for system contamination. 1 to 2 full turns beyond finger tight is generally all that is required to make a sound plastic threaded connection. Unnecessary over-tightening will cause damage to both pipe and fitting.

Flanges

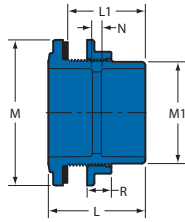
Spears® low-extractable Van Stone-style flanges are also available for transition to alternate materials or where disassembly may be required. This unique two-piece design incorporates a rotating flange ring that greatly simplifies bolt hole alignment during installation.



Low-Extractable Piping

Tank Adapter

Socket x Socket



Part #	Size (in.)	Hole Size (in.)	L	L1	M	M1	N	R	Weight (lbs.)
8170E-005BL	1/2	1.31	2-15/16	2-3/16	2	1-3/16	1-1/8	5/8	.20
8170E-007BL	3/4	1.69	2-15/16	2-3/16	2-1/4	1-5/8	15/16	5/8	.24
8170E-010BL	1	1.94	3-5/16	2-9/16	2-5/8	2	1-1/16	5/8	.35
8170E-012BL	1-1/4	2.39	3-7/16	2-5/8	3-1/8	2-5/16	15/16	5/8	.42
8170E-015BL	1-1/2	2.39	3-5/8	2-13/16	3-5/8	2-11/16	13/16	5/8	.93
8170E-020BL	2	3.51	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	1.30
8170E-030BL	3	4.49	5-1/2	4-1/2	6	4-9/16	1-11/16	1	2.50
8170E-040BL	4	5.50	5	4	7-1/2	5-1/2	7/16	1-1/4	3.40

EPDM Gasket – 150 psi maximum working pressure @73°F. For FKM Gasket, replace the E with V.

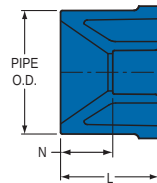
Gauge Guards

Spears® low-extractable gauge guards isolate process pressure or vacuum gauges from corrosive or potentially damaging process media by use of a thin PTFE diaphragm (optional FKM or EPDM available). This flexible membrane accurately transmits system pressure to the gauge connection chamber when properly assembled with gauge and liquid filled. A variety of optional gauges are available, factory assembled to the gauge guard and pre-filled. All gauge guards have 1/4" NPT gauge outlet connections. Inlet connections are either 1/4" or 1/2" NPT, featuring Spears® patented Special Reinforced (SR) female plastic thread.

Reducer Bushing

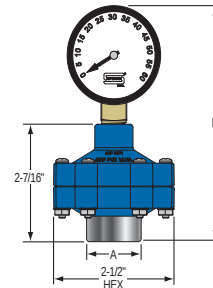
Flush Style

Spigot x Socket



Part #	Size (in.)	L	N	Weight (lbs.)
837-101BL	3/4 x 1/2	1-1/8	3/8	.02
837-130BL	1 x 1/2	1-5/8	13/32	.06
837-131BL	1 x 3/4	1-11/32	5/16	.04
837-166BL	1-1/4 x 1/2	1-1/2	5/8	.12
837-168BL	1-1/4 x 1	1-19/32	15/32	.08
837-210BL	1-1/2 x 3/4	1-3/4	11/16	.19
837-211BL	1-1/2 x 1	1-17/32	13/32	.14
837-212BL	1-1/2 x 1-1/4	1-9/16	5/16	.07
837-249BL	2 x 1	1-29/32	13/16	.26
837-251BL	2 x 1-1/2	1-3/4	11/32	.17
837-338BL	3 x 2	2-27/32	9/16	.62
837-422BL	4 x 3	2-21/32	25/32	.82
837-532BL	6 x 4	4	1-23/32	2.86

Gauge Guard PTFE Diaphragm



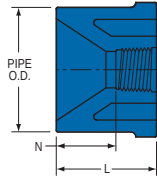
Gauge Configuration	1/4" Inlet	A	B	1/2" Inlet	A	B
No Gauge	G0004-002BL	7/8	—	G0004-005BL	1-3/16	—
0-30 in-Hg	G30V4-002BL	7/8	4-13/16	G30V4-005BL	1-3/16	4-7/8
0-15 psi	G0154-002BL	7/8	4-13/16	G0154-005BL	1-3/16	4-7/8
0-30 psi	G0304-002BL	7/8	4-13/16	G0304-005BL	1-3/16	4-7/8
0-60 psi	G0604-002BL	7/8	4-13/16	G0604-005BL	1-3/16	4-7/8
0-100 psi	G1004-002BL	7/8	4-13/16	G1004-005BL	1-3/16	4-7/8
0-160 psi	G1604-002BL	7/8	4-13/16	G1604-005BL	1-3/16	4-7/8
0-200 psi	G2004-002BL	7/8	4-13/16	G2004-005BL	1-3/16	4-7/8
0-300 psi	G3004-002BL	7/8	4-13/16	G3004-005BL	1-3/16	4-7/8

NOTE: Spears® low-extractable Gauge Guards carry a maximum pressure rating of 235 psi, non-shock, @73°F; vacuum gauges suitable for full vacuum service. All gauge guards have 1/4" NPT gauge outlet connections. Gauges are a standard 1/4" NPT brass bottom mount, epoxy enamel steel case, black marking on white face, black dial.

Reducer Bushing

Flush Style

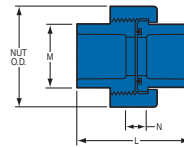
Spigot x Fipt



Part #	Size (in.)	L	N	Weight (lbs.)
838-072BL	1/2 x 1/4	1	7/8	.02
838-073BL	1/2 x 3/8	1-3/32	17/32	.02
838-098BL	3/4 x 1/4	1-7/32	5/8	.04
838-101BL	3/4 x 1/2	1-1/4	7/16	.03
838-129BL	1 x 3/8	1-13/32	19/32	.07
838-130BL	1 x 1/2	1-5/32	21/32	.06
838-131BL	1 x 3/4	1-3/8	21/32	.05
838-210BL	1-1/2 x 3/4	1-3/4	31/32	.15

Union (Old Style)

Socket x Socket



Part #	Size (in.)	L	M	N	Nut O.D.	Weight (lbs.)
897-005BL	1/2	2-3/32	1-9/32	11/32	1-31/32	.12
897-007BL	3/4	2-3/8	1-17/32	11/32	2-1/2	.17
897-010BL	1	2-9/16	1-27/32	3/8	2-7/8	.28
897-012BL	1-1/4	2-7/8	2-7/32	3/8	3-5/16	.36
897-015BL	1-1/2	3-3/32	2-9/16	15/32	3-9/16	.50
897-020BL	2	3-5/8	3-1/32	9/16	4-3/16	.86
8097-030BL	3	4-1/4	4-3/16	1/2	6-5/32	2.16
8097-040BL	4	5-1/8	5-1/4	5/8	7-3/4	3.43

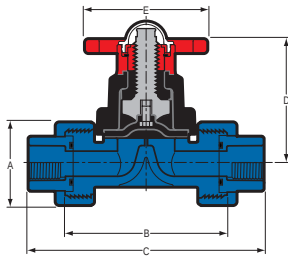
*For (Socket X Socket) Unions equipped with FKM O-Ring, replace the 897 with an 857 before the dash.

Valves

Spears® low-extractable valves are available in two styles: True Union Diaphragm configurations sizes 1/2" – 2" and True Union 2000 ball valve configurations sizes 1/2" – 4". Spears® low-extractable diaphragm valves (sizes 1/2" – 2") carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F. Spears® low-extractable ball valves sizes 1/2" – 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.

Diaphragm Valves

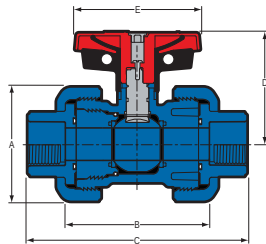
Spears® low-extractable diaphragm valves are engineered to provide accurate throttling control and shut-off, utilizing a positive-stop, non-rising stem. The Weir-type design incorporates a PTFE diaphragm for maintaining purity, and uses EPDM O-ring seals on the union connections. Low-profile True Union design minimizes space while allowing for ease of installation



True Union Diaphragm Valves

Part #	Size (in.)	A	B	C	D	E	Weight (lbs.)
2729T-005BL	1/2	1-15/16	3-7/8	5-3/16	3-11/32	2-7/8	.8
2729T-007BL	3/4	2-1/2	4-1/2	5-15/16	3-3/4	3-1/8	1.3
2729T-010BL	1	2-9/16	4-15/16	6-13/16	4-7/16	3-3/8	2.2
2729T-012BL	1-1/4	3-5/16	5-1/2	8-1/4	5-5/8	3-7/8	2.8
2729T-015BL	1-1/2	3-17/32	6-5/16	8-7/16	5-5/8	4-5/8	3.7
2729T-020BL	2	4-7/32	7-1/2	9-1/2	7	6-5/8	6.7

NOTE: Spears® low-extractable True Union Diaphragm valves sizes 1/2" – 2" carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F.

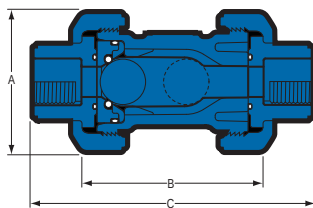


True Union 2000 Industrial Ball Valves

Part # *EPDM O-rings	Size (in.)	A	B	C	D	E	Weight (lbs.)
1829-005BL	1/2	1-7/8	2-3/8	4-3/16	2-9/16	2-13/16	.36
1829-007BL	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8	.56
1829-010BL	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16	.74
1829-012BL	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8	1.13
1829-015BL	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16	1.54
1829-020BL	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8	2.72
1822-030BL	3	6-3/16	7	10-11/16	5-7/8	7-5/8	7.46
1822-040BL	4	7-5/8	7-5/16	11-7/8	6-3/4	9-3/16	12.35

NOTE: Spears® low-extractable True Union ball valves sizes 1/2" - 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.

*For True Union 2000 ball valves equipped with FKM O-ring seals, replace the **1829** with **1839** in the Part Number.



True Union 2000 Industrial Ball Check Valves

Part # *EPDM O-rings	Size (in.)	Dimension Reference (inches + 1/16)			Approx. Wt. (Lbs.)	Cv ²	Horizontal Closing	
		A	B	C			Feet of Head (water)	GPM (minimum)
4529-005BL	1/2	1-7/8	2-7/16	4-3/16	0.72	6.3	1.6	.30
4529-007BL	3/4	2-1/4	2-3/4	4-3/4	1.19	17	1.6	.46
4529-010BL	1	2-1/2	2-7/8	5-1/8	1.53	25	1.6	.70
4529-012BL	1-1/4	3-1/16	3-1/4	5-3/4	1.85	65	1.6	1.04
4529-015BL	1-1/2	3-1/2	3-1/2	6-1/4	2.97	86	1.6	1.37
4529-020BL	2	4-1/4	4-3/4	7-3/4	4.55	130	1.6	2.47
4522-030BL	3	6-3/16	6-7/8	10-11/16	11.15	275	1.0	6.98
4522-040BL	4	7-1/2	7-1/4	11-13/16	16.58	500	1.0	12.13

1: Valve Lay Length

2: Gallons per minute at 1 psi pressure drop. Values based on independent testing by California State Polytechnic University.

NOTE: Spears® low-extractable True Union ball check valves sizes 1/2" - 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.

*For True Union 2000 ball check valves equipped with FKM O-ring seals, replace the **4529** with **4539** in the Part Number.



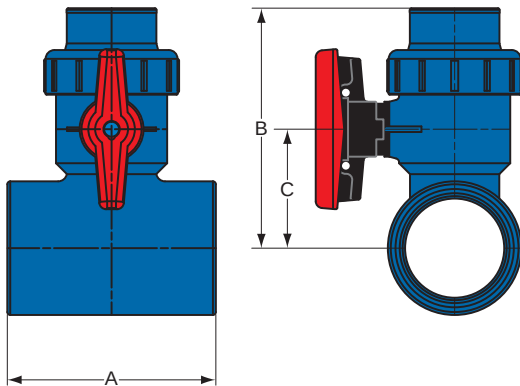
Low-Extractable Piping

Needle Valves

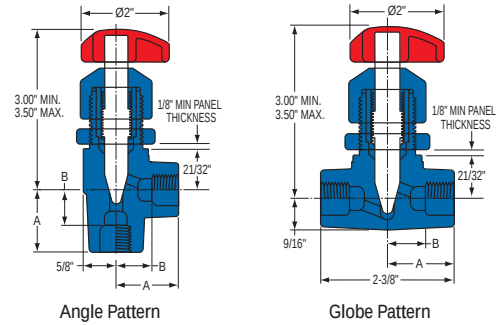
Spears® low-extractable needle valves provide proportional opening to needle travel for more accurate metering and other fine-adjustment flow-control applications. Replaceable PTFE seat eliminates all elastomer seals. Available in Globe and Angle pattern configurations with socket or threaded end connections. Valves include built-in panel mounting nut and easy-grip polypropylene handles.

Lab Fixtures (not shown)

See Part I of this catalog, High Purity PVC System for additional information.



Needle Valves



Globe Pattern Part #	Angle Pattern Part #	End Connection	Size (in.)	A	B
5592-002BL	5692-002BL	Socket	1/4	1-3/16	9/16
5592-003BL	5692-003BL	Socket	3/8	1-3/16	7/16
5592-005BL	5692-005BL	Socket	1/2	1-3/8	1/2
5591-002BL	5691-002BL	Threaded	1/4	1-3/16	21/32
5591-003BL	5691-003BL	Threaded	3/8	1-3/16	9/16
5591-005BLSR	5691-005BLSR	SR Threaded	1/2	1-3/8	21/32

NOTE: Spears® low-extractable Needle Valves carry a maximum pressure rating of 235 psi, non-shock, @ 73°F. Threaded 1/2" valve only available with Special Reinforced (SR) female threads.

True Union 2000 Industrial Tee-Style Ball Check Valves

Part # *EPDM O-rings	Nominal Size	Dimension Reference (inches + 1/16)				Weight (lbs.)
		A	B		C	
			Socket	Threaded		
182901-005BL	1/2	2-5/16	3-3/4	3-9/16	1-5/8	.48
182901-007BL	3/4	3-7/16	4-1/4	4	1-7/8	.70
182901-010BL	1	4	4-11/16	4-7/16	2-1/16	1.10
182901-012BL	1-1/4	4-1/4	5-5/16	5	2-7/16	1.64
182901-015BL	1-1/2	5-1/8	6-1/8	5-11/16	3	2.26
182901-020BL	2	5-7/8	7-5/16	6-13/16	3-7/16	3.72
182901-101BL	3/4x1/2	3-3/16	3-7/8	3-11/16	1-3/4	.51
182901-130BL	1x1/2	3-7/16	4	3-13/16	1-7/8	.58
182901-131BL	1x3/4	3-11/16	4-3/8	4-1/2	2	.78
182901-166BL	1-1/4x1/2	4-1/4	4	3-13/16	1-7/8	.77
182901-167BL	1-1/4x3/4	4-1/4	4-1/4	4	1-7/8	.90
182901-168BL	1-1/4x1	4-1/4	4-13/16	4-5/8	2-3/16	1.78
182901-209BL	1-1/2x1/2	4-3/8	4-1/4	4-1/16	2-1/8	.86
182901-210BL	1-1/2x3/4	4-1/8	4-5/8	4-3/8	2-3/16	.91
182901-211BL	1-1/2x1	4-1/2	5	4-13/16	2-3/8	1.37
182901-247BL	2x1/2	4-3/16	4-9/16	4-3/8	2-7/16	1.06
182901-248BL	2x3/4	4-3/8	4-15/16	4-11/16	2-9/16	1.23
182901-249BL	2x1	4-3/4	5-1/4	5-1/16	2-5/8	1.38
182901-251BL	2x1-1/2	5-7/8	6-1/16	5-7/8	2-15/16	2.33
182901-333BL	3x1/2	5-1/2	5-1/8	4-15/16	3	1.60
182901-335BL	3x1	5-1/2	5-7/8	5-11/16	3-1/4	2.19
182901-337BL	3x1-1/2	7-1/4	6-9/16	6-3/8	3-7/16	3.66
182901-338BL	3x2	6-11/16	7-11/16	7-3/16	3-13/16	4.61
182901-417BL	4x1	7-7/16	6-5/16	6-1/8	3-11/16	3.25
182901-419BL	4x1-1/2	7-3/8	7-5/16	7-1/8	4-3/16	4.01
182901-420BL	4x2	7-3/4	8-5/16	7-3/4	4-7/16	5.20
182901-528BL	6x2	10-3/16	9-5/8	9-1/8	5-3/4	9.26
182901-578BL	8x2	15-5/8	12-5/8	12-1/8	8-3/4	17.42

*For True Union 2000 Industrial Tee-Style ball valves equipped with FKM O-ring seals, replace the 182901 with 183901 in the Part Number.

Tee-Style Ball Valves

Spears® low-extractable True Union Tee-Style Ball Valve design integrates valve and Tee-fitting for direct branch take-off laterals. The close proximity of the valve to mainline emulates a "zero deadleg" design to minimize any areas of fluid stagnation. Custom produced to specified Tee and Valve connection sizes.

System Design & Installation

Product Ratings and Capability

Spears® low-extractable piping is produced to Schedule 80 dimensions in strict accordance with ASTM D 1785, and exhibits a Type II pressure rating. Fittings are produced to Schedule 80 dimensions per ASTM D 2467. Joining of product produced to the dimensional requirements of these standards ensures that strong connections with good pressure-bearing capability can be made up quickly and consistently using common, inexpensive tools. Utilizing these dimensions provides a higher pressure-bearing capacity compared to other "clean" systems on the market, and permits the use of standard socket dimensions.

Dimensions

Nominal Pipe Size (in.)	Average O.D.	Average I.D.	Minimum Wall	Nominal Weight Lbs./ft.	Max.W.P. PSI*
1/2	.840	.528	.147	.202	420
3/4	1.050	.724	.154	.273	340
1	1.315	.935	.179	.402	320
1-1/4	1.660	1.256	.191	.554	260
1-1/2	1.900	1.476	.200	.673	240
2	2.375	1.913	.218	.932	200
3	3.500	2.864	.300	1.903	190
4	4.500	3.786	.337	2.782	160
6	6.625	5.709	.432	5.313	140

*PSI water, non-shock @ 73°F with solvent-welded connections. System pressure rating dependent on component pressure ratings (i.e., flanges all sizes = 150 psi max @ 73° F)

Temperature De-rating Factor

Operating Temperature (°F)	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

As with all schedules of thermoplastic pipe, pressure rating is dependent on the pipe diameter as well as the operating temperature of the system. As temperatures rise, the pressure rating of the system decreases. The maximum temperature rating of Spears® low-extractable piping is 140°F. However, **DO NOT** use with "hot" Deionized (DI) water as this may have a detrimental effect on the system. Spears® recommends that Low Extractable PVC systems used with deionized water should be limited operating temperatures of no more than 80°F. Smaller-diameter piping can withstand higher pressure than large-diameter piping at elevated temperatures. Use appropriate temperature de-rating factors to determine maximum allowable pressure at elevated temperatures.

Hangers and Supports

Proper support spacing is critical to ensure that deflection is kept to a minimum. Support location and spacing is dependent on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use. Hangers also must not restrict linear movement of the system due to the effects of thermal expansion and contraction as a result of temperature changes; over-tightening must be avoided.

Hanger Support Spacing

Pipe Size (in.)	Maximum Support Spacing in Feet				
	73°F	80°F	100°F	120°F	140°F
1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5-1/2	5	4-1/2	3	2-1/2
1	6	5-1/2	5	3-1/2	3
1-1/4	6	6	5-1/2	3-1/2	3
1-1/2	6-1/2	6	5-1/2	3-1/2	3-1/2
2	7	6-1/2	6	4	3-1/2
3	8	7-1/2	7	4-1/2	4
4	9	8-1/2	7-1/2	5	4-1/2
6	10	9-1/2	9	6	5

Thermal Expansion and Contraction

As with all thermoplastic piping materials, consideration must be given during the design of the system to the effects of thermal expansion and contraction. The coefficient of linear expansion for Spears® low-extractable pipe is 3.89×10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$$\Delta L = 12 yL (T)$$

Where:

ΔL = amount of expansion or contraction in inches

$$y = 3.89 \times 10^{-5}$$

L = length of piping run in feet

ΔT = temperature change °F

(T max. – T @ time of installation or lowest system temperature or maximum system temperature, whichever is greater.)

Storage and Handling

Reasonable care and common sense should be used when handling and storing Spears® low-extractable piping products. These products are tough and corrosion resistant, but they should not be dropped or have objects dropped on them. Care should be used when transporting and storing the product to prevent physical damage. Spears® low-extractable products should not be stored or installed close to heat-producing sources, subjected to external loads or over stacked when stored. The product should be inspected for any scratches, splits or gouges. Damaged sections must be cut out and discarded.





Low-Extractable Piping

Joining Techniques

Spears® low-extractable piping products are easily joined by the solvent-cementing process. Unlike conventional PVC solvent-cementing techniques, this product utilizes a one-step solvent-cement system specifically formulated for "clean" applications. This solvent cement exhibits extremely fast set and cure times. When properly used, this system results in very short cure times prior to pressure testing, and produces a solvent-cemented assembly with an exceptionally low percentage of chemical additives, reducing the potential for system contamination.

A thorough understanding of the solvent cement joining process and proper assembly techniques must be used during assembly of these products to ensure the highest system integrity. Installers must become familiar with this process prior to use.

Basic Principles of Solvent Cementing

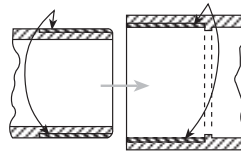
Spears® low-extractable components are manufactured to the dimensional tolerances for Schedule 80 pipe per ASTM D 1785, and Schedule 80 socket-type fittings per ASTM D 2467. When fittings are produced to these dimensions, the ID of the fitting at the entrance of the socket is larger than the ID of the fitting at the socket bottom. The taper created by fitting socket dimensions provides an interference fit during assembly of the components. This provides a proven means for proper mating of components, ensuring adequate joint strength when properly assembled.



The following points must be clearly understood to ensure satisfactory joints are obtained consistently.

1. The joining surfaces must be softened and made semifluid.
2. Sufficient cement must be applied to fill the gap between the pipe and fitting.
3. Assembly of pipe and fitting must be made immediately while the surfaces are still wet and the cement is fluid.
4. Joint strength develops quickly as the cement dries. In the tight part of the joint, the surfaces will tend to fuse together; in the loose part of the joint the cement will bond to both surfaces.

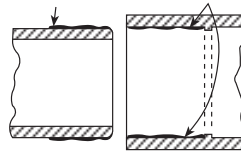
These areas must be softened and penetrated



Softening and Penetration

These areas must be softened and penetrated. (This can be achieved by the cement itself.)

Cement coatings of sufficient thickness



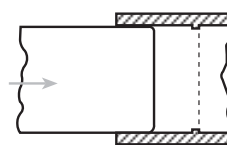
Sufficient Application of Cement

More than sufficient cement to fill the gap in the loose part of the joint must be applied. In addition to filling the gap, adequate cement layers will penetrate the joining surfaces and remain fluid until the joint is assembled.

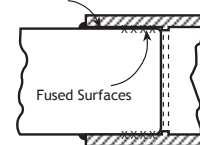
Joint Integrity

When the cement coating on the pipe and fittings are fluid during assembly, they will tend to flow together and become one cement layer. In addition, the surfaces beneath the cement coating will be soft from surface penetration of the cement. The softened surface areas in the tight part of the joint will tend to fuse together. As the solvent dissipates, the cement layer and the softened surfaces will harden with a corresponding increase in joint strength. The dissipation of the solvent from specially formulated one-step cement occurs very quickly due to its high evaporation rate. Joint strength develops more quickly in the tight (fused) part of the joint than in the looser (bonded) part of the joint. A properly assembled joint will take the required working pressure before the joint is fully dry and final joint strength is obtained.

Surfaces must be assembled while they are wet and soft



Bonded Surfaces



Specially Formulated One-Step Cement

Use only specially formulated one-step cement for Spears® low-extractable applications using the appropriate size applicator. Carefully read and follow the label on the cement can, and application and cure time instructions thoroughly. **NOTE:** Dauber is supplied in pint-can lid (suitable for pipe sizes 1/2" - 1-1/4"). Dauber is supplied in quart-can lid (suitable for pipe sizes 1-1/2" - 3"). For pipe sizes 4" thru 6" use a roller equal in size to 1/2 the pipe diameter.

Specially formulated one-step cement is listed by NSF International and conforms to the requirements of ASTM D 2564.

Low-Extractable Piping



Safety Precautions:

Before applying cement, appropriate safety precautions should be taken. Solvent cement should be stored in the shade between 40°F and 110°F. Eliminate all ignition sources. Avoid breathing of vapors. Use only with adequate ventilation; mechanical ventilation or local exhaust is recommended to maintain vapor concentrations below exposure limits. In confined or partially enclosed areas an organic vapor respirator is recommended. Containers should be kept tightly closed when not in use, and covered as much as possible when in use. Avoid frequent contact with skin. Wear clean rubber gloves; do not perform work with bare hands.

Component Preparation:

All pipe, fittings and tools used for joining must be clean and free of dirt, moisture, grease or other contamination prior to and during the joining process.

1. Cutting:

Cutting the pipe as squarely as possible (90°) is required, as it maximizes the bonding area of the joint. Only sharp wheel-type cutters with blades specifically designed for cutting plastic shall be used. Cutters should be rotated slowly to provide optimum cut. Cutting speeds should be further reduced at lower temperatures. The use of a saw is *not* recommended as filings and shavings will cause particulate contamination.

2. Deburring:

All pipe ends shall be properly chamfered by providing a 10° to 15° bevel (1/16" to 3/32" in width). A chamfering tool designed for this purpose shall be used. A proper bevel will aid in assembly and prevent solvent cement being pushed from the wall of the fitting during assembly. Burrs and filings can prevent contact between the pipe and fitting and must be removed from the outside and inside of the pipe during this process. A common practice is to place sterile gauze in the pipe end to prevent shavings from entering the pipe. The gauze is then removed prior to cement application.

3. Joining Preparation:

A. Prior to assembly, all components shall be inspected for any damage or irregularities. Mating components shall be checked to assure that tolerances and engagements are compatible. Do not use components that appear irregular or do not fit properly.

B. Check the dry fit – The pipe should enter the fitting socket easily one-quarter to three-quarters of the way. If the pipe bottoms in the fitting with little interference, use extra solvent cement in making the joint.

C. Measure the socket depth of the fitting and mark this distance on the pipe end. This reference mark can be used when joining to ensure the pipe is completely bottomed into the fitting during assembly.

4. Solvent Cement Application:

Specially formulated one-step cement shall be applied to the joining surfaces using a dauber or natural-bristle brush approximately half the diameter of the pipes being joined. Working quickly, apply a heavy, even coat of solvent cement to the pipe end on the surface equal to the depth of the fitting socket. Apply a light coat to the fitting socket. If there was little interference during the dry fit, apply a second coat of cement to the pipe end at this time. Great care must be used to prevent cement from coming into contact with the interior waterway of the fitting or pipe.

5. Assembly:

Immediately insert the pipe into the fitting socket while rotating one-quarter turn. Properly align the fitting for the installation at this time. The pipe must bottom completely to the fitting stop. Hold the assembly for approximately 30 seconds to ensure initial bonding. Due to the taper on the interference fit, the pipe can back off the fitting stop if steady pressure is not held on the joint during initial bonding. A bead of cement should be evident around the pipe and fitting juncture. If the bead is not continuous, it may indicate that insufficient cement was applied. *Due to the unique translucency of Spears® low-extractable products, visual inspection of the cemented joint can be conducted utilizing a flashlight or alternate light source. Joint integrity can be readily verified by visually inspecting the cemented surfaces for uniformity.* If insufficient cement is applied, the joint must be cut out, discarded and begun again. Excess cement must be wiped off from the pipe OD using a clean rag at this time.



Low-Extractable Piping

Assembly Instructions

Set and Cure Times:

Set and cure times are a function of pipe size, temperature, pressure, humidity and tightness of fit. The initial *set time* is the recommended waiting period prior to handling a newly assembled joint. After the initial set time, the joints will withstand the stresses of normal installation. (Misalignment of components during assembly will cause excessive stress in the joint, which can affect joint integrity). The *cure time* is the recommended waiting period prior to pressurizing newly assembled joints. Minimum cure time prior to pressure testing is dependent on pipe size, temperature, humidity, tightness of fit and test pressure required. Longer cure times must be allowed when working at higher humidity and colder temperatures.

Refer to the following tables for minimum set and cure times:

Initial Set Time

Temp.	Pipe Size 1/2 - 1-1/4	Pipe Size 1-1/2 - 2	Pipe Size 2-1/2 - 6
60° - 100°F	2 minutes	3 minutes	30 minutes
40° - 60°F	5 minutes	8 minutes	2 hours
0° - 40°F	10 minutes	15 minutes	12 hours

Joint Cure Schedule

Relative Humidity 60% or less*	Pipe Size 1/2 - 1-1/4		Pipe Size 1-1/2 - 2		Pipe Size 2-1/2 - 6
Temp range during assembly and cure periods	up to 160 psi	160 to 360 psi	up to 160 psi	160 to 315 psi	up to 160 psi
60° - 100°F	15 min	6 hrs	25 min	12 hrs	1-1/2 hrs
40° - 60°F	20 min	12 hrs	30 min	24 hrs	4 hrs
0° - 40°F	30 min	48 hrs	45 min	96 hrs	72 hrs

* If damp or humid weather allow 50 percent longer cure time.

Other Design Considerations

Proper system engineering, design, construction practices and operation are the responsibility of the design authority. Consideration must be given to ensure the Spears® low-extractable system is not exposed to any conditions that will exceed the product limitations regarding temperature, pressure, chemical compatibility, and mechanical strength. Detailed chemical resistance and other design information is available from Spears® Manufacturing Company.

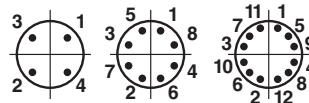
DO NOT use with "hot" Deionized (DI) water as this may have a detrimental effect on the system. Spears® recommends that Low Extractable PVC systems used with deionized water should be limited operating temperatures of no more than 80°F.

Spears® Manufacturing Company does not recommend the use of this product for the transportation or storage of compressed air or gases, nor the testing of these systems using compressed air or gases.

Excessive surge pressure must be avoided. The system must be designed to ensure that surge potentials generated by pump operation, entrapped air, flow velocity, and valve closure are kept to a minimum. Spears® does not recommend flow velocities in excess of five feet per second.

Flange Installation:

1. Solvent cement flange to pipe.
2. Piping runs joined must be installed in straight-line position to the flange and supported to avoid stress and damage.
3. Rotate ring into position with gasket in place to align holes.
4. Insert all bolts, washers and nuts.
5. Mating surfaces of flanges must be flush against gasket prior to bolting.
6. Tighten by hand until snug. Tighten bolts in 5 ft.-lb. increments according to opposing sequence shown below.
7. Do not use bolts to bring improperly mated flanges together.



Bolt Torque Sequence

Flange Size (in)	Recommended Torque
1/2 - 1-1/2	12 ft-pounds
2 - 4	25 ft-pounds
6	40 ft-pounds

Installation Notes:

Installers should verify for themselves that they can make satisfactory joints under varying conditions.

Use the appropriate size applicator. Avoid puddling of solvent cement on or within fittings and pipe. This will cause excessive softening of materials, resulting in damage to the product and excessive system contamination.

Spears® low-extractable solvent-cemented assemblies cure very quickly when properly constructed, enabling pressure-bearing capability in a short time. This is a positive attribute of the system for scheduling pressure tests and repair work. However, Spears® Manufacturing Company recommends that newly assembled systems be allowed to cure for a minimum period of 24 hours prior to system rinsing/activation procedures. This reduces the potential for TOC contamination.

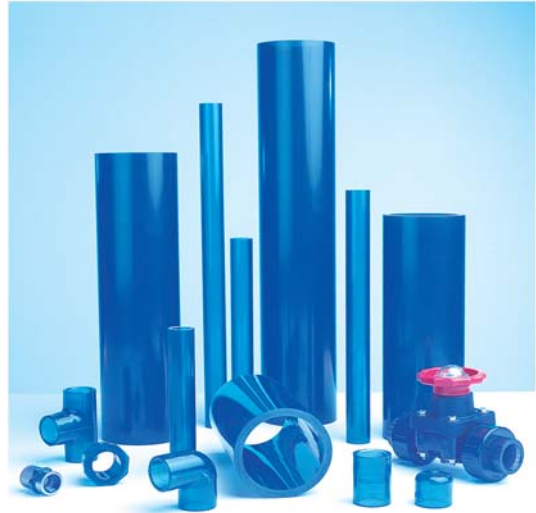
Spears® low-extractable piping products should not be connected directly to UV light sources that would expose system components to ultraviolet radiation.

Spears® low-extractable piping systems are not formulated for outdoor use. Prolonged exposure to ultraviolet radiation (UVR) will affect physical properties.

Spears® Manufacturing Company recommends that newly installed systems be allowed to cure for a minimum period of 24 hours prior to rinsing procedures to reduce the potential for TOC contamination. Rinsing procedures, chemical rinse and other cleanup/disinfection procedures to be used are at the discretion of the system design authority. Note: Spears® low-extractable piping is compatible with hydrogen peroxide at concentrations up to 30% at 73°F. Contact Spears® for additional chemical compatibility information concerning the use of these products with various substances prior to use.

Sample Specifications

UPW process piping and fittings shall be manufactured from a specialty low-extractable, Polyvinyl Chloride (PVC) compound with a Cell Classification of 12343 per ASTM D 1784. All pipe and fittings shall be produced to Schedule 80 dimensions, manufactured in strict compliance to ASTM D 1785 (pipe), and ASTM D 2467 (fittings). These products shall carry a Type II pressure rating and consistently meet or exceed the applicable Quality Assurance test requirements of these standards with regard to dimensions, workmanship, burst pressure, flattening resistance and end-product quality. All UPW process valves shall be True Union-style diaphragm or True Union-style quarter-turn ball valves produced from the same low-extractable PVC compound. All valve diaphragms and seats shall be PTFE; valve O-rings shall be EPDM or FKM as applicable. All valve union nuts shall have buttress-style threads. All valve components shall be replaceable. System components shall be joined utilizing specially formulated one-step cement for joining the system. All system components shall be manufactured in the USA by an ISO-certified manufacturer. All UPW piping shall be bagged and sealed immediately after manufacture to maintain cleanliness, and boxed and stored indoors at the manufacturing facility until shipped from the factory. UPW process pipe and UPW piping components shall be those as provided by Spears® Manufacturing Company.



The data furnished herein is provided as a courtesy and is based on past experience, limited testing, and other information believed to be reliable. This information may be considered as a basis for recommendation only. No guarantee is made as to its accuracy, suitability for particular applications, or the results to be obtained therefrom. Materials should be tested under actual service conditions to determine suitability for a particular purpose.

“Lead Free” low lead certification – unless otherwise specified, all Spears® Low-Extractable piping and fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California’s Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content $\leq 0.25\%$.



LabWaste™

CPVC Corrosive Waste
Drainage Systems



DESIGN & INSTALLATION GUIDE TECHNICAL INFORMATION

U.S. Patent No. 7,178,557
Manufactured to ASTM F 2618
NSF® cw Certified For
Corrosive Waste



Visit our web site
www.spearsmfg.com



**Proven Solvent Cement Joining Eliminates Troublesome
Fusion Equipment, Mechanical Joints & Elastomer Problems**
NSF® Certified for Corrosive Waste Use & Listed to ASTM F 2618
Specification For CPVC Pipe & Fittings for Chemical Waste Drainage Systems
Meets IAPMO IGC 210 and ICC-ES PMG-1018 For CPVC Chemical Waste Systems
U.S. Patent No. 7,178,557



- Complete System of Pipe, Fittings & Adapters
- Meets 25/50 Flame & Smoke Requirement for use in Return Air Plenums
- Non-Pressure Drainage Service to 220° F
- All CPVC Construction in a Full Assortment of Standard DWV Patterns
- Accessories including Drains, Neutralization Tanks, and Dilution Traps
- Specially Formulated One-Step Solvent Cement Provides Chemical Resistance Equal to System Pipe & Fittings – Now in Special Yellow Color

Chemical & Corrosion Resistant CPVC

One of the key advantages of Spears® **LabWaste™** CPVC System is its excellent resistance to a broad range of corrosive environments. CPVC is inert to most mineral acids, bases, salts and aliphatic hydrocarbons, and compares favorably to other plastics in these chemical environments.

General Chemical Resistance Overview:

Weak Acids	Excellent	Salts	Excellent
Strong Acids	Excellent	Aliphatic Solutions	Good
Weak Bases	Excellent	Halogens	Good-Fair
Strong Bases	Excellent	Strong Oxidants	Good-Fair

The **LabWaste™** CPVC System has been developed for use in Academic, Research, and Institutional Laboratory chemical waste drainage applications. These plumbing systems are characterized by the routine disposal of a wide variety of hot and cold chemical wastes in accordance with prudent laboratory practices for drainage disposal.

Manufactured to ASTM F 2618 in Full Line of Drainage Pattern Fitting Configurations

Spears® broad line of **LabWaste™** CPVC pipe & fittings are manufactured to ASTM F 2618 Specifications for CPVC Pipe & Fittings for Chemical Waste Drainage Systems and produced in ASTM D 3311 drainage patterns or to manufacturer's specifications. Standard configurations are available in nominal sizes of 1-1/2" through 24" with many specialty fittings and accessories, like dilution traps, (water dilution being critical in the prevention of exothermic chemical interactions within all plumbing systems).

NSF® Certified For Corrosive Waste

Spears® **LabWaste™** Corrosive Water Drainage System of pipe, fittings, and cement is tested and certified for use in corrosive waste systems by NSF International to ASTM F 2618, tested to IAPMO IGC 210, Certified to the Uniform Plumbing Code and ICC-ES listed to PMG-1018 for CPVC Chemical Waste Systems.

Cost Saving Solvent Weld Joining Eliminates the need for Electro-Fusion Joints and for Mechanical Joint Connections in Concealed Spaces

A proven joining method reliably used for over 50 years, Solvent Cement Welding requires no special tools, no costly fusion easy installation, repairs or alterations. Most importantly, solvent cement joints end problems typical of polypropylene system installation, such as mechanical connector pullout, maintaining mechanically sealed joints, leaks from fusion wire corrosion, and cumbersome fusion joining methods. Saves time, saves cost, saves worry!

A Flame & Smoke Rated Piping System

Spears® **LabWaste™** system components have been evaluated and Listed by Underwriters Laboratories of Canada (ULC®) as finished products for surface burning characteristics under CAN/ULC S102.2 and tested to UL 723/ASTM E 84, for Surface Burning Characteristics of Building Materials (NFPA 255, ANSI/UL 723 and UBC 8-1), and showed a flame spread of < 25 and a smoke developed index of < 50.



LabWaste™ CPVC Technical Information & Installation Guide

Industrial & Commercial Special Waste Applications

Spears® **LabWaste**™ CPVC products can be used in a very broad variety of dedicated waste applications with proper evaluation of waste medium and service conditions. **DO NOT** follow Chemical Resistance Tables recommendations in this manual for these applications. For non-laboratory applications, refer to CPVC pressure system resistance data for appropriate chemical resistance guidelines. Please contact Spears® Technical Services for additional information.

American Bureau of Shipping (ABS) Type Approval

Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System pipe and fittings are ABS Type Approved for marine and offshore applications in nominal pipe sizes through 12". Type Approval details and restrictions are specified in ABS Certificate # 10-HS539421-1-PDA available on the ABS website at www.eagle.org.



Applicable Conformance Standards & Certifications

Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System is a complete system of pipe, fittings and solvent cement independently (3rd party) tested, evaluated and certified by the following laboratories and agencies. Each of these approvals is routinely monitored through an ongoing program of periodic inspection and testing by the certifying agency.

- **ASTM F 2618** - Certified for corrosive waste and use by NSF International (NSF®-cw) in accordance with ASTM F 2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems*.
- **Uniform Plumbing Code** - Certified for use in accordance with the Uniform Plumbing Code (UPC®) by NSF International as specified in IAPMO IGC 210, *Interim Guide Criteria for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Limited Chemical Waste Drainage System*. (NSF®-U.P.Code).
- **International Plumbing Code** - Spears® **LabWaste**™ CPVC system has been approved for use in accordance with the International Plumbing Code (IPC®) by the International Codes Council Evaluation Services (ICC-ES) in accordance with ICC-ES PMG Listing PMG-1018 for Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System (See ICC-ES PMG Listing PMG-1018 at www.icc-es-pmg.org).

System Integrity – Lifetime Warranty

Spears® **LabWaste**™ products have been developed and designed to be used as a total system consisting of pipe, fittings, accessories, solvent cement and thread sealant. All Spears® **LabWaste**™ components must be used in order to ensure a sound piping system. Substitution of other products for Spears® **LabWaste**™ pipe, fittings, or solvent cement may be detrimental to system integrity and is not recommended. The Spears® Limited Lifetime Warranty (located at the end of the manual) does not cover problems occurring as the direct result of the use of products other than Spears® **LabWaste**™ system products, or products and materials not compatible with CPVC materials.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

LabWaste™ CPVC Technical Information & Installation Guide



Typical Physical Properties of Spears® LabWaste™ CPVC Material

Property	Test Method	Typical Value
Mechanical Properties @ 73°F		
Specific Gravity	ASTM D 792	1.49
Tensile Strength, psi	ASTM D 638	9000
Tensile Modulus, psi	ASTM D 638	420,000
Flexural Strength	ASTM D 790	12,000
Izod Impact (notched @73°F)	ASTM D 256	
Fittings		3.0
Pipe		5.5
Thermal Properties		
Heat Deflection Temperature 264 psi	ASTM D 648	
Fitting		214°F
Pipe		230°F
Thermal Conductivity, BTU/hr/sq ft/°F/in	ASTM C 177	.95
Coefficient of Linear Expansion, in/in/°F	ASTM D 696	3.2 x 10 ⁻⁵
Flammability		
Limiting Oxygen Index	ASTM D 2863	60
UL 94 Rating	UL 94	V-0, 5VB
Flame & Smoke Rating¹		
Flame Spread	CAN/ULC S 102.2	<25
Smoke Developed	UL 723/ASTM E 84	<50
Solvent Cement	ASTM F 2618/ASTM F 493	Heavy Body; Mustard Yellow Color

Typical Physical Properties data is based on information from material suppliers. It is provided as a guideline for service and is not to be considered a warranty of performance.

1- Based on test of physical product, including solvent cement welded pipe and fittings assemblies, as opposed to test of material only.

Fire Resistance

Material used in Spears® **LabWaste™** CPVC systems has a UL 94 flammability rating of V-0, 5VB. Pipe and fittings have been Listed and rated based on *finished product* tests, as opposed to a material test only, for surface burning characteristics of flame spread and smoke density developed by Underwriters Laboratories of Canada under standard test method CAN/ULC S102.2-M88. Additional test of **LabWaste™** pipe with dry fit caps was conducted by Southwest Research Institute (SwRI) Department of Fire Technology under UL 723/ASTM E 84 (modified to test finished product). Pipe and fitting components ratings are below the 25 maximum flame spread and 50 maximum smoke density developed typically required for exposed air plenum installation. Check local codes for acceptability. Use of approved plenum wrap or transition connectors to other material may be used if required.



LabWaste™ CPVC Technical Information & Installation Guide

Pipe & Fittings

Spears® **LabWaste™** CPVC pipe and fittings are produced to the dimensional and performance requirements of ASTM F 2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems*. **LabWaste™** CPVC fitting configurations are produced to applicable DWV patterns of ASTM D 3311, *Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns*, plus various specialty patterns and manufactured specified configurations not included in D 3311. All drainage fittings with 90° angles (sanitary tees, elbows, etc.) have socket pitch to maintain approximately 1/4" per foot drainage. **LabWaste™** CPVC pipe is produced to dimensions specified in ASTM F 2618 with sizes greater than 12" produced to Schedule 40 dimensions of ASTM F 441, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedule 40 and 80*.

Schedule 40 CPVC Pipe Dimensions (inch)

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16	18	20	24
Avg. O.D.	1.900	2.375	3.500	4.500	6.625	8.625	10.750	12.750	14.000	16.000	18.000	20.000	24.000
Avg. I.D.	1.592	2.049	3.042	3.998	6.031	7.943	9.976	11.889	13.073	14.940	16.809	18.743	22.544
Min. Wall	.145	.154	.216	.237	.280	.322	.365	.406	.437	.500	.562	.593	.687

Expansion & Contraction

Spears® **LabWaste™** CPVC products, like all piping materials, expand and contract with changes in temperature. If the coefficient of linear expansion is 3.2×10^{-5} in./in. °F, a 25°F change in temperature will cause an expansion of 1 inch for a 100-foot straight length. For most operating and installation conditions, expansion and contraction can be accommodated at changes of direction, or simple expansion loops can be used. For underground installations, snaking the pipe in the trench can be used where necessary to accommodate expansion and contraction.

Thermal expansion change in length is calculated from Length of Run in feet, expected Change in Temperature and given Coefficient of Linear Thermal Expansion of 3.2×10^{-5} in./in. °F for CPVC:

$$\Delta L = 12eL (\Delta T)$$

Where:

$$e = 3.2 \times 10^{-5} \text{ in./in. } ^\circ\text{F}$$

L = Length of Run in feet

ΔT = Temperature Change in °F

Example:

How much will a 50 ft. run Spears® **LabWaste™** pipe expand if the expected ambient temperature will range from 45°F to 85°F?

$$\Delta L = 12eL (\Delta T)$$

$$\Delta L = 12 \times .000032 \times 50 \times 40$$

$$\Delta L = .768 \text{ inches}$$

The following table provides quick reference in identifying expansion length change for different run lengths of pipe at various anticipated temperature changes.

Thermal Expansion Table

Length of Run (L) in feet	Length Change in Inches (ΔL) for Specified Change in Temperature (ΔT)								
	20°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F
10	.08	.12	.15	.19	.23	.27	.31	.35	.38
20	.15	.23	.31	.38	.46	.54	.61	.69	.77
40	.31	.46	.61	.77	.92	1.08	1.23	1.38	1.54
50	.38	.58	.77	.96	1.15	1.34	1.54	1.73	1.92
70	.54	.81	1.08	1.34	1.61	1.88	2.15	2.42	2.69
90	.69	1.04	1.38	1.73	2.07	2.42	2.76	3.11	3.46
120	.92	1.38	1.84	2.30	2.76	3.23	3.69	4.15	4.61

LabWaste™ CPVC Technical Information & Installation Guide



Joining Methods

Spears® **LabWaste**™ CPVC pipe and fittings are easily joined using Spears® LW-5 One-Step Solvent Cement that has been specially formulated for corrosive/acid waste applications and manufactured in accordance with ASTM F 493, *Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings*, as specified in ASTM F 2618. When cured, this cement provides a fused joint that maintains the same physical and chemical resistance properties as the CPVC components in the system. Spears® LW-5 is a “one-step” cement and does not require the use of primer. Spears® **LabWaste**™ CPVC systems may be additionally joined using threaded (NPT) or flanged connections where removal or connection to supplementary equipment is required. Special transition couplings are available for joining to Polypropylene, PVDF, glass or Duriron systems.

Solvent Cement Joints – Store below 90°F (33°C). Stir and use as is. If jelled, replace. Use within 2 years of date stamped on can. This cement is designed for use without a Primer. Check local code requirements before using Spears® LW - 5 cement.

1. Cut pipe square, deburr and chamfer (bevel 10° to 15°). Clean and dry joining surfaces.
2. Check dry fit. For interference fit, pipe should push 1/4 to 3/4 way into fitting snugly.
3. Use a suitable applicator at least 1/2 size of pipe diameter; for larger sizes use brush or roller.
4. Apply a full even layer of cement on the pipe equal to the socket depth. Coat the fitting socket with a medium layer. Avoid excess and puddling. If necessary, apply a second full layer on pipe.
5. Assemble while cement is wet. If not wet, recoat all parts before assembly. Assure pipe bottoms into fitting socket using a 1/8 to 1/4 turns twist. To avoid push out and allow for initial set, hold for about 30 seconds. Wipe off excess. Handle newly assembled joints carefully.

An Initial Set time is recommended to provide good handling strength after which the joint will handle normal stresses of installation. Cure Time is the recommended waiting period prior to placing the joint into service and before any pressure testing of the system. Set and cure times are relative to temperature at time of installation. Best results are obtained at temperatures between 40° and 110°F. Due to the many field variables, these should be used as a general guide only.

Recommended Set & Cure Times

Temperature	Initial Set	Cure
60°F - 100°F	30 min.	1 hr.
40°F - 60°F	1 hr.	2 hrs.
0°F	2 hrs.	4 hrs.

In moist or humid conditions (relative humidity above 60%) allow 50% more cure time.

Average Number of Joints per Quart of LW-5 One-step Cement

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16
No. of Joints	90	60	40	30	10	5	2-3	1-2	3/4	1/2-3/4

Estimate based on laboratory tests. Due to many field variables, these figures should be used as a general guide only.



LabWaste™ CPVC Technical Information & Installation Guide

Threaded Joints - Spears® Manufacturing Company highly recommends the use of Spears® **BLUE 75™** thread sealant, which has been tested for compatibility with Spears® products. Please follow the sealant Manufacturer's Application/Installation instructions. Choice of another appropriate thread sealant is at the discretion of the installer.

WARNING: Some pipe joint compounds or pastes may contain substances that could cause stress cracks in CPVC. For transitions to metal threaded systems, all cutting oils must be removed and the metal pipe thoroughly flushed and degreased prior to assembly with CPVC systems.

1. Apply joint sealant to the male pipe threads ONLY.
2. Thread joint hand tight for initial assembly.
3. Using commercial strap wrenches tighten 1 to 2 turns beyond hand tight; avoid over tightening. **DO NOT** use conventional pipe wrenches that can damage plastic fittings.

If a tape sealant is used:

1. Use TFE tape no less than 25 mil thick.
2. Initial wrap must fully cover the thread end.
3. Wrap clockwise with standard pipe threads.
4. Use only 2-3 wraps of tape.



DO NOT use combination of paste and tape sealants.

Flanged Connections - Solvent cement flange hub to pipe according to preceding instructions. Use full faced, 1/8" thick gaskets of a material suitable for the intended application having a Shore "A" durometer of approximately 60. Use of well lubricated bolts and flat washers is required. Bolts must be tightened in a 180° opposing pattern to the recommended torque values.

Flange Size (in.)	Bolt Torque (ft.-lb.)	Torque Sequence
1-1/2	12	
2-4	25	
6-8	40	
10	64	
12	95	
14-16	110	

LabWaste™ Transitions To Other Systems – Spears® **LabWaste™** Corrosive Waste Drainage System provides a complete line of transition fittings for use with other corrosive waste piping materials for system additions and retrofits.

P099 Transition Coupling: Hub X Compression. Allows connection of **LabWaste™** to Polypropylene or PVDF pipe and solvent cement socket connection to CPVC system. A safety groove must be cut into the Polypropylene or PVDF pipe to resist pull out. A groove cutting tool is available from Spears®

P093 Elastomer Transitions Coupling For Glass: IPS Clamp Joint X Glass Clamp Joint. Allows mechanical connection of **LabWaste™** CPVC pipe to plain end Kimax® glass pipe. Consists of high performance fluoroelastomer (FKM) sleeve, an outer stainless steel shear ring and two AISI 301 stainless steel clamping bands.

P098 Glass Transition Coupling: Spigot X Bead Clamp. Allows mechanical connection of **LabWaste™** to beaded-end glass drainage pipe. Coupling consists of a CPVC beaded-end matching glass pipe bead and CPVC pipe diameter spigot end for solvent cement connection. This requires a glass system's mechanical connector, available from Schott Scientific Glass, part# 6650-XXXX Bead-to-Bead end.

P094 Elastomer Transitions Coupling For Duriron®: IPS Clamp Joint X Duriron® Clamp Joint. Allows mechanical connection of **LabWaste™** CPVC pipe to plain end Duriron® pipe. Consists of high performance fluoroelastomer (FKM) sleeve, an outer stainless steel shear ring and two AISI 301 stainless steel clamping bands.

P095 Duriron® Mechanical Transition Fitting: Mechanical Joint X CPVC Pipe Size. Allows mechanical connection of **LabWaste™** to Duriron (siliconized iron) pipe. Fitting consists of Duriron pipe diameter spigot (male pipe end) and CPVC pipe diameter spigot end for solvent cement connection. Requires use of Duriron Mechanical Joint Coupling that consists of an inner sleeve of PTFE surrounded by an outer sleeve of Neoprene rubber held in place by a stainless steel coupling. Duriron® Mechanical Joint Coupling available through Flowserve.

P097 Duriron® Caulk Transition Coupling: Spigot x Caulk Joint. Allows caulk-joint connection of **LabWaste™** pipe to Duriron borosilicate systems. Coupling consists of Duriron pipe diameter male end for mating to Duriron belled pipe end and CPVC pipe diameter spigot end for solvent cement connection. This requires use of special chemical acid-resistant oakum packing available from Flowserve (Red Stripe Sealite A312 Rope) and plastic lead/caulk purchased from others. **DO NOT** use hot lead or oiled Oakum for this type of caulk-joint.

LabWaste™ CPVC Technical Information & Installation Guide



P096 Grooved Coupling Adapter: Groove X Socket. Allows connection of the **LabWaste™** to grooved metal piping systems. Requires use of a Metal Grooved Coupling with gasket. A flexible style grooved coupling must be used for plastic only. Do not use rigid style couplings. Use either Victaulic Flexible Grooved Couplings Part# 75 & 77 or Gruvlok Flexible Grooved Couplings Part# 7001 & 7000.

Please contact Spears® for special construction of any system transition connection needs not specified.

Support Spacing

Spears® **LabWaste™** CPVC systems should be properly supported to avoid stress caused by sagging and system component loads. Support should be given to concentrated system loads, such as flanges and where changes in direction occur. Such support should be made as close to fittings as possible, yet allow for movement due to expansion and contraction.

Conventional pipe hangers and brackets can be used. However, hangers must **NOT** be used to pull the piping system into position or over tightened to either restrict necessary movement or cut into pipe. Hangers should be smooth, free of burrs and provide as much load-bearing surface as possible.

Systems should be supported in accordance with applicable plumbing codes. Check local codes for additional requirements. The following chart shows recommended horizontal support spacing for un-insulated continuous spans with no concentrated loads. This information is provided as a general guideline. Local codes, engineering specifications, and system installation conditions may require significant variations.

Recommended Hanger Spacing (feet)

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16
Hanger Spacing	6	6	7	7-1/2	8	9	10	10-1/2	11	12

Underground Installation

Spears® **LabWaste™** CPVC systems may be installed underground in a smooth, uniform trench bottom that supports the pipe over its entire length, free of rocks and debris. Subsoil should be stable to provide physical protection for the pipe and fittings. Where large boulders are not removed, trench should be padded with sand or fine-grained soil. Trench should be wide enough to provide room for joining pipe in the trench and to allow snaking from side-to-side to provide slack for future expansion-contraction. Install a larger size pipe as a sleeve where piping must pass through masonry walls. Use only solvent cement connection in underground piping. System should be tested in accordance with local plumbing codes prior to back filling. Pipe should be surrounded with an initial backfill material having a particle size of 1/2" or less, free of sharp rock or debris and uniformly compacted in layers. Refer to ASTM D 2321, *Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications*, for additional information on underground installations.

Acid Neutralization/Dilution Tanks for Use With **LabWaste™** CPVC Systems

Neutralization or dilution tanks are required by codes for the purpose of neutralizing corrosive wastes. Corrosive liquids, spent acids or other harmful chemicals that destroy or injure a drain, sewer, soil or waste pipe, or create noxious or toxic fumes or interfere with sewage treatment processes are prohibited from discharge into the plumbing system without being neutralized or treated. A variety of system designs and treatment methods can be used for neutralization and dilution. For proper performance, Spears® recommends use of professional assistance in analysis of the application, neutralization system design, equipment selection, and specific maintenance requirements.

Spears® offers a standard selection of HDPE in 5 gallon to 3000 gallon capacities and CPVC tanks in 5 gallon to 55 gallon capacities with a variety of connection and vent options, plus convenient 1-gallon Dilution Tank designed for under-sink installation. Tanks can also be custom produced in virtually any size, shape, or connection configuration, including custom double-containment tanks. Contact Spears® Technical Services with desired specifications for custom quotation. See Price Schedule LWNT-1, "Spears® **LabWaste™** Standard CPVC & HDPE Neutralization Tanks", for pricing, additional information, selection detail and available options such as venting, tank extensions, manhole ports, pedestrian and traffic covers.

Installation Considerations - Except for under-sink installations, tank should be located on the lowest floor or basement room. It is recommended that the tank be in a concrete vault on a smooth flat surface. Where necessary, tanks may be installed on sturdy sheeting or directly into the ground. In all cases, the surface must be capable of uniformly supporting the tank weight, including effluent and neutralization medium.

Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fittings centerline since tank heights can vary. The top of the tank must remain accessible for servicing and clean out either directly or by manhole cover. Tanks may be installed under foot or light vehicle traffic with use of appropriate covers and support. Tanks themselves are not to be used to support traffic loading.

Avoid strain when installing the pipe to tank fitting connections. Tanks must **NOT** be supported by the inlet, outlet, or vent piping.



LabWaste™ CPVC Technical Information & Installation Guide

The following recommendation from the American Society of Plumbing Engineers (ASPE) may be used as a guideline for sizing tanks according to the number of lab sinks.

Neutralization Tank Sizing Table

Number of Lab Sinks	Tank Size	
	Gallons	Liters
2	5	18.9
4	15	56.8
8	30	113.6
16	55	208.2
22	75	283.9
27	90	340.7
30	108	408.8
40	150	567.8
50	175	662.4

Number of Lab Sinks	Tank Size	
	Gallons	Liters
60	200	757
75	275	1040.9
110	360	1362.6
150	500	1898.5
175	550	2081.8
200	650	2460.3
300	1200	4542
500	2000	7570
600	3000	11355

Limestone Chips for Acid Neutralization Tanks - Most state and local codes require the addition of a neutralization medium in acid waste tanks with the addition of water for dilution prior to discharge into a sanitary sewer system. Limestone must be 1" to 3" in diameter with a calcium carbonate content of at least 90%. Spears® offers high grade Limestone Chips having a calcium carbonate content of approximately 95%. The use of Limestone Chips is generally one of the best and least expensive means of acid neutralization, but may be used in conjunction with more sophisticated chemical treatments if necessary.

How Much Limestone to Use - The following is a guideline for pounds of Limestone Chips to use for one (1) tank filling (charge). It is recommended that sufficient quantity be ordered for more than one filling.

Tank Size Gallons	Approx. Pounds
5	50
15	100
30	200
55	500
100	1,000
150	1,750
175	1,900
200	2,500
275	3,200

Tank Size Gallons	Approx. Pounds
300	3,200
350	4,000
500	5,000
550	7,500
650	9,000
1200	11,000
2000	16,000
3000	25,000

General Tank Maintenance Guidelines - Tanks should be inspected routinely for accumulation of precipitated sludge and debris that must be cleaned out (usually scooped out) and for periodic addition of limestone and water if necessary. While once every one to three months may be sufficient, professional assistance should be sought to establish a proper schedule based on actual use. **Note:** Tank must be filled with water prior to carefully adding Limestone Chips to charge the system. Request instruction sheet.

LabWaste™ CPVC Technical Information & Installation Guide



System Pressure Testing

Spears® **LabWaste**™ CPVC systems should be tested with water as follows, or according to local plumbing codes. Test only after sufficient joint cure (see “Recommended Set & Cure Time”). The system may be tested in its entirety or isolated at each floor or in sections for testing.

Close all openings tight except the highest opening and fill the system to the point of overflow. Fill the system slowly, being sure to allow all air to escape. A minimum of ten (10) foot (3048 mm) head should be used for entire system or section tested. Allow the system/section under test to set 15 minutes before inspection for leaks.

Drain each section after inspection. Any leaking solvent cement joints should be cut from the system, replaced and retested after proper joint cure. Check any leaking mechanical joints for proper installation, applicable tightening, and presence of any debris in the joint. Reassemble and retest.

Supplemental Equipment Not Specified in this Manual

A variety of supplemental equipment including, pump stations, laboratory workstations, and fume hoods are built to customer specifications. Standard Laboratory fixtures, floor drains, wall drains and traps plus manual or actuated valves are also available. Spears® can custom fabricate virtually any **LabWaste**™ system component. Contact Spears® for additional needs or a custom quotation.

System Integrity

Spears® **LabWaste**™ products have been developed and designed to be used as a total system consisting of pipe, fittings, accessories, solvent cement and thread sealant. All-Spears® **LabWaste**™ components should be used in order to insure a sound piping system. Substitution of other products for Spears® **LabWaste**™ pipe, fittings, or solvent cement may be detrimental to system integrity and is not recommended. The Spears® Limited Lifetime Warranty (located on the back cover of this manual) does not cover problems occurring within the piping system as the direct result of non-use of Spears® **LabWaste**™ system products.

Sample Engineering Specification

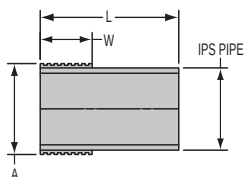
Special drainage systems for corrosive chemical or acid waste shall be manufactured from CPVC Type IV, ASTM Cell Classification 23447. All pipe, fittings and solvent cement shall be manufactured in accordance with ASTM F 2618 and certified by NSF International for corrosive waste end use (NSF® cw). All pipe and molded fittings shall be CAN/ULC S102.2 Listed for Surface Burning Characteristics with a flame spread of less than 25 and a smoke development of less than 50 as designated on the original package labeling for fittings and on the pipe print string marking. All pipe markings shall be accompanied by a yellow stripe for identification of CPVC chemical waste system. All fittings shall be CPVC drainage patterns meeting the requirements of ASTM D 3311 and specialty patterns according to the manufacturer's specifications. Joining method for pipe and fittings shall be solvent cement welding. Solvent cement shall be a “one-step” primerless type CPVC cement designated by the system manufacturer, specially formulated for resistance to corrosive chemicals and manufactured in accordance with ASTM F 493, as specified in ASTM F 2618. Mechanical connections for special equipment connection or transition to other system materials shall be as specified by the CPVC system manufacturer. All pipe, fittings, and cement shall be supplied together as a complete system. Installation shall be in accordance with the manufacturer's instructions and all applicable codes. Special drainage system to be Spears® **LabWaste**™ CPVC Corrosive Waste Drainage Systems manufactured by Spears® Manufacturing Company.



LabWaste™ CPVC Technical Information & Installation Guide

P095 Duriron Transition Fitting

Mechanical Joint x Pipe Size

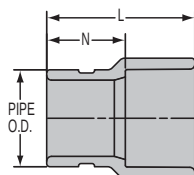


For connection to Duriron system. Requires duriron mechanical joint coupling.

Part Number	Size	A	L	W
P095-015C	1-1/2	1-3/16	4	1-3/8
P095-020C	2	2-5/8	4	1-1/2
P095-030C	3	3-3/4	4	1-7/8
P095-040C	4	4-3/4	4	2-5/16

P096 Grooved Coupling

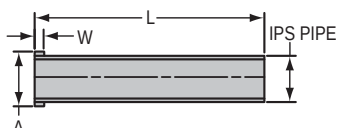
Grv x Soc



Part Number	Size	L	N
P096-015C	1-1/2	2-15/16	1-1/2
P096-020C	2	3-1/16	1-9/16
P096-030C	3	3-9/16	1-11/16
P096-040C	4	4-1/2	2-1/4
P096-060C	6	5-3/8	2-3/8

P097 Duriron Transition Coupling

Spig x Caulk Joint

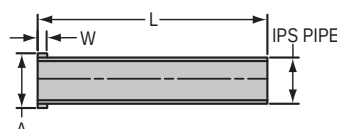


For connection to Duriron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	A	L	W
P097-015C	1-1/2	2-1/4	12	1/2
P097-020C	2	2-7/8	12	1/2
P097-030C	3	4-3/16	12	1/2
P097-040C	4	5-1/4	12	1/2

P097 Duriron Transition Coupling (continued)

Spig x Caulk Joint

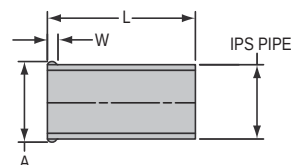


For connection to Duriron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	A	L	W
P097-060C	6	7-9/16	12	1/2
P097-080C	8	9-11/16	12	1/2

P098 Glass Transition Coupling

Spig x Clamp

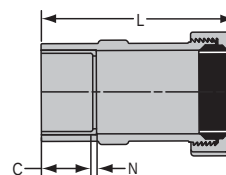


For connection to glass system. Requires use of clamp from glass system manufacturer.

Part Number	Size	A	L	W
P098-015C	1-1/2	2-1/16	4	1/4
P098-020C	2	2-1/16	5	1/4
P098-030C	3	3-11/16	6	5/16
P098-040C	4	4-27/32	6	5/16
P098-060C	6	7-1/8	6	1/2

P099 Transition Coupling

H x Compression



For connection to PP or PVDF systems. Requires Safety Retaining Groove Tool. Contact Spears®.

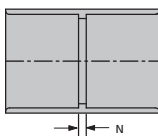
Part Number	Size	C	L	N
P099-015C	1-1/2	1-3/8	5-1/8	3/32
P099-020C	2	1-1/2	5-3/4	1/8
P099-030C	3	1-7/8	10-5/16	3/16
P099-040C	4	2-1/4	11-5/32	7/32
P099-060C	6	3	13-3/8	9/32

LabWaste™ CPVC Technical Information & Installation Guide



P100 Coupling

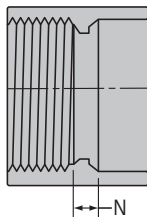
H x H



Part Number	Size	N
P100-015C	1-1/2	1/8
P100-020C	2	1/8
P100-030C	3	3/16
P100-040C	4	1/4
P100-060C	6	1/4
P100-080C	8	1/4
P100-100C	10	3/8
P100-120C	12	3/8
P100-140C	14	3/8

P101 Female Adapter

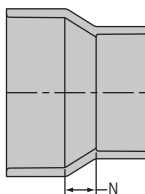
FPT x H



Part Number	Size	N
P101-015C	1-1/2	1/4
P101-020C	2	1/4
P101-030C	3	5/16
P101-040C	4	3/8
P101-060C	6	15/32

P102 Increaser Reducer

H x H

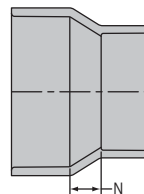


Part Number	Size	N
P102-251C	2x1-1/2	11/16

P102 Increaser Reducer

(continued)

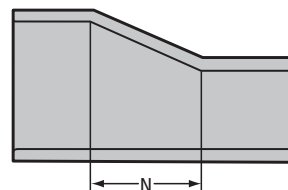
H x H



Part Number	Size	N
P102-337C	3x1-1/2	1-3/32
P102-338C	3x2	15/16
P102-420C	4x2	1-3/4
P102-422C	4x3	15/16
P102-530C	6x3	1-15/16
P102-532C	6x4	1-7/16
P102-582C	8x4	2-11/32
P102-585C	8x6	1-11/32
P102-624C	10x4	3-3/8
P102-626C	10x6	2-3/16
P102-628C	10x8	1-9/32
P102-666C	12x6	3-9/32
P102-668C	12x8	2-1/4

Pipe Increaser - Eccentric Reducer

H x H



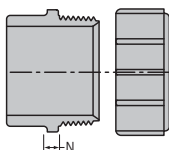
Part Number	Size	N
P102-338EC	3x2	2-15/32



LabWaste™ CPVC Technical Information & Installation Guide

P103P Trap Adapter - Male

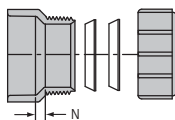
Spig x Slip with Plastic Nut



Part Number	Size	N
P103P-015C	1-1/2	3/16
P103P-020C	2	3/16

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer

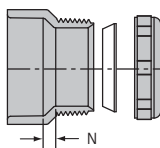
H x Slip w/Plastic Nut



Part Number	Size	N
P104R-015C	1-1/2	3/16

P104X Trap Adapter - Female

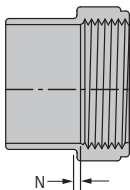
H x Slip w/ Chrome Nut & Washer



Part Number	Size	N
P104X-015C	1-1/2	3/16

P105 Cleanout Adapter

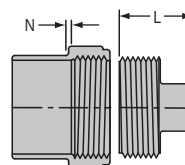
Spig x FPT



Part Number	Size	N
P105-015C	1-1/2	5/32
P105-020C	2	1/4
P105-030C	3	11/32
P105-040C	4	1/4
P105-060C	6	11/32
P105-080C	8	13/32

P105X Cleanout Adapter with Square Head Plug

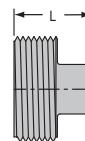
Spig x FPT



SEE PART NO. P105 AND P106

P106 Square Head Cleanout Plug

MPT



Part Number	Size	L
P106-015C	1-1/2	1-3/8
P106-020C	2	1-5/16
P106-030C	3	1-25/32
P106-040C	4	1-7/8
P106-060C	6	1-15/16
P106-080C	8	2-1/8

P107 Flush Bushing

Spig x H



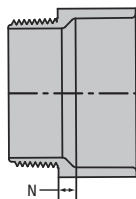
Part Number	Size	L	N
P107-251C	2x1-1/2	1-1/16	7/32
P107-337C	3x1-1/2	1-3/4	1
P107-338C	3x2	1-25/32	1
P107-420C	4x2	2	1-3/16
P107-422C	4x3	2	1/2
P107-530C	6x3	3-23/32	2-11/32
P107-532C	6x4	3-7/16	1-11/16
P107-582C	8x4	4-9/16	2-13/16
P107-585C	8x6	4-19/32	1-9/16

LabWaste™ CPVC Technical Information & Installation Guide



P109 Male Adapter

MPT x H



Part Number	Size	N
P109-169C	1-1/4x1-1/2	3/16
P109-015C	1-1/2	3/16
P109-020C	2	3/16
P109-030C	3	3/8
P109-040C	4	3/8
P109-060C	6	11/16

P116 Cap

Socket



Part Number	Size	L
P116-015C	1-1/2	15/16
P116-020C	2	1
P116-030C	3	1-3/4
P116-040C	4	2
P116-060C	6	3-9/32
P116-080C	8	6-3/8

P110 Counter Sunk Cleanout Plug

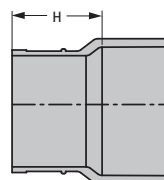
MPT



Part Number	Size	L
P110-015C	1-1/2	5/8
P110-020C	2	5/8
P110-030C	3	3/4
P110-040C	4	7/8
P110-060C	6	31/32

P119 No-Hub Adapter

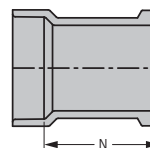
S x H



Part Number	Size	H
P119-015C	1-1/2	1-9/16
P119-020C	2	1-5/8
P119-030C	3	1-13/16
P119-040C	4	1-7/8

P123 Hub Adapter

H x S



For connection to Cast Iron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	N
P123-020C	2	4-5/8
P123-030C	3	5-5/8



LabWaste™ CPVC Technical Information & Installation Guide

P130 Repair Coupling

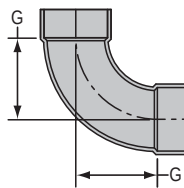
H x H



Part Number	Size	L
P130-030C	3	3-7/32
P130-040C	4	3-13/16

P300 1/4 Bend (90° EII)

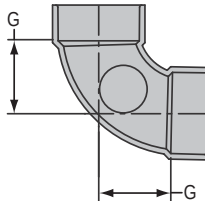
H x H



Part Number	Size	G
P300-015C	1-1/2	1-11/16
P300-020C	2	2-9/32
P300-030C	3	3
P300-040C	4	3-7/8
P300-060C	6	5
P300-080C	8	6
P300-100C	10	9-29/32
P300-120C	12	10-29/32

P300S 1/4 Bend w/Side Inlet (90° EII)

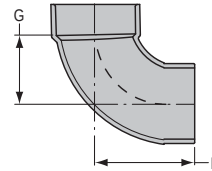
All Hub



Part Number	Size	G
P300S-338C	3x3x2	3-11/32

P302 1/4 Bend, Street (90° Street EII)

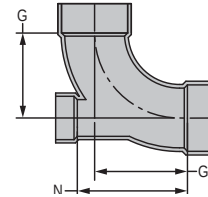
H x Spig



Part Number	Size	G	H
P302-015C	1-1/2	1-9/16	2-13/32
P302-020C	2	2-7/32	3-5/32
P302-030C	3	3-3/16	4-9/16
P302-040C	4	3-7/8	5-5/8
P302-060C	6	5	8-11/32
P302-080C	8	6	10-1/2
P302-100C	10	9-29/32	15-3/8
P302-120C	12	10-15/16	17-3/8

P303 1/4 Bend with Low Heel Inlet

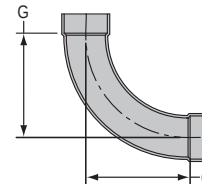
H x H x H



Part Number	Size	G	N
P303-338C	3x3x2	2-27/32	4-5/32
P303-420C	4x4x2	3-5/16	5

P304 1/4 Bend, Long Sweep (90° LS EII)

H x H



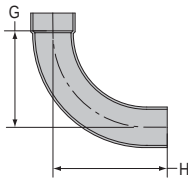
Part Number	Size	G
P304-015C	1-1/2	2-3/4
P304-020C	2	3-3/32
P304-030C	3	4-5/32
P304-040C	4	5-25/32
P304-060C	6	8-29/32

LabWaste™ CPVC Technical Information & Installation Guide



P309 Long Sweep 1/4 Bend, Street (90° LS Street Ell)

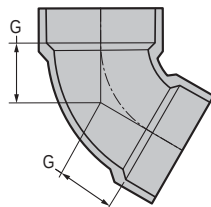
H x Spig



Part Number	Size	G	H
P309-015C	1-1/2	2-3/4	3-11/32
P309-020C	2	3-9/32	4-3/32
P309-030C	3	4-1/8	5-23/32
P309-040C	4	5-1/32	6-7/16
P309-060C	6	8-31/32	11-29/32

P319 1/6 Bend (60° Ell)

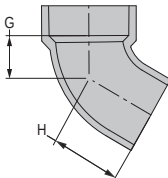
H x H



Part Number	Size	G
P319-015C	1-1/2	1-1/16
P319-020C	2	1-3/8
P319-030C	3	1-11/16
P319-040C	4	2-5/32
P319-060CF	6	4-9/16

P320 1/6 Bend, Street (60° Street Ell)

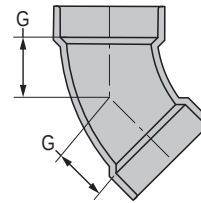
H x Spig



Part Number	Size	G	H
P320-015C	1-1/2	1-1/16	1-3/4
P320-020C	2	1-5/8	2-1/4
P320-030C	3	1-11/16	3-1/16
P320-040C	4	2-5/32	3-19/32

P321 1/8 Bend (45° Ell)

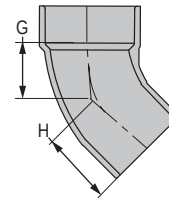
H x H



Part Number	Size	G
P321-015C	1-1/2	1-1/8
P321-020C	2	1-9/16
P321-030C	3	1-23/32
P321-040C	4	2-1/8
P321-060C	6	2-1/16
P321-080C	8	2
P321-100C	10	2-5/8
P321-120C	12	3-1/8

P323 1/8 Bend, Street (45° Street Ell)

H x Spig



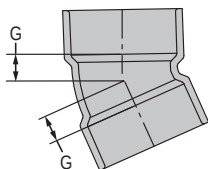
Part Number	Size	G	H
P323-015C	1-1/2	31/32	1-13/16
P323-020C	2	1-9/32	2-5/16
P323-030C	3	1-7/8	3-1/8
P323-040C	4	2-3/16	3-15/16
P323-060C	6	1-29/32	5-1/16
P323-080C	8	3-1/8	6-1/2



LabWaste™ CPVC Technical Information & Installation Guide

P324 1/16 Bend (22-1/2° Ell)

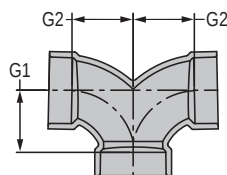
H x H



Part Number	Size	G
P324-015C	1-1/2	1/2
P324-020C	2	11/16
P324-030C	3	13/16
P324-040C	4	1
P324-060C	6	1-5/16
P324-080C	8	1-11/32

P327 Double 1/4 Bend (3 Way Ell)

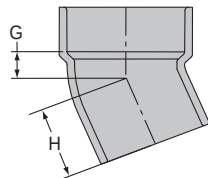
All Hub



Part Number	Size	G1	G2
P327-015C	1-1/2	1-3/4	1-3/4
P327-020C	2	2-5/16	2-5/16
P327-030C	3	3-1/16	3-1/16
P327-040C	4	3-29/32	3-29/32
P327-241C	2x1-1/2x1-1/2	1-3/8	4-1/2

P326 1/16 Bend, Street (22-1/2° Street Ell)

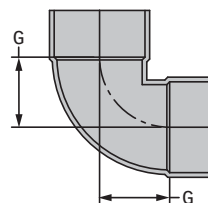
H x Spig



Part Number	Size	G	H
P326-015C	1-1/2	1/2	1-1/4
P326-020C	2	11/16	1-1/2
P326-030C	3	13/16	2-5/16
P326-040C	4	1	2-3/4
P326-060C	6	1-3/8	4-1/2
P326-080C	8	1-3/4	5-5/8

P331 Vent Ell

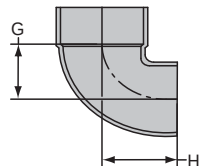
H x H



Part Number	Size	G
P331-015C	1-1/2	1-3/16
P331-020C	2	1-1/2
P331-030C	3	1-7/8
P331-040C	4	2-5/16
P331-060C	6	3-15/32

P333 Vent Ell, Street

H x Spig



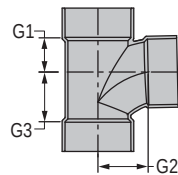
Part Number	Size	G	H
P333-015C	1-1/2	1-3/16	2
P333-020C	2	1-1/2	2-1/8
P333-030C	3	1-7/8	3-5/8
P333-040C	4	4-3/16	4-7/16

LabWaste™ CPVC Technical Information & Installation Guide



P400 Sanitary Tee

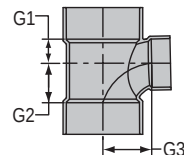
All Hub



Part Number	Size	G1	G2	G3
P400-015C	1-1/2	25/32	1-9/16	1-9/16
P400-020C	2	1-11/32	2-5/16	2-5/16
P400-030C	3	1-13/16	2-7/8	2-7/8
P400-040C	4	2-1/32	3-11/16	3-11/16
P400-060C	6	3-7/16	5-1/32	5-1/32
P400-080C	8	4-13/32	6-1/16	6-1/16
P400-100C	10	5-17/32	9-31/32	9-29/32
P400-120C	12	6-1/2	10-31/32	11-1/32

P401 Sanitary Tee, Reducing

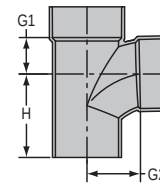
All Hub



Part Number	Size	G1	G2	G3
P401-241C	2x1-1/2x1-1/2	1-3/16	1-15/16	2-3/16
P401-251C	2x2x1-1/2	1-1/4	1-27/32	2-3/16
P401-257C	2x1-1/2x2	1-3/8	2-5/16	2-5/16
P401-337C	3x3x1-1/2	15/16	1-3/4	2-1/2
P401-338C	3x3x2	31/32	1-29/32	2-13/16
P401-420C	4x4x2	7/8	1-27/32	3-5/32
P401-422C	4x4x3	1-11/16	3	3-1/2
P401-532C	6x6x4	2-1/8	3-19/32	4-11/16
P401-582C	8x8x4	4-17/32	5-7/8	8-7/8

P403 Sanitary Tee, Street

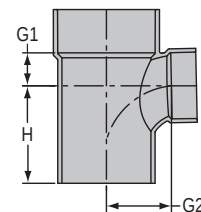
S x H x H



Part Number	Size	G1	G2	H
P403-015C	1-1/2	13/16	1-17/32	2-7/16
P403-030C	3	1-7/8	2-15/16	4-3/8
P403-040C	4	2-1/4	3-7/8	5-5/8
P403-080C	8	4-3/8	5-31/32	9-13/32
P403-100C	10	5-19/32	9-1/2	14-19/32
P403-120C	12	6-15/32	11-1/32	16-9/32

P404 Sanitary Tee, Street, Reducing

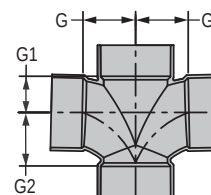
S x H x H



Part Number	Size	G1	G2	H
P404-241C	2x1-1/2x1-1/2	1-7/32	2-7/32	2-9/16
P404-251C	2x2x1-1/2	1-9/32	2-3/16	2-1/2
P404-337C	3x3x1-1/2	13/16	2-15/32	2-15/16
P404-338C	3x3x2	1-1/16	2-3/4	3-7/32

P428 Double Sanitary Tee

All HUB



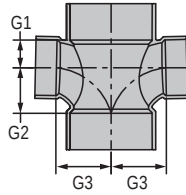
Part Number	Size	G	G1	G2
P428-015C	1-1/2	1-3/4	1	1
P428-020C	2	2-7/8	1-25/32	1-25/32
P428-030C	3	3-1/16	1-13/16	1-13/16
P428-040C	4	3-7/8	2-1/4	2-1/4



LabWaste™ CPVC Technical Information & Installation Guide

P429 Double Sanitary Tee, Reducing

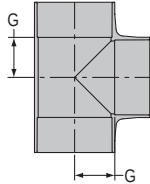
All Hub



Part Number	Size	G1	G2	G3
P429-241C	2x1-1/2x1-1/2x1-1/2	1-3/16	1-7/8	2-1/16
P429-251C	2x2x1-1/2x1-1/2	1-1/8	1-7/8	2-1/8
P429-337C	3x3x1-1/2x1-1/2	15/16	1-3/4	4
P429-338C	3x3x2x2	1-3/16	2-1/8	2-7/8
P429-419C	4x4x1-1/2x1-1/2	1-1/16	2	5-1/16
P429-420C	4x4x2x2	1-1/8	2-1/16	5-1/16
P429-422C	4x4x3x3	1-3/4	3	5-1/16

P441 Vent Tee

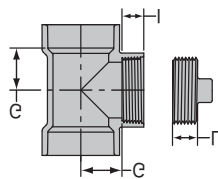
All Hub



Part Number	Size	G
P441-015C	1-1/2	1-5/32
P441-030C	3	1-29/32
P441-040C	4	2-3/8
P441-060C	6	3-5/8

P444X Cleanout Tee w/Plug

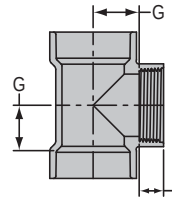
H x H x FPT



SEE PART NO. P445 AND P106

P445 Cleanout Tee

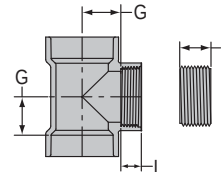
H x H x FPT



Part Number	Size	G	I
P445-015C	1-1/2	1-1/8	5/8
P445-020C	2	1-13/32	5/8
P445-030C	3	1-7/8	3/4
P445-040C	4	2-7/16	7/8
P445-060C	6	3-1/2	1

P445X Cleanout Tee with Counter Sunk Plug

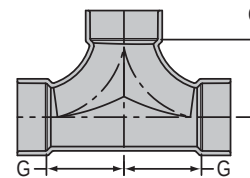
H x H x FPT



SEE PART NO. P445 AND P110

P448 2-Way Cleanout

ALL HUB



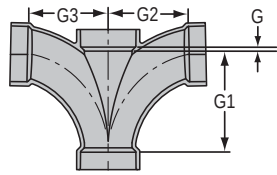
Part Number	Size	G
P448-030C	3	4
P448-040C	4	4-13/16

LabWaste™ CPVC Technical Information & Installation Guide



P500 Double Fixture Fitting

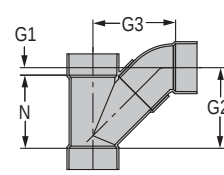
All Hub



Part Number	Size	G	G1	G2	G3
P500-020C	2x2x2x2	9/16	3-9/16	3-5/16	3-5/16
P500-241C	2x1-1/2x1-1/2x1-1/2	3/8	3-1/8	2-7/8	2-7/8
P500-251C	2x2x1-1/2x1-1/2	1/8	3-1/4	2-25/32	2-25/32
P500-338C	3x2x3x3	1/2	6-9/32	4-7/8	4-7/8
P500-030C	3x3x3x3	1/2	6-9/32	4-29/32	4-29/32

P503 Combination Wye and 1/8 Bend (Two Piece)

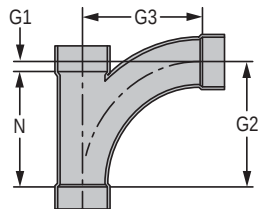
All Hub



Part Number	Size	G1	G2	G3	N
P503-060C	6	31/32	10-31/32	11-11/32	10
P503-080C	8	1-1/2	16	16	14-1/2
P503-100C	10	2-1/2	21-7/8	17-15/16	16-9/16

P501 Combination Wye and 1/8 Bend (Long Turn Tee Wye)

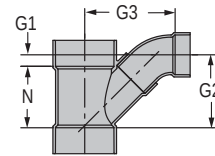
All Hub



Part Number	Size	G1	G2	G3	N
P501-015C	1-1/2	13/32	3-7/8	3-7/8	3-15/32
P501-020C	2	11/16	5-1/8	5-1/8	4-7/16
P501-030C	3	1-1/16	7-9/16	7-9/16	6-1/2
P501-040C	4	1-1/2	10	10	8-1/2

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)

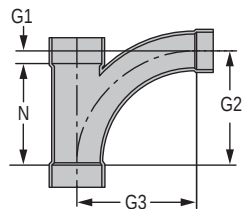
All Hub



Part Number	Size	G1	G2	G3	N
P504-241C	2x1-1/2	3/32	4-7/16	4-15/32	4-5/16
P504-528C	6x2	15/32	7-9/16	8-27/32	7-3/32
P504-530C	6x3	5/8	7-1/4	8-29/32	7-3/32
P504-532C	6x4	1-5/16	8-3/32	10-3/32	6-27/32
P504-582C	8x4	1-1/4	9-1/4	11-1/8	8
P504-585C	8x6	1	11-5/16	12-7/16	10-7/16
P504-623C	10x3	2-3/8	11-1/16	13-15/16	11-1/16
P504-624C	10x4	1-3/8	12-3/16	14-5/8	10-13/16
P504-626C	10x6	2-1/2	11-3/4	14-1/16	10-13/16
P504-628C	10x8	2-1/2	14-1/2	15-1/2	13-9/16
P504-668C	12x8	3	20-1/8	19-1/8	19-1/8
P504-670C	12x10	3	19-13/16	19-1/2	19-1/8

P502 Combination Wye and 1/8 Bend, Reducing (Long Turn Tee Wye)

All Hub



Part Number	Size	G1	G2	G3	N
P502-251C	2x2x1-1/2	7/16	3-15/16	4-3/16	3-1/2
P502-337C	3x3x1-1/2	7/16	3-15/16	4-3/4	3-1/2
P502-338C	3x3x2	11/16	5-1/8	5-11/16	4-7/16
P502-420C	4x4x2	7/32	4-1/2	6-1/8	4-3/32
P502-422C	4x4x3	1-1/16	7-9/16	8-1/16	6-1/2

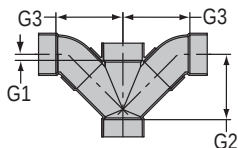
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology



LabWaste™ CPVC Technical Information & Installation Guide

P507 Double Combination Wye and 1/8 Bend

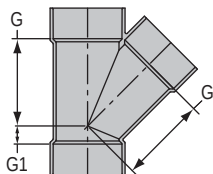
All Hub



Part Number	Size	G1	G2	G3
P507-020C	2	11/16	5-9/16	5-13/16
P507-030C	3	27/32	7-11/32	7-11/32
P507-040C	4	1-1/8	8-31/32	9-7/32
P507-060C	6	1	11-1/32	11-13/32
P507-338C	3x3x2x2	29/32	5-3/4	6-1/2
P507-422C	4x4x3x3	1-1/16	7-1/2	8-1/8
P507-530C	6x6x3x3	1-1/32	10-7/8	10-7/8
P507-532C	6x6x4x4	1-23/32	11-5/8	12-5/32

P600 45° Wye

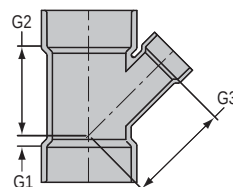
All Hub



Part Number	Size	G	G1
P600-015C	1-1/2	2-7/8	1-3/32
P600-020C	2	3-5/8	7/8
P600-030C	3	5	1-5/8
P600-040C	4	6-1/4	1-7/8
P600-060C	6	8	1-3/8
P600-080C	8	11-5/16	2
P600-100C	10	14-1/32	2-7/16
P600-120C	12	16-7/16	2-5/32

P601 45° Wye, Reducing

All Hub

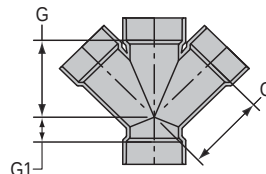


Part Number	Size	G1	G2	G3
P601-241C	2x1-1/2x1-1/2	3/4	2-15/16	2-15/16
P601-251C	2x2x1-1/2	13/16	3-15/32	3-17/32
P601-337C	3x3x1-1/2	1/2	3-25/32	4-3/8
P601-338C	3x3x2	7/8	4-3/32	4-17/32
P601-419C	4x4x1-1/2	3/8	3-9/32	4-3/8
P601-420C	4x4x2	9/32	4-1/4	5-5/16
P601-422C	4x4x3	21/32	5-1/2	5-29/32
P601-528C	6x6x2	7/32	6-7/8	8-3/8
P601-530C	6x6x3	1-1/8	6	6-7/8
P601-532C	6x6x4	23/32	6-3/16	7-1/8
P601-578C	8x8x2	3/8	7-5/8	9-13/16
P601-580C	8x8x3	7/32	9-1/8	7-11/32
P601-582C	8x8x4	3/8	6-31/32	8-5/16
P601-585C	8x8x6	1	9-1/2	9-13/16
P601-626C	10x10x6	9/32	10-31/32	11-31/32
P601-628C	10x10x8	1-1/16	12-3/8	11-27/32
P601-661C ¹	12x12x2	3	16-3/16	23-1/2
P601-663C ¹	12x12x3	3	16-3/16	22-7/8
P601-664C ¹	12x12x4	3	16-3/16	22-3/8
P601-666C ¹	12x12x6	3	16-3/16	21-1/8
P601-670C ¹	12x12x10	2-15/16	16-3/16	17-3/16

¹ Sized with Bushing

P611 Double Wye

All Hub



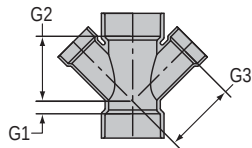
Part Number	Size	G	G1
P611-015C	1-1/2	2-7/8	1-1/8
P611-020C	2	3-9/16	1-3/8
P611-030C	3	4-15/16	1-5/8
P611-040C	4	6-11/32	1-27/32
P611-060C	6	8-5/16	1-25/32

LabWaste™ CPVC Technical Information & Installation Guide



P612 Double Wye, Reducing

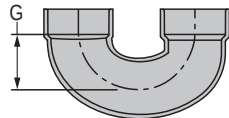
All Hub



Part Number	Size	G1	G2	G3
P612-241C	2x1-1/2x1-1/2x1-1/2	25/32	3-3/8	4-3/16
P612-251C	2x2x1-1/2x1-1/2	1-1/16	3-5/16	3-7/16
P612-337C	3x3x1-1/2x1-1/2	1/2	3-3/4	4-5/16
P612-338C	3x3x2x2	7/8	4-1/16	4-5/8
P612-420C	4x4x2x2	3/8	4-5/8	5-17/32
P612-422C	4x4x3x3	1-1/2	5-1/32	5-9/32
P612-532C	6x6x4x4	3/16	6-11/16	7-7/16

P700 Return Bend

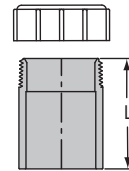
H x H



Part Number	Size	G
P700-015C	1-1/2	1-13/32
P700-020C	2	2-3/8
P700-030C	3	3
P700-040C	4	3-7/16
P700-060C	6	5

P704P Tail Piece Adapter

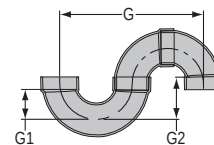
Spig x Slip w/Plastic Nut



Part Number	Size	L
P704P-015C	1-1/2	2-1/2

P705 S-Trap

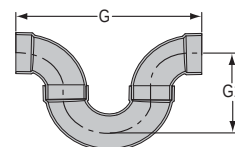
H x H



Part Number	Size	G	G1	G2
P705-015C	1-1/2	7-1/2	1-3/4	2-3/8
P705-020C	2	14-1/2	2-3/8	3-13/32
P705-030C	3	15-1/2	3-3/16	4-7/16
P705-040C	4	19-1/16	3-7/8	5-9/16

P705R Running Trap

H x H



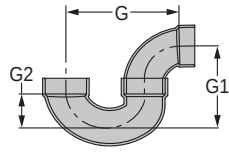
Part Number	Size	G	G1
P705R-015C	1-1/2	8	3-3/4
P705R-020C	2	12-1/2	5-7/16
P705R-030C	3	17-1/8	7-21/32
P705R-040C	4	20-7/8	9-9/32



LabWaste™ CPVC Technical Information & Installation Guide

P706X P-Trap

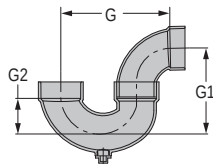
H x H



Part Number	Size	G	G1	G2
P706X-015C	1-1/2	4-3/16	3-29/32	1-13/32
P706X-020C	2	6-7/16	4-21/32	2-11/32
P706X-030C	3	8-11/16	6-15/16	3-1/32
P706X-040C	4	11-1/32	8-1/8	3-23/32
P706X-060C	6	18-25/32	14-3/4	5-13/16
P706X-080C	8	22	17	6-3/4

P707X P-Trap w/Cleanout

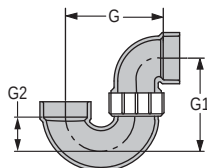
H x H



Part Number	Size	G	G1	G2
P707X-015C	1-1/2	4-3/16	3-21/32	1-7/32

P708P P-Trap w/Plastic Nut (Union Connection)

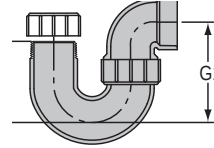
H x H



Part Number	Size	G	G1	G2
P708P-015C	1-1/2	4-1/4	3-3/4	1-9/16
P708P-020C	2	7-1/4	4-3/8	2-13/32

P711P L.A. Pattern P-Trap w/Plastic Nut (Union Connection w/Slip Joint)

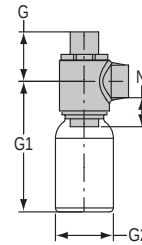
Slip x H w/Plastic Nut



Part Number	Size	G	G1	G2
P711P-015C	1-1/2	4-11/32	3-3/4	3-1/2

P712 Jar Trap

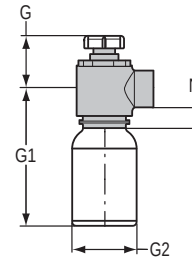
Spig x H



Part Number	Size	G	G1	G2	N
P712-015C	1-1/2	3-3/16	8-1/4	3-29/32	1-7/8

P712P Jar Trap w/Tail Piece Adapter

Slip x H



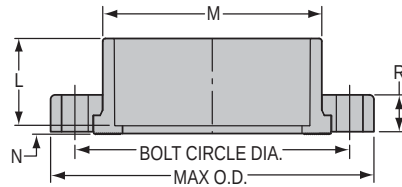
Part Number	Size	G	G1	G2	N
P712P-015C	1-1/2	3-5/16	8-1/4	3-7/8	1-3/4

LabWaste™ CPVC Technical Information & Installation Guide



Flange - Van Stone Style

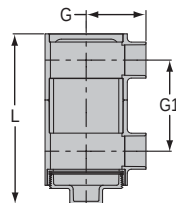
Soc



Part Number	Size	L	M	N	R	No. of Bolt Holes	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	Max O.D.
854-015C	1-1/2	1-17/32	2-7/16	3/16	3/4	4	3-7/8	1/2	2-1/2	5
854-020C	2	1-11/16	2-15/16	3/16	13/16	4	4-3/4	5/8	3	6
854-030C	3	2-1/8	4-1/4	1/4	1-1/16	4	6	5/8	3-1/4	7-1/2
854-040C	4	2-1/2	5-1/4	1/4	1-1/8	8	7-1/2	5/8	3-1/2	9
854-060C	6	3-3/8	7-9/16	7/16	1-9/32	8	9-1/2	3/4	4	11
854-080C	8	4-3/8	9-5/16	9/32	1-3/8	8	11-3/4	3/4	4-1/2	13-1/2
854-100C	10	5-11/16	11-3/4	21/32	1-5/8	12	14-1/4	7/8	5	16
854-120C	12	7-1/4	13-3/4	5/8	1-1/2	12	17	7/8	5	19
854-140C	14	7-1/2	15-1/2	1/2	2	12	18-3/4	1	5-1/2	21
854-160C	16	8-3/4	17-3/4	3/4	2-3/8	16	21-1/4	1	6-1/2	23-1/2

P720 Drum Trap

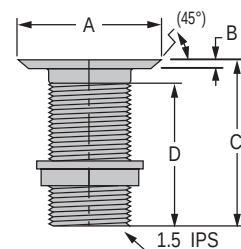
H x H



Part Number	Size	G	G1	L
P720-015C	1-1/2	3-5/8	5-11/16	10-5/8
P720-020C	2	3-7/8	5	10-3/8
P720-030C	3	4-1/2	6-3/4	13-7/16
P720-040C	4	4-3/8	8-1/4	15-11/16

Waste Assembly

Sink Outlet

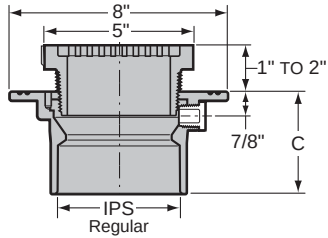


Part Number	Size	A	B	C	D
LWWA-1	1-1/2	2-7/16	9/32	4-9/32	3-27/32



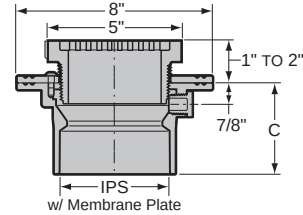
LabWaste™ CPVC Technical Information & Installation Guide

LW1500 Floor Drain with CPVC Adjustable Top w/5" Round Grate



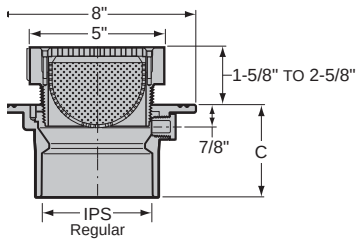
Part Number Regular	Size	IPS	C
LW1500-015C	1-1/2x5	1-1/2	4-3/16
LW1500-020C	2x5	2	4
LW1500-030C	3x5	3	4
LW1500-040C	4x5	4	3-3/4

LW150M Floor Drain with CPVC Adjustable Top w/5" Round Grate & Membrane Collar



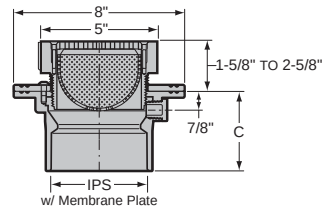
Part Number Membrane Plate	Size	C
LW150M-015C	1-1/2x5	4-3/16
LW150M-020C	2x5	4
LW150M-030C	3x5	4
LW150M-040C	4x5	3-3/4

LW1520 Floor Drain with CPVC Adjustable Top w/5" Round Grate & Strainer



Part Number	Size	IPS	C
LW1520-015C	1-1/2x5	1-1/2	4-3/16
LW1520-020C	2x5	2	4
LW1520-030C	3x5	3	4
LW1520-040C	4x5	4	3-3/4

LW152M Floor Drain with CPVC Adjustable Top w/5" Round Grate, Strainer & Membrane Collar

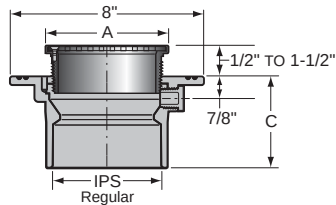


Part Number Regular	Size	IPS	C
LW152M-015C	1-1/2x5	1-1/2	4-3/16
LW152M-020C	2x5	2	4
LW152M-030C	3x5	3	4
LW152M-040C	4x5	4	3-3/4

LabWaste™ CPVC Technical Information & Installation Guide

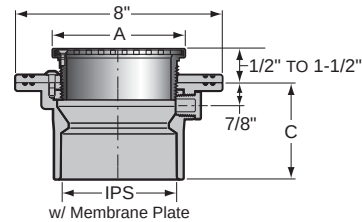


Floor Drain with Stainless Steel Adjustable Top w/Round Grate



Part Number Regular	Size	A, Nom	IPS	C
LW1500-015S	1-1/2x5	5	1-1/2	4-3/16
LW1600-015S	1-1/2x6	6	1-1/2	4-3/16
LW1700-015S	1-1/2x7	7	1-1/2	4-3/16
LW1800-015S	1-1/2x8	8	1-1/2	4-3/16
LW1500-020S	2x5	5	2	4
LW1600-020S	2x6	6	2	4
LW1700-020S	2x7	7	2	4
LW1800-020S	2x8	8	2	4
LW1500-030S	3x5	5	3	4
LW1600-030S	3x6	6	3	4
LW1700-030S	3x7	7	3	4
LW1800-030S	3x8	8	3	4
LW1500-040S	4x5	5	4	3-3/4
LW1600-040S	4x6	6	4	3-3/4
LW1700-040S	4x7	7	4	3-3/4
LW1800-040S	4x8	8	4	3-3/4

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar

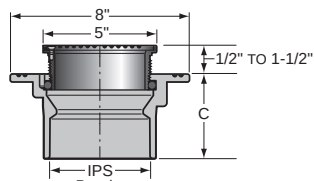


Part Number Membrane	Size	A, Nom	IPS	C
LW150M-015S	1-1/2x5	5	1-1/2	4-3/16
LW160M-015S	1-1/2x6	6	1-1/2	4-3/16
LW170M-015S	1-1/2x7	7	1-1/2	4-3/16
LW180M-015S	1-1/2x8	8	1-1/2	4-3/16
LW150M-020S	2x5	5	2	4
LW160M-020S	2x6	6	2	4
LW170M-020S	2x7	7	2	4
LW180M-020S	2x8	8	2	4
LW150M-030S	3x5	5	3	4
LW160M-030S	3x6	6	3	4
LW170M-030S	3x7	7	3	4
LW180M-030S	3x8	8	3	4
LW150M-040S	4x5	5	4	3-3/4
LW160M-040S	4x6	6	4	3-3/4
LW170M-040S	4x7	7	4	3-3/4
LW180M-040S	4x8	8	4	3-3/4



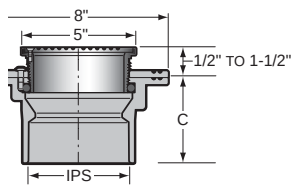
LabWaste™ CPVC Technical Information & Installation Guide

LW1510 Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



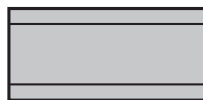
Part Number Regular	Size	IPS	C
LW1510-015S	1-1/2x5	1-1/2	4-3/16
LW1510-020S	2x5	2	4
LW1510-030S	3x5	3	4
LW1510-040S	4x5	4	3-3/4

LW151M Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



Part Number Membrane Plate	Size	IPS	C
LW151M-015S	1-1/2x5	1-1/2	4-3/16
LW151M-020S	2x5	2	4
LW151M-030S	3x5	3	4
LW151M-040S	4x5	4	3-3/4

LW LabWaste™ Pipe 10' Lengths



Part Number	Pipe Dia. (inches)	Avg. O.D.	Avg. I.D.	Min. Wall
LW-015	1-1/2	1.900	1.592	.145
LW-020	2	2.375	2.049	.154
LW-030	3	3.500	3.042	.216
LW-040	4	4.500	3.998	.237
LW-060	6	6.625	6.031	.280
LW-080	8	8.625	7.943	.322
LW-100	10	10.750	9.976	.365
LW-120	12	12.750	11.890	.406

One-Step CPVC Cement Yellow-Heavy Bodied



Part Number	Size
LW5-030	Quart
LW5-040	Gallon

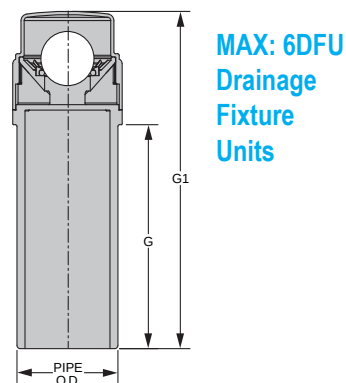
Average Number of Joints per Quart of Solvent Cement

Pipe Diameter	Number of Joints
1-1/2"	90
2"	60
3"	40
4"	30
6"	10
8"	5
10"	2 - 3
12"	1 - 2

Note: These figures are based on laboratory tests. Due to many field variations, these should be used as a general guide only.

LabWaste™ Air Admittance Valve

Spigot



Part Number	Size	G	G1
AAV-015C	1-1/2	4-1/8	6-1/4

LabWaste™ CPVC Technical Information & Installation Guide



Standard HDPE Round Neutralization/Dilution Tanks

Construction: HDPE – High Density Polyethylene

Tank Capacity US Gallons	Approx. Useable Capacity, US Gallons		Inside Dimension Dia x Ht. (in.)	Wall Thickness (in.)	Approx. Weight (lbs.)	Standard Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting	Optional Vent Connection Size (in.)	Approx. Centerline Height (in.)		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	3	1	11 x 14	3/16	10	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
15	7	2	18 x 15	3/16	20	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
30	19	6	18 x 29	3/16	35	3	Mipt	P101	2 or 3	23	19	25
55	35	12	22 x 36	3/16	50	4	Mipt	P101	3 or 4	27	23	31
100	77	26	28 x 42	1/4	85	4	Mipt	P101	3 or 4	35	31	37
150	105	35	31 x 48	1/4	100	4	Mipt	P101	3 or 4	38	34	42
175	135	45	30 x 60	1/4	125	4	Mipt	P101	3 or 4	51	47	54
200	137	46	36 x 48	1/4	125	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
275	186	62	42 x 48	1/4	160	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
300	230	76	36 x 74	5/16	175	4 or 6	Mipt/Flange	P101/854	4 or 6	61	56	65
350	243	81	48 x 48	5/16	200	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
500	395	132	52 x 60	3/8	225	4 or 6	Mipt/Flange	P101/854	4 or 6	51	47	54
550	447	149	48 x 72	3/8	275	4 or 6	Mipt/Flange	P101/854	4 or 6	64	60	67
650	548	183	48 x 84	3/8	375	4 or 6	Mipt/Flange	P101/854	4 or 6	75	71	76
1200	1052	351	69 x 84	3/8	600	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
2000 ¹	1559	521	84 x 84	1/2	850	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
3000 ¹	2203	735	95 x 97	1/2	1350	4 or 6	Mipt/Flange	P101/854	4 or 6	87	83	91

Standard CPVC Round Neutralization/Dilution Tanks

Construction: Chlorinated Polyvinyl Chloride (CPVC)

Tank Capacity US Gallons	Approx. Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx. Weight (lbs.)	Standard ² Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting ³	Optional ⁴ Vent Connection Size (in.)	Approx. Centerline Height (in.) ⁵		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	5	3	12-3/8 x 14-11/16	3/16	20	1-1/2 or 2	Socket	Direct	1-1/2 or 2	11	8	12
15	15	7	17-11/16 x 17-1/4	3/16	35	1-1/2 or 2	Socket	Direct	1-1/2 or 2	11	8	12
30	30	18	17-5/8 x 33	3/16	54	3	Socket	Direct	2 or 3	23	18	25
55	55	35	23-1/2 x 38-1/2	1/4	70	4	Socket	Direct	3 or 4	27	23	31

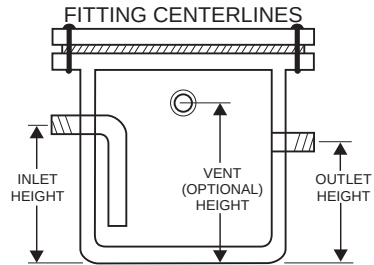
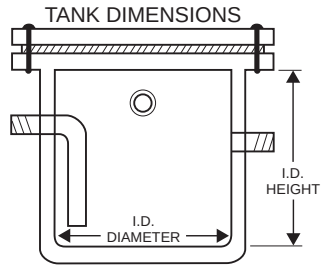
Important Notes

- Larger HDPE tanks may include exterior steel banding or fiberglass reinforcement for additional strength. Special ordered optional inspection manhole ports are recommended for larger tanks (includes cover with neoprene gasket, stainless steel nuts, bolts, and washers).
- All tanks can be special ordered with Mipt, Flanged (CL150), and Fipt connections or varying combinations other than standard connections specified. Inlets or vents may also be custom ordered for installation in covers instead of tank sides.
- For transitions from Mipt HDPE tank connections to LabWaste™ piping use part numbers P101-xxxC, Female Adapter. CPVC tank sockets can be cemented directly to LabWaste™ piping. For transitions from ALL flanged connections to LabWaste™ piping use part numbers 854-xxxC, Flange (xxx = size code).
- Venting is required by codes but may be accomplished either at the tank or in-line.
- Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault with use of a protective traffic cover as deemed appropriate. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fitting centerline since tank heights can vary.

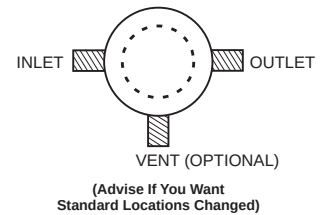


LabWaste™ CPVC Technical Information & Installation Guide

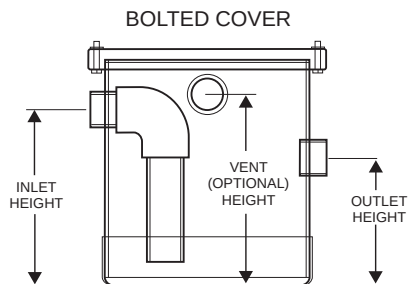
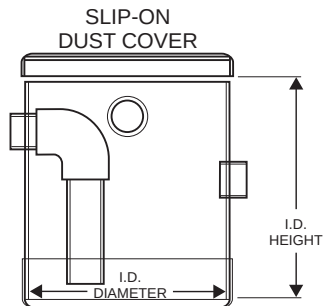
HDPE Tanks



TOP VIEW STANDARD FITTING LOCATIONS

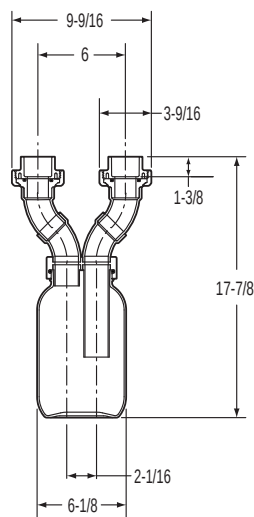
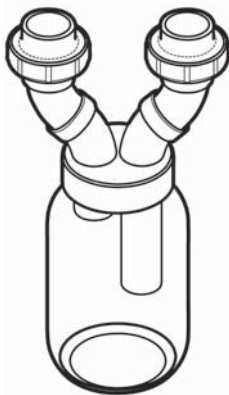


CPVC Tanks

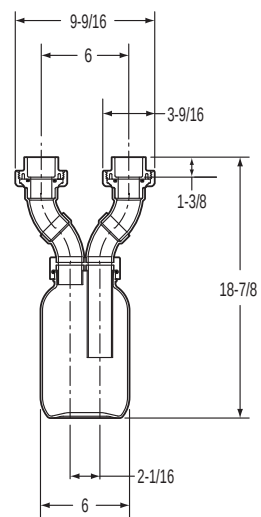


1-Gallon CPVC Dilution Tanks

Provides chemical dilution from water rinse during use. Designed for under-sink installations.
CPVC construction with Glass or PP Jar type tank.



Glass



Polypropylene



Chemical Resistance Information

CPVC is inert to most acids, bases, salts, plus a wide variety of organic compounds. Application conditions including chemical concentration and temperature must be taken into consideration. Due to the many variables involved, final suitability often must be based on in-service testing.

The following Chemical Resistance Table recommendations apply only to non-pressure, laboratory drainage applications, which are those characterized as the routine disposal of a wide variety of hot and cold chemicals in relatively small quantities accompanied by water for the purpose of dilution and flushing. For use of **LabWaste™** CPVC products in continuous or dedicated chemical waste drainage systems, chemical resistance data for pressure applications must be followed. Contact Spears® Technical Services for additional information.

In many cases compatibility or solubility data is not available. While specific data may not be available, please note that virtually all aqueous solutions of chemicals used in a laboratory can be safely used with proper dilution and flushing. This includes chemicals that readily disperse in water (such as many fat-soluble vitamins and oils) that can be flushed during disposal.

This information is compiled from commercially available industry sources. It is offered in good faith and believed to be accurate at the time of its preparation, but is offered without any warranty, expressed or implied, by information sources or Spears® Manufacturing Company. These recommendations are guidelines for use and the final decision regarding material suitability must rest with the end-user.

Noted Caution Areas for CPVC

- Disposed chemicals must be properly diluted. Chemicals that individually have no affect may have an affect when used in combination. Due to the wide variety of potential chemical concentrations and combinations, testing under actual service conditions is highly recommended.
- CPVC is not recommended for use with chlorinated solvents. Most solvents are prohibited by law from disposal in drainage systems.
- Chemicals that do not normally affect CPVC may cause cracking when excessive stress is applied. Tests under applied adverse stress conditions indicate that environmental stress cracking may occur when exposed to surfactants, certain oils, or grease. Such stresses include external stresses from expansion/contraction and installation. Special consideration should be taken during design and installation to avoid unusual stresses in the piping system.
- Chemical resistance of plastics tends to decrease with an increase in chemical concentration and/or temperature. As a result, various chemicals may be safely handled in limited concentrations or within certain temperature limits. Most all aqueous solutions of water-soluble chemical not specified in the Chemical Resistance Tables can be used in CPVC drainage systems.
- While **LabWaste™** CPVC products are suitable for many continuous commercial and industrial chemical waste applications, the following Chemical Resistance Tables should **NOT** be used for these applications. Consult chemical resistance data for CPVC pressure piping to determine suitability for continuous chemical waste drainage applications.

WARNING: Hazardous material (including certain solvents and high concentrations of certain acids), are typically not discharged into lab waste piping. Laboratories routinely have specialized collection equipment and contracted disposal services for waste considered “hazardous”. Proper laboratory protocols on handling materials identified by OSHA and EPA as “hazardous” must be established and followed. Such requirements typically specify special storage and disposal apart from drainage disposal via dilution or neutralization. Even improper handling and disposal of HAZARDOUS materials by accident are subject to heavy fines by Federal, State and Local Authorities.



LabWaste™ CPVC Technical Information & Installation Guide



CHEMICAL	RATING
Diesel Fuels	R
Diethylamine	R
Diethyl Cellosolve	R
Diethyl Ether	R
Diglycolic Acid	R
Dimethylamine	R
Dimethyl Formamide	R
Dimethylhydrazine	R
Dimethyl Phthalate	N
Dimethyl Sulfoxide	R
Diethyl Phthalate	N
Dodecyl Alcohol	R
Dodecyl Sulfate	R
Dioxane	R
Diphenyl Oxide	---
Disodium Phosphate	R
Drierite	R
E	
Eosin Y	R
Eriochrome Black T	R
Ether	R
Ethyl Acetate	R
Ethyl Acetoacetate	R
Ethyl Acrylate	R
Ethyl Alcohol	R
Ethyl Benzene	C
Ethyl Chloride	N
Ethyl Chloroacetate	N
Ethylene Bromide	N
Ethylene Chloride	N
Ethylene Chlorohydrin	N
Ethylenediamine	R
Ethylene Dichloride	N
Ethylene Glycol	C
Ethylene Oxide	R
Ethyl Ether	R
Ethyl Formate	R
Ethylene Glycol	R
2-Ethylhexanol	R
Ethyl Mercaptan	R
Ethyl Oxalate	R
F	
Fast Green FCF	R
Fatty Acids	R
Fehlings solution A	R
Fehlings solution B	R
Ferric Ammonium Sulfate	R
Ferric Chloride	R
Ferric Hydroxide	R
Ferric Nitrate	R
Ferric Sulfate	R
Ferrous Chloride	R
Ferrous Hydroxide	R
Ferrous Nitrate	R
Ferrous Sulfate	R
Fish Oil	R
Fluoboric Acid	R
Fluorine Gas (Dry)	R
Fluorine Gas (Wet)	R
Fluosilicic Acid 30%	R
Fluosilicic Acid 50%	R
Formaldehyde Dilute	R
Formaldehyde 35%	R
Formaldehyde 37%	R
Formaldehyde 50%	C
Formic Acid	R
Freon	R
Freon 12	R
Freon 21	---
Freon 22	R
Freon 113	C
Freon 114	---
Fructose	R
Furfural	R
G	
Gallic Acid	R
Gasoline	R
Gasohol	R
Gelatin	R
Glauber's Salt	---
Glucose	R
Glue, PVA	R
Glutathione	R
Glycerine	R
Glycine	R
Glycogen	R
Glycol	C
Glycol Amine	---
Glycolic Acid	R
Glyoxal	R
Grape Sugar	R
Grease	---
Green Liquor	R

CHEMICAL	RATING
H	
Heptane (Type 1)	R
n-Hexane	R
Hexamethylenediamine	R
Hexanol, Tertiary	R
Hydraulic Oil	---
Hydrazine	R
Hydrobromic Acid 20%	R
Hydrobromic Acid 50%	R
Hydrochloric Acid 10%	R
Hydrochloric Acid 30%	R
Hydrocyanic Acid	R
Hydrofluoric Acid Dilute	R
Hydrofluoric Acid 30%	R
Hydrofluoric Acid 50%	R
Hydrofluoric Acid 100%	R
Hydrofluosilic Acid 50%	R
Hydrogen	R
Hydrogen Cyanide	R
Hydrogen Fluoride	C
Hydrogen Peroxide 50%	R
Hydrogen Peroxide 90%	R
Hydrogen Phosphide	R
Hydrogen Sulfide Dry	R
Hydrogen Sulfide Wet	R
Hydrogen Sulfide, aqueous	R
Hydroquinone, aqueous	R
Hydroxylamine Hydrochloride	R
Hydroxylamine Sulfate	R
Hypochlorous Acid	R
I	
Indigo Carmine	R
Inks	R
Iodine	R
Iodine solution, Lugol's	R
Iron Phosphate	---
Isobutane	C
Isobutyl Alcohol	R
Isocane	R
Isopropyl Acetate	R
Isopropyl Alcohol	R
Isopropyl Chloride	N
Isopropyl Ether	R
Isophorone	R
J	
Janus Green	R
JP-3 Fuel	R
JP-4 Fuel	R
JP-5 Fuel	R
JP-6 Fuel	R
K	
Kerosene	R
Ketchup	R
Kraft Liquors	R
L	
Lactic Acid 25%	R
Lactic Acid 80%	R
Lactose	R
Lard Oil	C
Latex	---
Lauric Acid	R
Lauryl Chloride	R
Lead Acetate	R
Lead Chloride	R
Lead Nitrate	R
Lead Sulfate	R
Lemon Oil	R
Ligroin	R
Limonene	R
Lime Slurry	R
Lime Sulfur	R
Linoleic Acid	C
Linoleic Acid	---
Linseed Oil	C
Liqueurs	R
Lithium Bromide	R
Lithium Carbonate	R
Lithium Chloride	R
Lithium Hydroxide 50%	R
Lithium Nitrate	R
Lithium Sulfate	R
Lubricating Oil #1	R
Lubricating Oil #2	R
Lubricating Oil #3	R
Ludox	---
Luminol 3-amino Phthalhydrazide	R
DL-lysine Hydrochloride	R
Lysozyme	R
M	
Magnesium Acetate	R

CHEMICAL	RATING
Magnesium Bromide	R
Magnesium Carbonate	R
Magnesium Chloride	R
Magnesium Citrate	R
Magnesium Fluoride	---
Magnesium Hydroxide	R
Magnesium Nitrate	R
Magnesium Oxide	---
Magnesium Sulfate	R
Malachite Green	R
Maleic Acid	R
Malic Acid	R
Maltose	R
Manganese Chloride	R
Manganese Nitrate	R
Manganese Sulfate	R
Menthol	R
Mercuric Chloride	R
Mercuric Cyanide	R
Mercuric Sulfate	R
Mercurous Nitrate	R
Mercury	R
Methane	R
Methanol	R
DL-methionine	R
Methoxyethyl Oleate	---
Methyl Acetate	R
Methyl Acetone	R
Methyl Acrylate	---
Methyl Amine	R
Methyl Bromide	N
Methyl Cellosolve	R
Methyl cellulose	R
Methyl Chloride	N
Methyl Chloroform	N
Methyl Ethyl Ketone	R
Methyl Formate	R
Methyl Green	R
Methyl Isobutyl Carbinol	R
Methyl Isobutyl Ketone	R
Methyl Isopropyl Ketone	R
Methyl Methacrylate	R
Methyl Red	R
Methyl Sulfate	R
Methyl Violet-2B	R
Methyl Violet-6B	R
Methylene Blue	R
Methylene Bromide	N
Methylene Chloride	N
Methylene Chlorobromide	N
Methylene Iodine	N
Methylsulfuric Acid	R
Milk	R
Mineral Oil	R
Molasses	R
Monochloroacetic Acid	R
Monochlorobenzene	N
Monoethanolamine	R
Monosodium Glutamate	R
Motor Oil	R
Morpholine	R
N	
Naphtha	R
Naphthalene	C
Natural Gas	R
Neutral Red	R
Nickel Acetate	R
Nickel Ammonium Sulfate	---
Nickel Chloride	R
Nickel Nitrate	R
Nickel Sulfate	R
Nicotine	R
Nicotinic Acid	R
Nitric Acid 10%	R
Nitric Acid 30%	R
Nitric Acid 40%	R
Nitric Acid 50%	R
Nitric Acid 70%	R
Nitric Acid 100%	R
Nitrobenzene	N
Nitroethane	C
Nitrogen Gas	---
Nitroglycerine	C
Nitroglycol	---
Nitromethane	C
Nitrous Acid	R
Nitrous Oxide	R
O	
n-Octane	C
Octanol	R
Oleic Acid	R
Oleum	R
Olive Oil	C
Orange G - acid orange 10	R



LabWaste™ CPVC Technical Information & Installation Guide

CHEMICAL	RATING	CHEMICAL	RATING	CHEMICAL	RATING
Orange IV - acid orange 5	R	Propargyl Alcohol	R	Succinic Acid	R
Orcinol	R	Propionic Acid	R	Sugar	R
Osmium Tetroxide	R	Propyl Acetate	---	Sulfamic Acid	R
Oxalic Acid	R	Propyl Alcohol	R	Sulfate Liquors	R
Oxygen Gas	R	N-Propyl Bromide	---	Sulfite Liquors	R
Ozone	R	Propylene Dichloride	N	Sulfur	R
Ozonized Water	R	Propylene Glycol	R	Sulfur Chloride	R
P		Propylene Oxide	R	Sulfur Dioxide Gas Dry	R
Palm Oil	R	Pyridine	R	Sulfur Dioxide Gas Wet	R
Palmitic Acid 10%	R	Pyrogallol Acid	R	Sulfur Trioxide Gas Dry	---
Palmitic Acid 70%	R	Pyrrrole	R	Sulfur Trioxide Gas Wet	N
Pancreatin	R	Q		Sulfuric Acid Up to 30%	R
Papain	R	Quinine Sulfate	R	Sulfuric Acid 50%	R
Paraffin	R	Quinine Chloride Dihydrate	R	Sulfuric Acid 60%	R
Peanut Oil	C	Quinone	---	Sulfuric Acid 70%	R
Pectin	R	R		Sulfuric Acid 80%	R
n-Pentane	C	Rayon Coagulating Bath	R	Sulfuric Acid 90%	R
Pepsin	R	Rennin	R	Sulfuric Acid 93%	R
Peracetic Acid	R	Resazurin	R	Sulfuric Acid 94%	R
Perchloric Acid 15%	R	Ringers Solution	R	Sulfuric Acid 95%	R
Perchloric Acid 70%	R	Rose Bengal Acid Red 94	R	Sulfuric Acid 96%	R
Perchloroethylene	C	S		Sulfuric Acid 98%	R
Periodic Acid	R	Safranin O	R	Sulfuric Acid 100%	R
Perphosphate	R	Salicylaldehyde	N	Sulfurous Acid	R
Phenol	R	Salicylic Acid	R	T	
Phenolphthalein	R	Selenic Acid, Aq.	R	Tall Oil	R
Phenyl Salicylate	R	Silicic Acid	R	Tannic Acid	R
Phenyldiazine	C	Silicone Oil	R	Tanning Liquors	R
Phosphate Esters	---	Silver Acetate	R	Tar	C
Phosphoric Acid 10%	R	Silver Chloride	R	Tartaric Acid	R
Phosphoric Acid 50%	R	Silver Cyanide	R	Terpineol	---
Phosphoric Acid 85%	R	Silver Nitrate	R	Tetrachloroethane	N
Phosphoric Anhydride	R	Silver Sulfate	R	Tetrachloroethylene	N
Phosphorous (Red)	C	Soaps	R	Tetracycline hydrochloride	R
Phosphorous (Yellow)	R	Sodium Acetate	R	Tetraethyl Lead	R
Phosphorous Pentoxide	R	Sodium Alum	R	Tetrahydrofuran	R
Phosphorous Trichloride	R	Sodium Aluminate	R	Tetralin	N
Photographic Solutions	R	Sodium Arsenate	R	Thiamine Hydrochloride	R
Phthalic Acid	R	Sodium Benzoate	R	Thionin	R
Picric Acid	R	Sodium Bicarbonate	R	Thionyl Chloride	R
Pine Oil	C	Sodium Bichromate	R	Thymol	R
Plating Solutions Brass	R	Sodium Bisulfate	R	Titanium Dioxide	R
Plating Solutions Cadmium	R	Sodium Bisulfite	R	Titanium Tetrachloride	R
Plating Solutions Chrome	R	Sodium Borate	R	Toluene	C
Plating Solutions Copper	R	Sodium Bromide	R	Tomato Juice	R
Plating Solutions Gold	R	Sodium Carbonate	R	Transformer Oil	R
Plating Solutions Lead	R	Sodium Chlorate	R	Transformer Oil DTE/30	R
Plating Solutions Nickel	R	Sodium Chloride	R	Tributyl Citrate	---
Plating Solutions Rhodium	R	Sodium Chlorite	R	Tributyl Phosphate	R
Plating Solutions Silver	R	Sodium Chromate	R	Trichloroacetic Acid	R
Plating Solutions Tin	R	Sodium Citrate	R	Trichloroethylene	N
Plating Solutions Zinc	R	Sodium Cyanide	R	Triethanolamine	R
Polyvinyl Acetate	---	Sodium Dichromate	R	Triethylamine	R
Polyvinyl Alcohol	R	Sodium Diphenylamine Sulfonate	R	Trimethylpropane	R
Potash	R	Sodium Dithionite	R	Trisodium Phosphate	R
Potassium Acetate	R	Sodium Ferricyanide	R	Trypsin	R
Potassium Alum	R	Sodium Ferrocyanide	R	Tung Oil	C
Potassium Aluminum	R	Sodium Fluoride	R	Turpentine	C
Potassium Bicarbonate	R	Sodium Hexametaphosphate	R	U	
Potassium Bichromate	R	Sodium Hydroxide 15%	R	Urea	R
Potassium Bisulfate	R	Sodium Hydroxide 30%	R	Urease	R
Potassium Bitartrate	R	Sodium Hydroxide 50%	R	Urine	R
Potassium Borate	R	Sodium Hydroxide 70%	R	V	
Potassium Bromate	R	Sodium Hypochlorite	R	Varnish	---
Potassium Bromide	R	Sodium Iodate	R	Vaseline	C
Potassium Carbonate	R	Sodium Iodide	R	Vegetable Oil	C
Potassium Chlorate	R	Sodium Metabisulfite	R	Vinegar	R
Potassium Chloride	R	Sodium Metaphosphate	R	Vinyl Acetate	R
Potassium Chromate	R	Sodium Nitrate	R	W	
Potassium Citrate	R	Sodium Nitrite	R	Water, Acid Mine	R
Potassium Cyanide	R	Sodium Palmitate	R	Water, Deionized	R
Potassium Dichromate	R	Sodium Perborate	R	Water, Distilled	R
Potassium Ethyl Xanthate	---	Sodium Perchlorate	R	Water, Potable	R
Potassium Ferricyanide	R	Sodium Periodate	R	Water, Salt	R
Potassium Ferrocyanide	R	Sodium Peroxide	R	Water, Sea	R
Potassium Fluoride	R	Sodium Phosphate Acid	R	Water, Soft	R
Potassium Hydrogen Phosphate	R	Sodium Phosphate Alkaline	R	Water, Waste	R
Potassium Hydrogen Phthalate	R	Sodium Phosphate Neutral	R	Whiskey	R
Potassium Hydroxide	R	Sodium Propionate	R	White Liquor	R
Potassium Hypochlorite	R	Sodium Silicate	R	Wine	R
Potassium Iodate	R	Sodium Sulfate	R	X	
Potassium Iodide	R	Sodium Sulfide	R	Xylene	C
Potassium Nitrate	R	Sodium Sulfite	R	Z	
Potassium Nitrite	R	Sodium Thioussulphate	R	Zinc Acetate	R
Potassium Perborate	R	Sour Crude Oil	R	Zinc Carbonate	R
Potassium Perchlorate	R	Soybean Oil	C	Zinc Chloride	R
Potassium Permanganate 10%	R	Stannic Chloride	R	Zinc Nitrate	R
Potassium Permanganate 25%	R	Stannous Chloride	R	Zinc Stearate	R
Potassium Persulfate	R	Stannous Sulfate	R	Zinc Sulfate	R
Potassium Phosphate	R	Starch	R		
Potassium Sodium Tartrate	R	Stearic Acid	R		
Potassium Sulfate	R	Streptomycin Sulfate	R		
Potassium Sulfide	R	Strontium Bromide	R		
Potassium Sulfite	R	Strontium Chloride	R		
Potassium Thiocyanate	R	Styrene	N		
Propane	R				



Double Containment



DESIGN & INSTALLATION GUIDE TECHNICAL INFORMATION



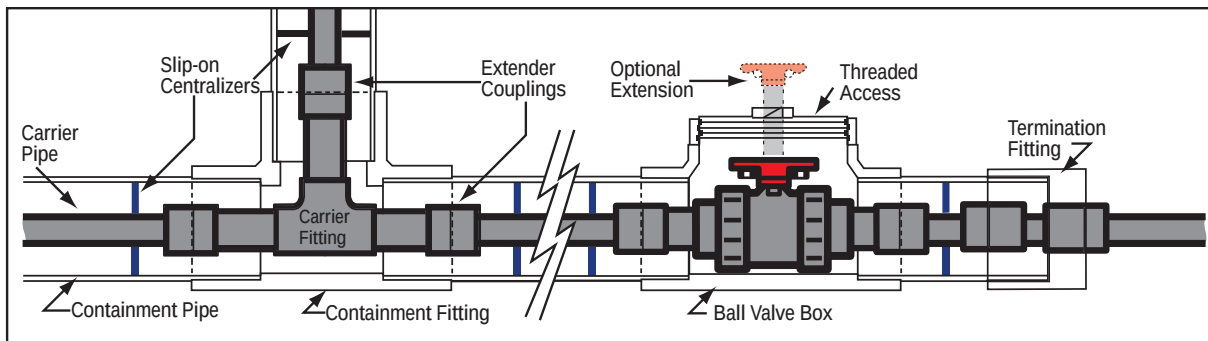
Visit our web site
www.spearsmfg.com



DOUBLE CONTAINMENT DESIGN & INSTALLATION GUIDE

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Spears® Double Containment Systems are engineered for ease of installation and lower associated installation costs. Complete systems include all necessary components - carrier pipe, containment pipe, centralizer brackets, valves and valve boxes, plus a full assortment of simplified double containment configurations including elbows, tees, closure and termination fittings. Typical user-supplied components include leak detection cable and sensors, air relief valves, and solvent cement for assembly.



Successful installation requires proper design and planning of system layout, a basic understanding of how Spears® double containment fitting design works, and specific attention to a proper sequence of general assembly. This manual is designed as a general guide and may not address all situations encountered. Due to the variety of selected Carrier/Containment combinations some design variations may occur.

PLEASE READ ALL INSTRUCTIONS PRIOR TO SYSTEM ASSEMBLY



I. SYSTEM PLANNING & LAYOUT

The following issues need to be addressed in the planning stage of System Layout:

- **Carrier/Containment Combinations:** System primary carrier and secondary containment size, and material and pipe Schedule must be determined based on system temperature, pressure, and volume requirements. Standard Carrier x Containment sizes and material/Schedule combinations are shown in the table below. Double containment systems can be custom produced to virtually any standard pipe size, material, or material combinations not shown, including multiple carriers in a single containment system. Contact Spears® Technical Services.

STANDARD CARRIER X CONTAINMENT COMBINATIONS

Carrier x Containment Size	PVC Sch 40 x PVC Sch 40	PVC Sch 40 x PVC Sch 40 Clear	PVC Sch 80 x PVC Sch 40	PVC Sch 80 x PVC Sch 40 Clear	PVC Sch 80 x PVC Sch 80	CPVC Sch 80 x PVC Sch 40	CPVC Sch 80 x CPVC Sch 80	CPVC Sch 80 x PVC Sch 40 Clear
1/2 x 2	•	•	•	•	•	•	•	•
3/4 x 3	•	•	•	•	•	•	•	•
1 x 3	•	•	•	•	•	•	•	•
1-1/2 x 4	•	•	•	•	•	•	•	•
2 x 4	•	•	•	•	•	•	•	•
3 x 6	•	•	•	•	•	•	•	•
4 x 8	•	•	•	•	•	•	•	•
6 x 10	•	N/A	•	N/A	•	•	•	N/A
8 x 12	•	N/A	•	N/A	•	•	•	N/A

N/A = Not available in specified size and material

System Support: The system must be supported according to standard pipe support methods and criteria for installation of the Containment-size pipe. Where practical, system support should align with internal carrier support (centralizers) to reduce concentrated point loads.

- **Caution:** System must be designed so that if carrier fails (leaks), the Containment pipe must not be pressurized beyond 10 psi pressure. An extremely hazardous condition can result from the air in the containment pipe becoming compressed. An air relief valve can be used or a vent to a containment vessel can be installed.
- **Thermal Expansion & Contraction:** Both Containment and Carrier system expansion and contraction must be determined, just like any other system. This is especially important where significantly different fluid temperatures are anticipated between the Carrier system and the Containment system. The primary line must be designed to allow for expansion & contraction due to process media temperature. The secondary line must be designed to accommodate temperature changes, especially in above ground installation where environmental factors will affect the temperature of the pipe.
- **Containment Thrust Blocking:** Adequate thrust blocking must be determined for the system and related loads.
- **Termination Points:** Must be determined for both start and end of Containment portion of the system.
- **Leak Detection Sensors, Drains, Valve Box, etc.:** Location and type must be determined (i.e. ball valve, gate valve, etc.)



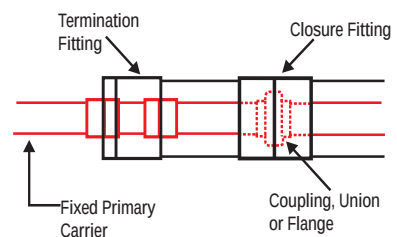
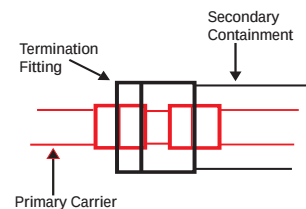
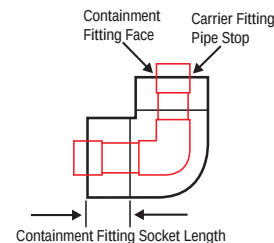
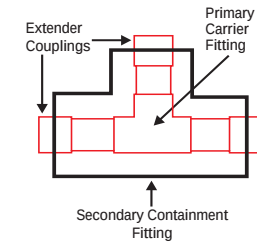
DOUBLE CONTAINMENT DESIGN & INSTALLATION GUIDE

II. DOUBLE CONTAINMENT FITTING & COMPONENT DESIGN OVERVIEW

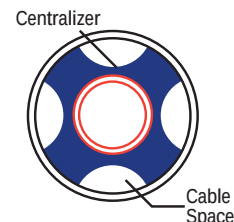
A basic understanding of Spears® double containment fitting and component design will make assembly much easier. Additional details of their application is found in each specific installation section.

- General configurations (elbows, tees, etc.) of Spears® double containment fittings consist of separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings (except standard couplings) are equipped with extenders to facilitate cement assembly. Centralizers are used inside the Containment piping system, but not inside fittings in order to; 1) allow movement of the Carrier assembly inside the Containment system during expansion and contraction; and 2) allow the Carrier assembly to be more easily cemented before cementing the Containment assembly.
NOTE: Certain configurations may require oversized containment fittings bushed to specified containment pipe size in order to accommodate specified carrier fitting configurations.

- Most double containment fitting configurations (where practical) are designed with dimensions that bring the pipe stop of the Carrier fitting flush to the face of the socket of the Containment fitting. This facilitates solvent cementing and determination of Carrier and Containment pipe cut lengths. On each pipe run, the Carrier pipe cut length is equal to the face-to-face distance between Containment fittings. The Containment pipe cut length is equal to the Carrier pipe length plus two (2) Containment pipe socket lengths.
- Termination Fittings are a special configuration for starting or stopping the containment portion of a system. Termination fittings will consist of a reducer coupling to accept the Containment pipe that is pre-fabricated to an internal extender coupling for connection to existing carrier system, thereby terminating (start or stop) the secondary containment portion of the system.
- System installation is best accomplished by consecutive assembly from a starting point to the end of the system. In situations where runs of Carrier and Containment system must meet, the Closure Fitting is a special coupling configuration for joining both Carrier and Containment piping. Closure Fittings are frequently used at the end of a system where the final Termination Fitting must connect to a fixed point in the system.

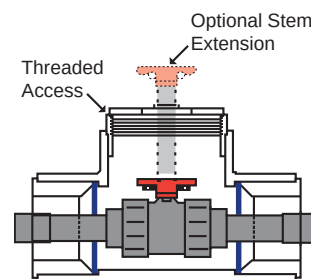


- Centralizers are a simple slip-on design which are positioned and held in place by a few wraps of Clean-room adhesive on each side. Centralizers hold the Carrier piping centrally located within the Containment piping and are designed with an annular space for routing of leak detection cable, if used.

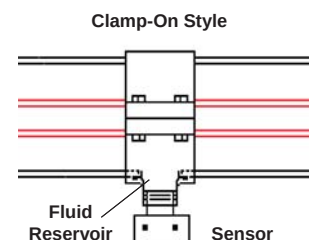


- In-Line Ball Valve Boxes are a pre-assembled “Tee-style” configuration with a valve installed for connection to Carrier and Containment piping. A threaded access is provided through the tee-box branch. Valve handle extensions through the cap are available as an option.

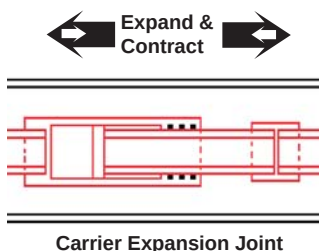
NOTE: Tee-style valve boxes are normally over specified containment pipe size and bushed down in order to accommodate carrier valve.



- Sensor Saddles are special devices which can be installed on the Containment system where a “low-point” is desired for leak-detection apparatus. Saddles may also be used in Containment piping high points for air relief or for connection of Containment drainage valves.



- Expansion Joints are designed to accommodate linear thermal expansion and contraction in thermoplastic systems using an O-ring sealed internal piston. These units can be used on either primary Carrier or secondary Containment portions of the system, especially where a significant temperature differential exists between the two. Expansion Joints also double as an adjustable coupling or repair coupling for making pipe connections.



- Additional specialty configurations can be custom produced according to user requirements.

III. PRODUCT RECEIVED

Carrier and Containment pipe are sold and shipped separate from each other in standard stock 20-foot lengths. Finished cut lengths are prepared by the user at time of installation.

Likewise, each configuration of a double containment fitting is shipped with Carrier and Containment fittings separately, except special configurations that require factory pre-assembly. Upon receipt, each double containment configuration (Carrier fitting and Containment fitting) should be matched up in preparation for installation.



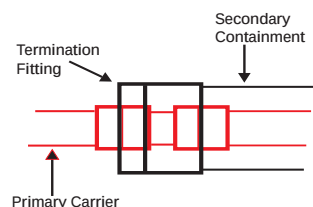
DOUBLE CONTAINMENT DESIGN & INSTALLATION GUIDE

IV. GENERAL INSTALLATION ASSEMBLY

Important: Proper solvent cementing procedures must be followed. See Appendix A

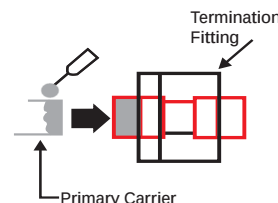
Termination Fitting - The Proper Starting Point

Where practical, it is easiest to start using a Termination fitting. This special fitting terminates (start/stop) the secondary Containment portion of the system. The Termination fitting is assembled to the existing primary piping system which continues as the Carrier in the double containment portion of the system and provides a connection for starting (or ending) the Containment piping.



Step 1: Install Termination Fitting to Primary Carrier Pipe

Using proper dauber size, cement Termination Fitting to the primary carrier piping.



Step 2: Cut Carrier & Containment Pipe Lengths

Important: All pipe MUST be cut square and properly deburred and beveled.

1. Carrier Pipe Cut Length: Determine the distance between the Containment socket end face of the first fitting to the socket end face of the next Containment fitting and cut Carrier pipe to that length.

Note: This dimension can be calculated from system centerlines as follows:

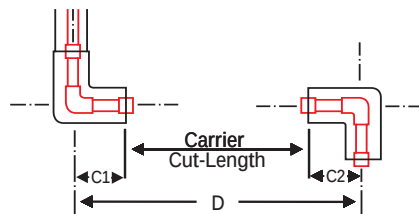
$$L_{car} = D - (C1 + C2)$$

Where: L_{car} = Carrier Pipe Cut Length

D = Centerline to Centerline distance between Containment fittings

$C1$ = Centerline to socket end of first Containment fitting

$C2$ = Centerline to socket end of second Containment fitting



2. Containment Pipe Cut Length: Add the socket lengths for each of the two (2) connecting Containment fittings to the Carrier pipe cut length and cut the Containment pipe to that length.

Note: This dimension can be calculated as follows:

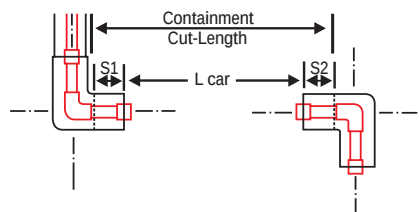
$$L_{con} = L_{car} + S1 + S2$$

Where: L_{con} = Containment Pipe Cut Length

L_{car} = Carrier Pipe Cut Length

$S1$ = Socket Length of first Containment fitting

$S2$ = Socket Length of second Containment fitting



COUPLING NOTE: Regular couplings do not come with extenders. Where a continuation of a straight pipe run is made with a coupling on carrier or containment pipe, use the overall coupled length in the above calculations. Special allowances should also be made for Closure Fittings and Expansion Joints in determining cut lengths.

Step 3: Assemble Slip-On Centralizers

The chart below shows recommended Centralizer support spacing according to Carrier pipe size, material and Schedule at specified operating temperature for liquids up to 1.00 specific gravity, but does not include concentrated loads (see chart note on double containment system support).

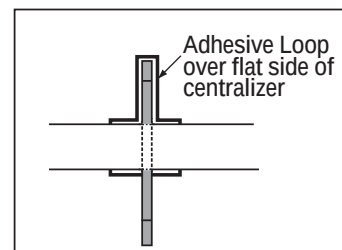
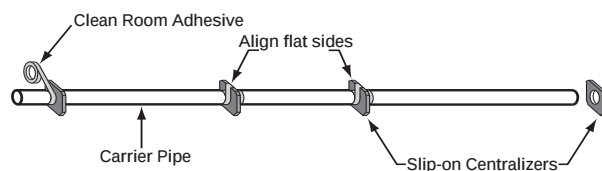
RECOMMENDED MINIMUM CENTRALIZER SUPPORT SPACING (ft.) *

Carrier Size (in.)	PVC SCHEDULE 40 CARRIER Temperature °F					PVC SCHEDULE 80 CARRIER Temperature °F					CPVC SCHEDULE 80 CARRIER Temperature °F					
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°	73°	100°	120°	140°	160°	180°
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	6	5-1/2	5	3-1/2	3
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	7	6-1/2	6	5-1/2	3-1/2	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7	7	6-1/2	6	4	3-1/2
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8	8	7-1/2	7	4-1/2	4
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9	8-1/2	8	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	10	9-1/2	9	8	5-1/2	5
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	11	10-1/2	10	9	6	5-1/2
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	11-1/2	11	10-1/2	9-1/2	6-1/2	6
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	12-1/2	12	11-1/2	10-1/2	7-1/2	6-1/2

Note: Specified minimum spacing can also be used for system support according to the secondary Containment pipe size and Schedule used. Where practical, system support should correspond to internal Carrier support (Centralizers) to minimize concentrated point loads.

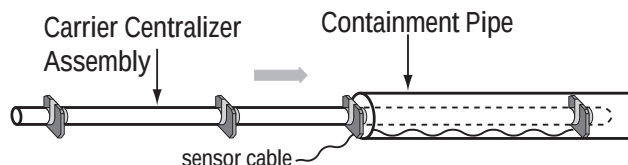
*** Note:** Data furnished is based on raw material manufacturer's information. This information can be considered a reliable recommendation, but not a guarantee. Actual service conditions and system parameters should be evaluated by qualified personnel.

Assemble Centralizers to Carrier pipe as required (see chart above) holding in place with a loop of Clean-room adhesive over one flat side of each Centralizer followed by 3-wraps of adhesive around Carrier pipe on each side of Centralizer to hold loop. Orient so that the flat sides of all Centralizers align. On horizontal runs, the flat side should also lay parallel to the ground to accommodate any sensor wire used.



Step 4: Assemble Carrier Pipe Run Into Containment Pipe Run

Insert Carrier pipe run with Centralizers into Containment pipe run while feeding sensor wire through and under Centralizers as required.

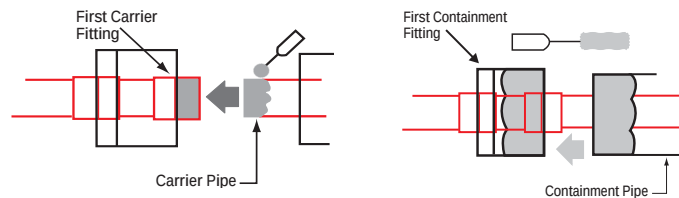




DOUBLE CONTAINMENT DESIGN & INSTALLATION GUIDE

Step 5: Solvent Cement Start of Carrier & Containment Run

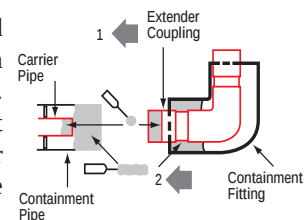
Position double containment pipe assembly and pull Carrier pipe out enough to allow joint make-up. Using proper dauber size, cement Carrier pipe to first Carrier (or Termination) fitting being sure to properly orient Centralizers. Using a different size dauber if necessary, cement Containment pipe and slide into first Containment (or Termination) fitting.



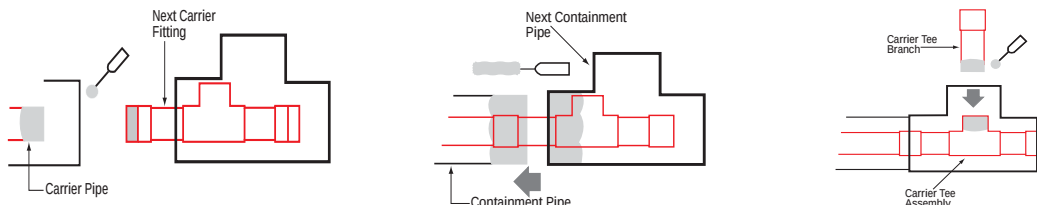
Step 6: Solvent Cement Next Carrier & Containment Run

At the opposite end of the run, install the next carrier and containment fitting assembly. **Important Note:** Certain carrier x containment sizes and configurations (such as elbows) may require cementing and installation of both fittings at the same time. A dry fit check of both fittings should be made to verify that there is clearance to slide the Containment fitting over the Carrier fitting once the Carrier fitting has been cemented to the carrier pipe. In such cases, slide the Containment fitting back as much as possible and apply cement to both Carrier pipe and extender coupling and to both Containment pipe and Containment fitting using appropriate size daubers. Immediately assemble next Carrier fitting to Carrier pipe and Containment fitting to Containment pipe being sure to align properly. Note: This process must be done quickly to prevent cement from drying out before assembly.

Other size and configuration combinations allow Containment fitting to be installed after Carrier fitting is in place. In such cases, slide Containment fitting away from Carrier fitting and cement Carrier pipe to next Carrier fitting, using proper dauber size. Slide next Containment fitting back over Carrier assembly and cement Containment pipe to next Containment fitting, using a different size dauber if necessary. For tees or crosses, where possible, always cement the run double containment assembly before the branch.



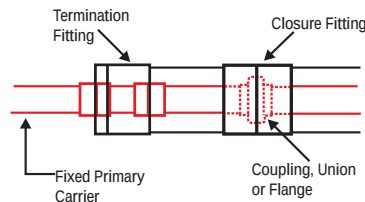
Important Note: Some Tees are shipped with the Carrier Tee branch socket extension separated from the Carrier Tee assembly to allow easy movement of the Carrier fitting to facilitate assembly, as shown below. The Carrier Tee branch extension must be **cemented in place** after the run Carrier Tee assembly is completed.



Repeat Step 2 through 6 above to consecutively assemble each additional section of the Double Containment System. Finish with installation of an additional Termination Fitting. See following instructions on Closure Fittings or on Expansion Joints for joining Double Containment system sections which must meet.

V. SPECIAL CLOSURE FITTING INSTALLATION

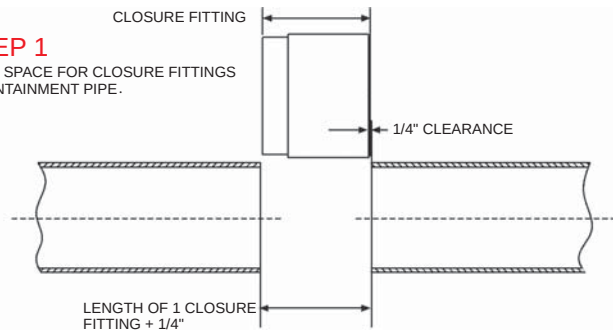
Closure Fittings are a special split coupling for joining meeting runs of Containment piping such as before the final Termination Fitting. Closure Fittings consists of 1 male Closure Fitting and 1 female Closure Fitting. An internal O-ring on each component serves as a “cement-wiper” during installation to assure a proper joint. A “One-step” type cement should be used to facilitate rapid assembly.



Typical Closure Fitting Use

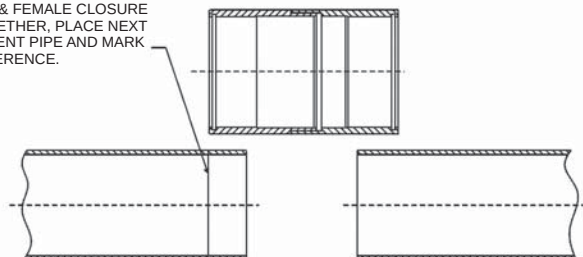
STEP 1

LEAVE SPACE FOR CLOSURE FITTINGS IN CONTAINMENT PIPE.



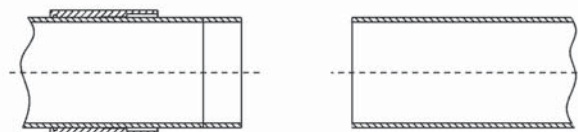
STEP 2

DRY FIT MALE & FEMALE CLOSURE FITTINGS TOGETHER, PLACE NEXT TO CONTAINMENT PIPE AND MARK END FOR REFERENCE.



STEP 3

PLACE FEMALE CLOSURE FITTING ON CONTAINMENT PIPE AND SLIDE BACK.

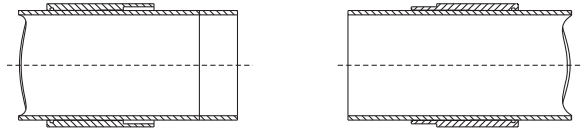




DOUBLE CONTAINMENT DESIGN & INSTALLATION GUIDE

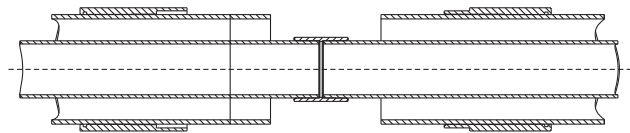
STEP 4

PLACE MALE CLOSURE FITTING ON CONTAINMENT PIPE AND SLIDE BACK.



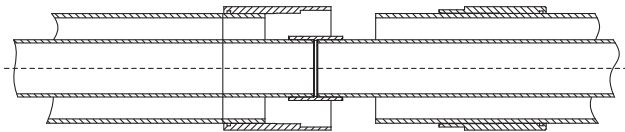
STEP 5

COMPLETE CARRIER PIPE. IF SUFFICIENT MOVEMENT FOR A SOCKET JOINT CANNOT BE MADE, A UNION, FLANGE OR EXPANSION JOINT MAY BE REQUIRED.



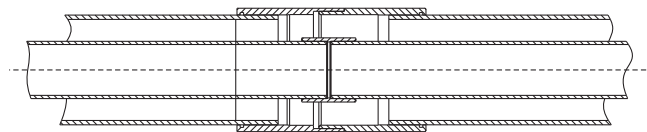
STEP 6

USE ONE-STEP CEMENT ON FEMALE CONTAINMENT PIPE. APPLY WELL PAST MARK ON PIPE. O-RING WILL WIPE OFF EXCESS. SLIDE CLOSURE FITTING FORWARD TO MARK ON PIPE MADE IN (STEP 2) LET CEMENT CURE BEFORE CONTINUING TO NEXT STEP.



STEP 7

USE ONE-STEP CEMENT ON CONTAINMENT PIPE. APPLY WELL PAST WHERE THE END OF CLOSURE FITTING WILL BE INSTALLED. ALSO CEMENT MALE PORTION OF CLOSURE FITTING AND INSIDE THE MATING FEMALE JOINT. SLIDE MALE FITTING INTO FEMALE FITTING AND CLAMP WITH A BAR OR PIPE-TYPE CLAMP.

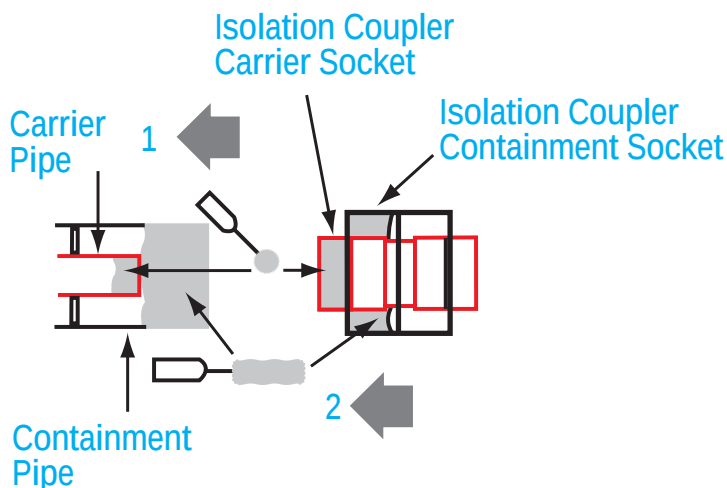


VI. ISOLATION COUPLER INSTALLATION

The purpose of the Isolation Coupler is to isolate a containment section for improved location identification if a leak is detected. To accomplish this, the Isolation Coupler has a partition in the Containment section fixed to the Carrier section.

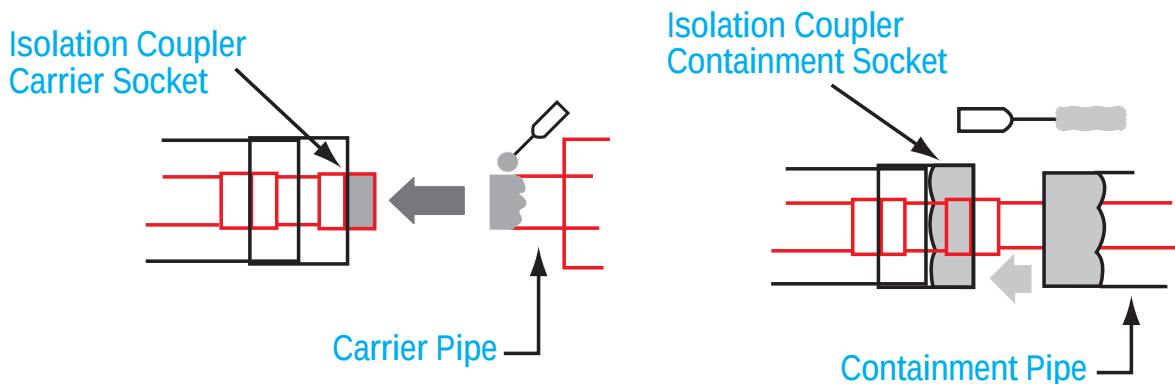
Step 1: Solvent Cement Isolation Coupler on Carrier and Containment Pipe Run

This coupler requires cementing of both primary Carrier and Containment joints at the same time. Using the right size dauber, cement both sockets on one end of the Isolation Coupler and both pipe ends of the Carrier and Containment pipe run. Assemble both joints immediately. **Note:** This process must be done quickly to prevent cement from drying out before assembly.



Step 2: Solvent Cement Start of Next Carrier & Containment Run

Position the next double containment pipe and centralizer assembly and pull Carrier pipe out enough to allow joint make-up. Using proper dauber size, cement Carrier pipe to Carrier socket of Isolation Coupler being sure to properly orient Centralizers. Using a different size dauber if necessary, cement Containment pipe and slide into Containment socket of the Isolation Coupler.

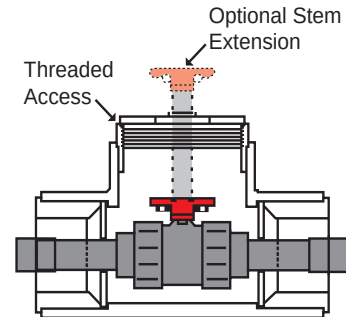




DOUBLE CONTAINMENT DESIGN & INSTALLATION GUIDE

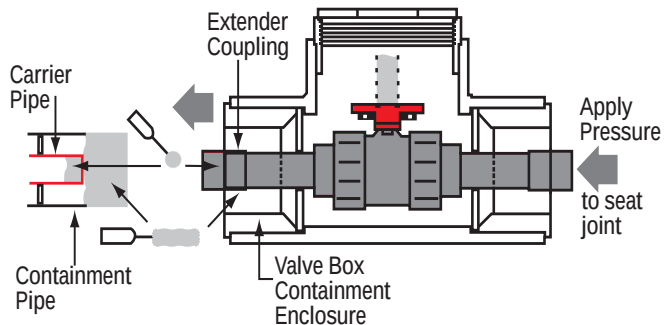
VII. IN-LINE VALVE BOX INSTALLATION

Tee-style valve boxes come with Spears® True Union 2000 style ball valves or ball check valves installed. Centralizers are pre-installed in box to give support to the valve. In-Line Valve Boxes are constructed in a larger diameter than the secondary containment system in order to accommodate the appropriate valve for the carrier system. These are fitted with reducers for connection to the containment system. Valve boxes can be ordered with stem extensions for exterior operation of valve. Ball and Ball Check Valves are available for use with Carrier pipe sizes 1/2" through 4", PVC or CPVC using EPDM or FKM seals. Other valve types available on request.



Using appropriate size daubers, apply cement to both Carrier pipe and extender coupling and to both Containment pipe and Valve Box Containment enclosure. Assemble immediately being sure to apply pressure to the opposite end extender coupling to seat Carrier connection.

Note: This process must be done quickly to prevent cement from drying out before assembly. A one-step type cement is recommended for this installation.

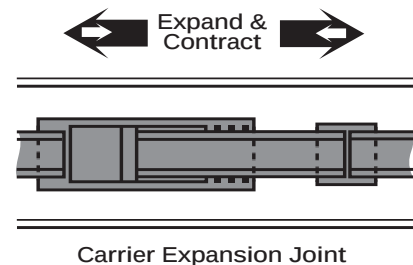


VIII. EXPANSION JOINT INSTALLATION

Expansion Joints can be used to compensate for linear thermal expansion in Carrier or Containment portions of the system. Expansion Joints are available in either 6" or 12" extension lengths.

Step 1: Determine Travel Length Needed

General Rule: For PVC systems, allow 3/8" expansion for every 10°F change in temperature per 100 feet of pipe (all diameters). For CPVC systems, allow 1/2" expansion for every 10°F change in temperature per 100 feet of pipe (all diameters). For example, a 6" travel expansion joint will accommodate approximately 160°F temperature change in 100 ft. of PVC pipe ($16 \times 3/8" = 6"$) or approximately 120°F temperature change in 100 ft. of CPVC pipe ($12 \times 1/2" = 6"$).





Step 2: Support & Thrust Block

ON SECONDARY CONTAINMENT PIPING: For proper operation, the outer tube of the Expansion Joint should be firmly anchored to allow free movement of the inner tube or “piston.” Alignment is critical. Support and thrust block the system to direct movement squarely into the Expansion Joint. Alignment is critical and axial guides should be installed to ensure straight movement into Expansion Joint. Provisions should be made to protect the cylinder shaft from scratches, damage and debris in order to prevent leaks.

ON PRIMARY CARRIER PIPING: A Centralizer bracket should be located at each end of the Expansion Joint to serve as an axial guide to ensure straight movement into Expansion Joint. Protect the cylinder shaft from scratches, damage and debris during installation.

Step 3: Install Expansion Joint in Line

Determine installed extension length and solvent cement unit in system. Expansion Joints can be installed at the travel range midpoint for most general installations and are shipped from the factory in this position. If desired, the extended position for installation may be additionally adjusted to specific system and installation parameters using the following calculation:

$$\begin{array}{l} \text{T-A} \\ \text{-----} \times \text{E} = \text{P} \\ \text{T-F} \end{array} \quad \begin{array}{l} \text{T} = \text{Maximum Temperature of Pipe Exposure} \\ \text{A} = \text{Temperature of Pipe at time of Installation} \\ \text{E} = \text{Maximum Expansion Joint Travel (6" or 12")} \\ \text{P} = \text{Piston Extension for Installation Position (inches)} \\ \text{F} = \text{Minimum Temperature of Pipe Exposure} \end{array}$$

Example: A straight run of pipe will operate at temperatures between 60°F and 110°F. Temperature at time of installation is 75°F using a 6" travel Expansion Joint.

$$\begin{array}{l} \text{T-A} \\ \text{-----} \times \text{E} = \text{P} \\ \text{T-F} \end{array} \quad \begin{array}{l} 110-75 \\ \text{-----} \times 6 = 4.2 \text{ inches extended at installation} \\ 110-60 \end{array}$$

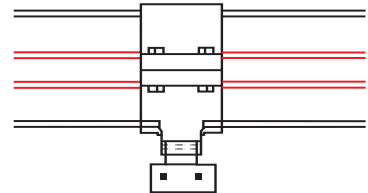
Supplemental Information Notes:

Maximum operating temperature:	PVC = 140°F
	CPVC = 180°F
Coefficient of Linear Thermal Expansion:	PVC 1120 = 2.8×10^{-5} in/in/°F
	CPVC 4120 = 3.4×10^{-5} in/in/°F



XI. SENSOR SADDLE INSTALLATION

PVC and CPVC Sensor Saddles are available in Clamp-On type with O-ring seal for Containment pipe sizes 2" through 6" or in Glue-On style for Containment pipe sizes 1/2" and larger. Specify branch outlet size in thread or socket connection. Sensor Saddles should be installed in a low point along a Containment pipe run for collection of any fluid leakage. Install user-supplied sensor device. Saddles may also be used in Containment piping high points for air relief or for connection of Containment drainage valves.



Clamp-On Style Sensor Saddle

Clamp-On style Saddle Installation

1. Using a standard industrial-grade hole saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4), and washers (8). Washers **MUST** be placed under each bolt head and nut to avoid damage to saddle.
4. Tighten bolts to specified torque.
5. Saddle is now ready for user-supplied sensor device installation.

Glue-On style Saddle Installation

1. Using a standard industrial-grade hole saw, cut specified hole in desired position on pipe according to recommended hole saw size. Note: Care must be taken to deburr hole and remove all residue from hole and cement area to assure proper fit.
2. Dry fit saddle over hole and mark perimeter on pipe.
3. Clean pipe and saddle glue surface, apply solvent cement to saddle and to pipe, fully covering marked area.
4. Immediately press saddle onto pipe while rotating the saddle on the pipe slightly to distribute the cement. Secure each end of saddle with gear-type clamp or strap to maintain compression until solvent cement fully cures.
5. Saddle is now ready for user-supplied sensor device installation.

X. PRESSURE TESTING SYSTEM

After all joints have properly cured, the Secondary Containment system may be air tested at 5 to 8 psig regulated pressure.

WARNING: System must **NOT** be tested with direct connection of air-line, nitrogen bottle, or similar unregulated pressure device. Test apparatus must be equipped with both a pressure limiting device at the source to assure that 8 psig pressure is not exceeded and an air relief device at the far end of the system set at a maximum pressure of 8 psig. **FAILURE TO FOLLOW THIS PROCEDURE CAN RESULT IN SERIOUS OR FATAL BODILY INJURY.** Use a spray bottle of soap and water solution to check for leaks at joints. The Primary Carrier system should be hydrostatically tested. Flush the system to remove any debris and slowly fill to remove all entrapped air.



General Solvent Cement Welding Procedures

For best results, installation should be made at temperatures between 40°F and 110°F. All joint components should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All pipe, fittings and valves should be removed from packaging or containers and exposed to the installation environment for a minimum of one hour in order to thermally balance all components. All joining components must be clean and dry.

Important: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL COMPONENTS OF VALVES, EXPANSION JOINTS, OR UNIONS.

Step 1: Cut Pipe Square

Pipe ends must be cut square, using a wheel-type cutter or saw & miter box. A fine-toothed hand saw (16-18 teeth/inch) with little or no set is recommended. A power cut-off saw with carbide blade is recommended for high volume cutting.

Step 2: Deburr & Bevel Pipe

Regardless of cutting method used in Step 1, burrs are created which must be removed from both the pipe I.D. and O.D. before joining. All pipe ends should be beveled 10° to 15°. Commercially available deburring & beveling tool is recommended, or a mill file may be used.

Step 3: Clean Joint Components

Wipe away all loose dirt and moisture from the pipe O.D. and fitting I.D. with a clean, dry cotton rag. **DO NOT ATTEMPT TO JOIN WET SURFACES.**

Step 4: Check Joint Interference Fit

An interference between pipe and fitting socket is necessary for proper fusion of the joint. To check, lightly insert pipe into fitting socket. **DO NOT FORCE.** Interference between pipe and fitting must occur between ½ of the socket depth (full interference fit) and the socket bottom (net fit). Do not use components which improperly mate.

Step 5: Apply Primer

NOTE: Certain Double Containment solvent cement connections should be made using a “one-step” type cement specifically designed for use without primer. Go to Step 6 if using a one-step type of solvent cement.

Primer is necessary to penetrate and soften both pipe and fitting socket surfaces in order for the solvent cement to properly bond. **THE MOST FREQUENT CAUSE OF JOINT FAILURES IS INADEQUATE SOLVENT PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.**

1. Using a brush or applicator size not less than ½ the pipe diameter, apply a liberal coat of primer with a scrubbing motion to the fitting socket until the surface is softened and semi-fluid. This may take 5 to 15 seconds depending on size and temperature (larger diameters and lower temperatures will increase required time).
2. Apply primer to pipe in the same manner, extending application area to slightly more than the insertion depth into the fitting socket.
3. Apply a second coat to both the fitting socket and the pipe.
4. Check penetration and softening by scraping the primed surfaces. A few thousandths of the semi-fluid surface should be easily removed. Repeat primer application if necessary.



Step 6: Apply Solvent Cement

Solvent cement must be applied IMMEDIATELY to primed surfaces before the primer dries, in an alternating 3-coat application. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of solvent cement to the primed pipe surface, then apply a light to medium coat to the primed fitting socket. If a "net fit" was experienced during dry fit check (Step 4), apply an additional coat again to the pipe surface. BE SURE TO USE A VERY LIBERAL AMOUNT OF SOLVENT CEMENT ON PIPE.

Step 7: Join Components

IMMEDIATELY following application of cement and before it starts to set, insert the pipe into the socket with a 1/4-turn twisting motion to evenly distribute cement within the joint. A full bead of cement should form around the circumference of the joint. Hold joint together for approximately 30 seconds to make sure the pipe does not move or back out of the socket.

Step 8: Remove Excess Cement

Using a cloth, wipe clean all excess cement from the exterior juncture of the pipe and fitting.

Step 9: Initial Set & Cure Time

Initial Set & Cure Time must be followed in accordance with the solvent cement manufacturer's instructions.

Sample Engineering Specification

1.0 System Design and Manufacturer

1.1 Thermoplastic Double Containment System shall be a floating carrier design constructed from conventional pipe and fittings meeting applicable ASTM requirements for all standard configurations of primary carrier and secondary containment. System shall include all pipe, fittings, centralizers, valves and valve boxes to be supplied by Spears® Manufacturing Company.

1.2 Standard configurations (tees, elbows, crosses, etc.) of primary carrier fitting shall be equipped with extender couplings for installation in secondary containment pipe and fittings.

1.3 Primary carrier system shall be supported by polypropylene slide-on centralizer brackets positioned with clean room adhesive. Centralizers shall provide annular space suitable for drainage or installation of user-supplied leak detection cable.

1.4 Specialty fittings shall be according to manufacturer's specifications and suitable for use with specified primary carrier and secondary containment system. Specialty fittings include the following:

Termination Fitting for start and stop of secondary containment.

Closure Fitting for joining two (2) secondary containment lines that meet.

Expansion Joint/Coupling for thermal expansion/contraction compensation or joining of pipe lines.

Sensor Saddles for connection of user-supplied leak detection apparatus.

Any other custom fitting configuration designed for the system.

1.5 Double Containment System shall be air-vented in the secondary containment to prohibit pressurization in excess of 10 psi.

1.6 Valve Box enclosure for ball and ball check valves shall be Tee-Style with specified valve installed and [option: external stem extension].



2.0 Size & Materials

2.1 Double Containment system shall be [specify size, material & schedule *] primary carrier pipe and fittings and [specify size, material & schedule] secondary containment pipe and fittings.

2.2 All primary carrier and secondary containment pipe and fittings shall be manufactured from [specify: PVC, cell class 12454 or CPVC, cell class 23447] materials, according to ASTM D 1784.

2.3 All primary carrier and secondary containment pipe shall meet the requirements of [specify: ASTM D 1785 for PVC or ASTM F 441 for CPVC].

2.4 All standard configuration primary carrier and secondary containment fittings shall meet the requirements of [specify: ASTM D 2466 for PVC Schedule 40, D 2467 for PVC Schedule 80 or F 439 for Schedule 80 CPVC]. All special configuration fittings shall meet the manufacturer's design requirements and be suitable for use with the designated pipe.

3.0 Installation

3.1 Double Containment System shall be installed in accordance with Spears® Double Containment Design & Installation Guide.

3.2 Installation shall be made by qualified personnel trained in making solvent cement joints per ASTM practice D 2855, and flanged joint assembly according to manufacturer's instructions.

3.3 Primary carrier and secondary containment pipe and fitting connections shall be made by conventional solvent cement welding. Flanged assembly connections may be used where required for disassembly or as a design necessity. Solvent cement shall be user supplied and medium to heavy bodied as required. Solvent cement shall be IPS Weld-On or equal.

* = See standard size, material and pipe Schedule combinations. Custom size, material and Schedule combinations by request.



Plastic Pipe



ENGINEERING GUIDE



Visit our web site
www.spearsmfg.com



The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Purpose of this Manual

This manual is intended as resource for use by specification engineers, installers, and users in the selection, design and installation of PVC and CPVC systems installed using Spears® or other pipe products. All information contained within this manual is considered vital to obtain proper system performance and must be read and fully understood before attempting to install these products. If you have any questions about the safe and proper installation of these products, contact Spears® Manufacturing Company, 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611.

Spears® PVC and CPVC Materials

PVC

Polyvinyl Chlorides (PVC) is one of the most widely used plastic piping materials. PVC is environmentally sound, provides long service life, is light weight and easy to install, has superior corrosion resistance, is cost effective, and widely accepted by codes. PVC pipe is manufactured by extrusion and PVC fittings are manufactured by injection molding or fabrication. PVC is an amorphous thermoplastic material with physical properties that make it suitable for a wide variety of pressure and non-pressure applications and can be compounded for optimum performance. PVC pipe and fittings are used for drain-waste-vent (DWV), sewers, water mains, water service lines, irrigation, conduit, and various industrial installations.

Spears® high quality PVC compounds give optimum chemical and corrosion resistance with a full range of pressure handling capabilities. Spears® PVC materials are certified by NSF International to applicable standards, including NSF® Standard 61 for use in potable water service, certified lead-free, and to ASTM STD D1784, Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds that specifies Cell Classification for minimum physical property requirements. These include resin type, impact strength, tensile strength, modulus of elasticity in tension, heat deflection temperature and flammability. Spears® minimum PVC Cell Classification is 12454 for rigid (unplasticized) PVC.

The ASTM Type and Grade is PVC Type I, Grade I and the typical long and short term strength designation of material for pressure piping is PVC 1120.

See Industry Standards and Test Methods, Physical Properties and Chemical Resistance sections for additional information.

Spears® PVC Pipe & Systems Product Lines

EverTUFF® Industrial Schedule 80 Pressure Pipe & Fittings
Spears® Clear PVC Schedule 40 & Schedule 80 Pipe & Fittings
Spears® Low Extractable Ultra Pure Water Piping & Fittings
Spears® PVC Duct & Fittings
Spears® PVC Double Containment Pipe & Fittings
Spears® Supplemental PVC Fittings, Valves & Accessories

CPVC

Chlorinated polyvinyl chloride (CPVC) is created by post chlorination of the PVC polymer. This produces up to a 60°F higher heat handling capability than PVC and greater fire resistance, plus a broad range of chemical resistance. CPVC is excellent for use in process piping, hot and cold water service, corrosive waste drainage and other elevated temperature applications. CPVC provides relatively low cost compared to alternative materials for similar use. CPVC pipe is manufactured by extrusion and CPVC fittings are manufactured by injection molding or fabrication. Spears® produces a variety of CPVC pipe, fittings, valves, system accessories and specialty systems.

Spears® high quality CPVC compounds give optimum chemical and corrosion resistance with a full range of pressure handling capabilities. Spears® CPVC materials are certified by NSF International to applicable standards, including NSF® Standard 61 for use in potable water service, certified lead-free, and to ASTM STD D1784, Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds that specifies Cell Classification for minimum physical property requirements. These include resin type, impact strength, tensile strength, modulus of elasticity in tension, heat deflection temperature and flammability. Spears® minimum CPVC Cell Classification is 23447 for rigid (unplasticized) CPVC.

The ASTM Type and Grade is CPVC Type IV Grade I and the typical long and short term strength designation of material for pressure piping is CPVC 4120.

See Industry Standards and Test Methods, Physical Properties and Chemical Resistance sections for additional information.

Spears® CPVC Pipe & Systems Product Lines

EverTUFF® Industrial Schedule 40 & Schedule 80 CPVC Pressure Pipe & Fittings
EverTUFF® CTS CPVC Hot and Cold Water Plumbing Distribution Pipe & Fittings
LabWaste™ CPVC Corrosive Waste Drainage System Pipe & Fittings
FlameGuard® CPVC Fire Sprinkler Products Pipe & Fittings
Spears® CPVC Duct & Fittings
Spears® CPVC Double Containment Pipe & Fittings
Spears® Supplemental CPVC Fittings, Valves & Accessories

"Lead Free" low lead certification – unless otherwise specified, all Spears® Plastic Piping specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.



Physical Properties of PVC & CPVC Pipe

GENERAL	PVC Value	CPVC Value	Test Method
Cell Classification	12454	23447	ASTM D 1784
Maximum Service Temp.	140°F	200°F	
Color	White, Dark Gray	Medium Gray	
Specific Gravity, (g/cu.cm @ 73°F)	1.41	1.51	ASTM D 792
Water Absorption % increase 24 hrs @ 25°C	0.05	0.03	ASTM D 570
Hardness, Rockwell	110 - 120	117 - 119	ASTM D 785
Poisson's Ratio @ 73°F	0.410	0.370	
MECHANICAL			
Tensile Strength, psi @ 73°F	7,450	7,900	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	420,000	426,000	ASTM D 638
Flexural Strength, psi @ 73°F	14,450	15,000	ASTM D 790
Flexural Modulus, psi @ 73°F	360,000	360,000	ASTM D 790
Compressive Strength, psi @ 73°F	9,600	10,000	ASTM D 695
Izod Impact, notched, ft-lb/in @ 73°F	0.75	2.9	ASTM D 256
THERMAL			
Coefficient of Linear Expansion (in/in/°F)	2.9×10^{-5}	3.2×10^{-5}	ASTM D 696
Coefficient of Thermal Conductivity			ASTM C 177
Calories • cm/second • cm ² • °C	3.5×10^{-4}	3.27×10^{-4}	
BTU • inches/hour • Ft.2 • °F	1.02	0.95	
Watt/m/K	0.147	0.137	
Heat Deflection Temperature			
Under Load (264 psi, annealed)	170	235	ASTM D 648
ELECTRICAL			
Dielectric Strength, volts/mil	1,413	1,250	ASTM D 149
Dielectric Constant, 60Hz, 30°F	3.70	3.70	ASTM D 150
Volume Resistivity, ohm/cm @ 95°C	1.2×10^{12}	3.4×10^{12}	ASTM D 257
Spears® PVC & CPVC Pipe is non-electrolytic			
FIRE PERFORMANCE			
Flammability Rating	V-0	V-0, 5VB, 5VA	UL-94
Flame Spread Index	<10	<10	
Flame Spread	0-25	<25	ULC
Smoke Generation	80-225	<50	ULC
Flash Ignition Temp.	730°F	900°F	
Average Time of Burning (sec.)	<5	<5	ASTM D 635
Average Extent of Burning (mm)	<10	<10	
Burning Rate (in/min)	Self Extinguishing	Self Extinguishing	
Softening Starts (approx.)	250°F	295°F	
Material Becomes Viscous	350°F	395°F	
Material Carbonizes	425°F	450°F	
Limiting Oxygen Index (LOI)	43	60	ASTM D 2863

NOTE: The physical properties shown above are considered general for PVC and CPVC. Contact Spears® Technical Services for additional information if necessary.

Dimensions & Pressure Ratings



PVC & CPVC pipe is produced in several different outside diameters, sizes and dimensions for different applications. Different classifications based on outside diameter are not interchangeable, but can often be connected with specialty adapter fittings.

Basic Pipe Sizing Classifications Based on Outside Diameter

- Iron Pipe Size (IPS) - PVC & CPVC Pressure Pipe and Drainage Waste & Vent DWV pipe, forms one of the most widely used sizing classifications including Schedule 40, 80 & 120 pipe and Class pipe in various Standard Dimension Ratios (SDR); plus several specialty piping products such as Spears® **FlameGuard**® CPVC Fire Sprinkler Systems, **LabWaste**™ CPVC Corrosive Waste Drainage Systems, and Low Extractable PVC Systems for Ultra Pure Water.
- Plastic Irrigation Pipe (PIP) – PVC for agricultural irrigation
- Copper Tube Size (CTS) – CPVC for Hot & Cold Waste Distribution
- Plastic Sewer Main (Type PSM) – PVC for gravity sewer mains
- AWWA C900/905 – PVC with Cast Iron O.D. for municipal water systems

The following Pipe Dimension Reference chart is for quick reference to some of the commonly used sizing classifications and nominal sizes. The following pages give additional detail for widely used PVC & CPVC pipe in IPS and CTS sizes.

Pipe Dimension Reference Chart

Pipe Type O.D. Size SDR	LH PIP 91	80 PIP 51	100 PIP 41	125 PIP 32.5	CL 63 IPS 64	CL 100 IPS 41	SEWER PSM 35	CL 125 IPS 32.5	CL 160 IPS 26	CL 200 IPS 21	40 DWV IPS —	80 DWV IPS —	SCH 40 IPS —	SCH 80 IPS —	C-900 CI DR 18
4"	O.D. 4.130 I.D. 4.000 Wall .065 PSI 43	4.130 3.968 .081 80	4.130 3.928 .101 100	4.130 3.876 .127 125	4.500 4.360 .070 63	4.500 4.280 .110 100	4.215 3.89 0.125 117.5	4.500 4.224 .138 125	4.500 4.154 .173 160	4.500 4.072 .214 200	4.500 3.998 .237 100	4.500 3.786 .337 100	4.500 3.998 .237 220	4.500 3.786 .337 320	4.800 4.22 .267 150
6"	O.D. 6.140 I.D. 6.000 Wall .070 PSI 43	6.140 5.898 .121 80	6.140 5.840 .150 100	6.140 5.762 .189 125	6.625 6.417 .104 63	6.625 6.301 .162 100	6.275 5.742 0.18 117.5	6.625 6.217 .204 125	6.625 6.115 .255 160	6.625 5.993 .316 200	6.625 6.031 .280 100	6.625 5.709 .432 100	6.625 6.031 .280 180	6.625 5.709 .432 280	6.900 6.08 .383 150
8"	O.D. 8.160 I.D. 7.984 Wall .088 PSI 43	8.160 7.840 .160 80	8.160 7.762 .199 100	8.160 7.658 .251 125	8.625 8.355 .135 63	8.625 8.205 .210 100	8.4 7.665 0.24 117.5	8.625 8.095 .265 125	8.625 7.961 .332 160	8.625 7.805 .410 200	8.625 7.943 .322 100	8.625 7.565 .500 100	8.625 7.943 .322 160	8.625 7.565 .500 250	9.050 7.97 .503 150
10"	O.D. 10.200 I.D. 9.980 Wall .110 PSI 43	10.200 9.800 .200 80	10.200 9.702 .249 100	10.200 9.572 .314 125	10.750 10.414 .168 63	10.750 10.226 .262 100	10.5 9.563 0.3 117.5	10.750 10.088 .331 125	10.750 9.924 .413 160	10.750 9.748 .511 200	10.750 9.976 .365 100	10.750 9.492 .593 100	10.750 9.976 .365 140	10.750 9.492 .593 230	11.100 9.78 .617 150
12"	O.D. 12.240 I.D. 11.975 Wall .132 PSI 43	12.240 11.760 .240 80	12.240 11.642 .299 100	12.240 11.486 .377 125	12.750 12.352 .199 63	12.750 12.128 .311 100	12.5 11.361 0.36 117.5	12.750 11.966 .392 125	12.750 11.770 .490 160	12.750 11.538 .606 200	12.750 11.890 .406 100	12.750 11.294 .687 100	12.750 11.890 .406 130	12.750 11.294 .687 220	13.200 11.63 .733 150
14"	O.D. 14.280 I.D. 14.000 Wall .140 PSI 43	14.280 13.720 .280 80	14.280 13.584 .348 100	14.280 13.402 .439 125	*	*	*	*	14 12.86 0.538 160	*	14.000 13.072 .438 100	14.000 12.410 .750 100	14.000 13.072 .438 130	14.000 12.410 .750 220	15.3 13.48 .085 235
15"	O.D. 15.300 I.D. 14.970 Wall .165 PSI 43	15.300 14.700 .300 80	15.300 14.550 .375 100	15.300 14.358 .471 125	*	*	15.3 13.898 0.44 117.5	*	*	*	*	*	*	*	*
16"	O.D. 16.000 I.D. 15.616 Wall .0615 PSI 160	*	*	*	*	*	*	*	16 14.696 0.615 160	*	16.000 14.940 .500 100	16.000 14.214 .843 100	16.000 14.940 .500 130	16.000 14.214 .843 220	17.4 15.33 .0967 235
18"	O.D. 18.360 I.D. 17.964 Wall .198 PSI 43	18.701 17.967 .367 80	18.701 17.789 .456 100	18.701 17.551 .575 125	*	18.000 17.122 .439 100	18.701 17.629 0.536 117.5	*	18.000 16.616 .692 160	*	18 16.808 0.562 100	18.000 16.014 .937 100	18 16.808 0.582 120	18.000 16.014 .937 220	19.5 17.83 1.083 235
20"	O.D. 20.400 I.D. 19.962 Wall .219 PSI 43	*	*	*	*	20.000 19.026 .487 100	*	*	20.000 18.462 .769 160	*	20 18.863 0.533 100	20 17.814 1.031 100	20 18.863 0.533 120	20 17.614 1.031 220	21.6 19.03 1.2 235
21"	O.D. 21.000 I.D. 20.783 Wall .0632 PSI 117.5	*	22.047 21.183 .432 80	22.047 20.971 .538 100	22.047 20.691 .678 125	*	22.047 20.783 0.632 117.5	*	*	*	*	*	*	*	*
24"	O.D. 24.000 I.D. 23.831 Wall .486 PSI 80	*	24.803 23.831 .605 100	24.803 23.593 .763 125	*	24.000 22.748 .585 100	24.8 23.381 0.711 117.5	*	24 22.043 0.923 160	*	24 22.54 0.687 100	24 21.418 1.218 100	24 22.54 0.687 120	24 21.418 1.218 210	25.800 23.73 1.200 235

* Information Not Available



Dimensions & Pressure Ratings

PVC PIPE

Schedule 40

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/8	0.405	0.249	0.068	0.051	810
1/4	0.540	0.344	0.088	0.086	780
3/8	0.675	0.473	0.091	0.115	620
1/2	0.840	0.602	0.109	0.170	600
3/4	1.050	0.804	0.113	0.226	480
1	1.315	1.029	0.133	0.333	450
1-1/4	1.660	1.360	0.140	0.450	370
1-1/2	1.900	1.590	0.145	0.537	330
2	2.375	2.047	0.154	0.720	280
2-1/2	2.875	2.445	0.203	1.136	300
3	3.500	3.042	0.216	1.488	260
3-1/2	4.000	3.521	0.226	1.789	240
4	4.500	3.998	0.237	2.118	220
5	5.563	5.016	0.258	2.874	190
6	6.625	6.031	0.280	3.733	180
8	8.625	7.942	0.322	5.619	160
10	10.750	9.976	0.365	7.966	140
12	12.750	11.889	0.406	10.534	130
14	14.000	13.073	0.437	12.462	130
16	16.000	14.940	0.500	16.286	130
18	18.000	16.809	0.562	20.587	130
20	20.000	18.743	0.593	24.183	120
24	24.000	22.544	0.687	33.652	120

Schedule 80

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/4	.540	.282	0.119	0.117	1130
3/8	.675	.403	0.126	0.162	920
1/2	.840	.526	0.147	0.231	850
3/4	1.050	.722	0.154	0.314	690
1	1.315	.936	0.179	0.462	630
1-1/4	1.660	1.255	0.191	0.654	520
1-1/2	1.900	1.476	0.200	0.793	470
2	2.375	1.913	0.218	1.097	400
2-1/2	2.875	2.290	0.276	1.674	420
3	3.500	2.864	0.300	2.242	370
3-1/2	4.000	3.326	0.318	2.735	350
4	4.500	3.786	0.337	3.277	320
5	5.563	4.768	0.375	4.078	290
6	6.625	5.709	0.432	6.258	280
8	8.625	7.565	0.500	9.506	250
10	10.750	9.493	0.593	14.095	230
12	12.750	11.294	0.687	19.392	230
14	14.000	12.410	0.750	23.261	220
16	16.000	14.213	0.843	29.891	220
18	18.000	16.014	0.937	35.419	220
20	20.000	17.814	1.031	45.879	220
24	24.000	21.418	1.218	64.959	210

SDR 13.5 - Class 315

Maximum W.P. 315 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.
1/2	0.840	0.716	.062	0.096
3/4	1.050	0.874	.078	0.168
1	1.315	1.101	.097	0.257
1-1/4	1.660	1.394	.123	0.403
1-1/2	1.900	1.598	.141	0.525
2	2.375	2.003	.176	0.809
2-1/2	2.875	2.423	.213	1.189
3	3.500	2.950	.259	1.762
4	4.500	3.794	.333	2.908
6	6.625	5.584	.491	6.313

SDR 21 - Class 200

Maximum W.P. 200 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
3/4	1.050	0.910	0.060	0.136
1	1.315	1.169	0.063	0.180
1-1/4	1.660	1.482	0.079	0.278
1-1/2	1.900	1.700	0.090	0.358
2	2.375	2.129	0.113	0.550
2-1/2	2.875	2.581	0.137	0.797
3	3.500	3.146	0.167	1.169
4	4.500	4.046	0.214	1.927
6	6.625	5.955	0.316	4.186
8	8.625	7.756	0.410	7.070
10	10.750	9.667	0.511	10.983
12	12.750	11.465	0.606	15.455
14	14.000	12.588	0.666	18.647
16	16.000	14.385	0.762	24.373
18	18.000	16.183	0.857	30.849
20	20.000	17.982	0.952	38.070
24	24.000	21.577	1.143	54.850

SDR 26 - Class 160

Maximum W.P. 160 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1	1.315	1.175	0.060	0.173
1-1/4	1.660	1.512	0.064	0.233
1-1/2	1.900	1.734	0.073	0.300
2	2.375	2.173	0.091	0.456
2-1/2	2.875	2.635	0.110	0.657
3	3.500	3.210	0.135	0.967
4	4.500	4.134	0.173	1.570
6	6.625	6.084	0.255	3.415
8	8.625	7.921	0.332	5.786
10	10.750	9.874	0.413	8.973
12	12.750	11.711	0.490	12.623
14	14.000	12.860	0.538	15.209
16	16.000	14.696	0.615	19.881
18	18.000	16.533	0.692	25.162
20	20.000	18.370	0.769	31.064
24	24.000	22.043	0.923	44.754

SDR 41 - Class 100

Maximum W.P. 100 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
2-1/2	2.875	2.715	0.070	0.444
3	3.500	3.310	0.085	0.643
4	4.500	4.260	0.110	1.044
6	6.625	6.281	0.162	2.205
8	8.625	8.180	0.210	3.714
10	10.750	10.195	0.262	5.774
12	12.750	12.421	0.311	4.113
14	14.000	13.270	0.341	9.888
16	16.000	15.165	0.390	12.925
18	18.000	17.061	0.439	16.352
20	20.000	18.956	0.488	20.200
24	24.000	22.748	0.585	29.070

Dimensions & Pressure Ratings



SDR 32.5 - Class 125

Maximum W.P. 125 PSI* (all sizes)

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1/2	.840	.750	.045	.071
3/4	1.050	0.950	0.050	0.099
1	1.315	1.215	0.051	0.126
1-1/4	1.660	1.520	0.060	0.221
1-1/2	1.900	1.760	0.060	0.255
2	2.375	2.209	0.073	0.378
2-1/2	2.875	2.679	0.088	0.541
3	3.500	3.264	0.108	0.793
4	4.500	4.204	0.138	1.280

SDR 32.5 - Class 125

Maximum W.P. 125 PSI* (all sizes)

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
6	6.625	6.196	0.204	2.732
8	8.625	8.063	0.265	4.658
10	10.750	10.048	0.331	7.252
12	12.750	11.919	0.392	10.182
14	14.000	13.088	0.430	12.270
16	16.000	14.957	0.492	16.037
18	18.000	16.826	0.554	20.307
20	20.000	18.696	0.615	25.063
24	24.000	22.436	0.738	36.072

Schedule 120

Nom. Pipe Size (in)	O.D.	Average I.D.	Minimum Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/2	.840	.480	0.170	0.236	1010
3/4	1.050	.690	0.170	0.311	770
1	1.315	.891	0.200	0.464	720
1-1/4	1.660	1.204	0.215	0.649	600
1-1/2	1.900	1.423	0.225	0.787	540
2	2.375	1.845	0.250	1.111	470

Schedule 120

Nom. Pipe Size (in)	O.D.	Average I.D.	Minimum Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
2-1/2"	2.875	2.239	0.300	1.615	470
3"	3.500	2.758	0.350	2.306	440
4"	4.500	3.574	0.437	3.713	430
6"	6.625	5.434	0.562	7.132	370
8"	8.625	7.189	0.718	11.277	380

Schedule 40

CPVC INDUSTRIAL PIPE

Schedule 80

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.	Maximum W.P. PSI*
1/8	0.405	0.249	0.095	0.055	910
1/4	0.540	0.344	0.119	0.093	780
3/8	0.675	0.473	0.126	0.125	620
1/2	0.840	0.602	0.147	0.184	600
3/4	1.050	0.804	0.154	0.245	480
1	1.315	1.029	0.179	0.360	450
1-1/4	1.660	1.360	0.191	0.487	370
1-1/2	1.900	1.590	0.200	0.581	330
2	2.375	2.047	0.218	0.779	280
2-1/2	2.875	2.445	0.276	1.229	300
3	3.500	3.042	0.300	1.610	260
4	4.500	3.998	0.337	2.292	220
6	6.625	6.031	0.432	4.039	180
8	8.625	7.942	0.500	6.079	160
10	10.750	9.976	0.593	8.618	140
12	12.750	11.889	0.687	11.397	130
14	14.000	13.073	0.750	13.482	130
16	16.000	14.940	0.843	17.619	130
18	18.000	16.809	0.937	22.271	130
20	20.000	18.743	1.031	26.162	120
24	24.000	22.544	1.218	36.406	120

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.	Maximum W.P. PSI*
1/8	0.405	0.195	0.095	0.068	1230
1/4	0.540	0.282	0.119	0.115	1130
3/8	0.675	0.403	0.126	0.158	920
1/2	0.840	0.526	0.147	0.232	850
3/4	1.050	0.722	0.154	0.314	690
1	1.315	0.936	0.179	0.461	630
1-1/4	1.660	1.255	0.191	0.638	520
1-1/2	1.900	1.476	0.200	0.773	470
2	2.375	1.913	0.218	1.070	400
2-1/2	2.875	2.29	0.276	1.632	420
3	3.500	2.864	0.300	2.186	370
4	4.500	3.786	0.337	3.196	320
6	6.625	5.709	0.432	6.102	280
8	8.625	7.565	0.500	9.269	250
10	10.750	9.493	0.593	13.744	230
12	12.750	11.294	0.687	18.909	230
14	14.000	12.41	0.750	22.681	220
16	16.000	14.213	0.843	29.162	220
18	18.000	16.014	0.937	36.487	220
20	20.000	17.814	1.031	44.648	220
24	24.000	21.418	1.218	63.341	210

SDR 11 - Copper Tube Size (CTS)

Maximum W.P. 400 PSI* (all sizes)

Nominal Pipe Size (in)	Average O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1/2	0.625	0.469	0.068	1.393
3/4	0.875	0.695	0.080	0.149
1	1.125	0.901	0.102	0.240
1 1/4	1.375	1.105	0.125	0.353
1 1/2	1.625	1.309	0.148	0.489
2	2.125	1.716	0.193	0.829

SDR13.5 - Class 315

Maximum Working Pressure 315 psi (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.
3/4	1.050	0.874	0.078	0.182
1	1.315	1.101	0.097	0.278
1-1/4	1.660	1.394	0.123	0.436
1-1/2	1.900	1.598	0.141	0.568
2	2.375	2.003	0.176	0.875
2-1/2	2.875	2.423	0.213	1.286
3	3.500	2.950	0.259	1.906
4	4.500	3.794	.333	3.146
6	6.625	5.584	.491	6.828

Note: *Pressure ratings are for water, non-shock, @73°F. Threaded pipe requires a 50% reduction in the pressure ratings stated for plain-end pipe @ 73°F. Threading recommended for Schedule 80 or heavier walls only. Maximum service temperature for PVC is 140°F. Maximum service temperature for CPVC is 200°F. The pressure rating of the pipe must be de-rated when working at elevated temperatures. Chemical resistance data should be referenced for proper material selection and possible de-rating when working with fluids other than water.



Dimensions & Pressure Ratings

Temperature De-rating

The pressure ratings given are for water, non-shock, @ 73°F. The specified derating factors for PVC or for CPVC are suitable for pipe conveying water at elevated temperatures. To determine elevated temperature rating, multiply 73°F [23°C] pressure rating by appropriate factor shown in the tables.

When working near maximum specified temperature, solvent cement joints are recommended in place of threaded connections. Where disassembly is required at elevated temperatures use Spears® Special reinforced (SR) adapters, flanges, unions or grooved coupling connections.

Only Schedule 80 or heavier wall thickness pipe (PVC or CPVC) should be threaded. Do NOT thread Schedule 40 pipe or other thinner-walled pipe such as SDR 13.5, SDR 21, SDR 26, etc. Threading requires a 50% reduction in the pipe's specified pressure rating @ 73°F.

See Chemical Resistance Data for Pressure Piping information for both chemical compatibility and potential temperature limitations when using certain chemicals.

PVC Pipe

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

EX: 2" PVC SCHEDULE 80 @ 120°F = 400 psi x 0.40 = 160 psi max. @ 120°F.

CPVC Pipe

Operating Temp (°F)	De-Rating Factor
73-80	1.00
90	0.91
100	0.82
110	0.72
120	0.65
130	0.57
140	0.50
150	0.42
160	0.40
170	0.29
180	0.25
200	0.20

EX: 2" CPVC SCHEDULE 80 @ 120°F = 400 psi x 0.65 = 260 psi max. @ 120°F

FLOW VELOCITY & FRICTION LOSS

Friction Loss Through Pipe

The Hazen-Williams equation below is widely used to calculate friction loss for water through PVC and CPVC pipe

$$f = .2083 \times \left(\frac{100}{C} \right)^{1.852} \times \frac{G^{1.852}}{di^{4.8655}}$$

Where: f = friction head of feet of water per 100' for the specific pipe size and I.D.
 C = a constant for internal pipe roughness. 150 is the commonly accepted value for PVC and CPVC pipe.
 G = flow rate of gallons per minute (U.S. gallons).
 di = inside diameter of pipe in inches.

Friction Loss Through Fittings

Friction loss through fittings is expressed in equivalent feet of the same pipe size and schedule for the system flow rate. Schedule 40 head loss per 100' values are usually used for other wall thicknesses and standard iron pipe size O.D.'s.

Average Friction Loss for PVC and CPVC Fittings in Equivalent Feet of Straight Run Pipe

Item	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24
Tee Run	1.0	1.4	1.7	2.3	2.7	4.0	4.9	6.1	7.9	12.3	14.0	17.5	20.0	25.0	27.0	32.0	35.0	42.0
Tee Branch	3.8	4.9	6.0	7.3	8.4	12.0	14.7	16.4	22.0	32.7	49.0	57.0	67.0	78.0	88.0	107.0	118.0	137.0
90° Ell	1.5	2.0	2.5	3.8	4.0	5.7	6.9	7.9	11.4	16.7	21.0	26.0	32.0	37.0	43.0	53.0	58.0	67.0
45° Ell	.8	1.1	1.4	1.8	2.1	2.6	3.1	4.0	5.1	8.0	10.6	13.5	15.5	18.0	20.0	23.0	25.0	30.0

Note: Values 10"-24": Approximate values from Nomograph.

Pressure Drop In Valves & Strainers

Pressure drop calculations can be made for valves and strainers for different fluids, flow rates, and sizes using the CV values and the following equation:

Where:

$$P = \frac{(G)^2 (Sg)}{(C_v)^2}$$

$$P = \text{Pressure drop in PSI; feet of water} = \frac{\text{PSI}}{.4332}$$

G = Gallons per minute

C_v = Gallons per minute water per 1 PSI pressure drop

Sg = Specific gravity of liquid (water = 1)

C_v Valves for Select Spears® Valves and Strainers

Nominal Size →	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
True Union 2000 Ball Valve ¹	29	63	120	243	357	599	856	1416	2865	1952	--	--	--
Single Entry Ball Valve ¹	38	76	146	292	412	720	--	1660	3104	--	--	--	--
True Union 2000 Ball Check Valve	6.3	17	25	65	86	130	200	275	500	800	--	--	--
Butterfly Valve (90° - Full Open)	--	--	--	--	81	109	192	345	411	1125	2249	4440	6309
Y-Check Valve	6.7	12.6	22.9	33.8	50.7	79.2	--	235	387	--	--	--	--
Y-Strainer (12 Mesh-Clean)	5.4	7.8	13.9	32.9	41.6	50.0	--	74.6	169.0	--	--	--	--
Basket Strainer (Clean)	4.5	10	15	30	46	72	110	172	270	630	750	893	1063

1- Full Port Ball Valve Cv based on equivalent length of Schedule 80 pipe

Water Velocities

Velocities for water in feet per second at different GPM's and pipe inside diameters can be calculated as follows:

$$V = .3208 \frac{G}{A}$$

Where:

V = velocity in feet per second

G = gallons per minute

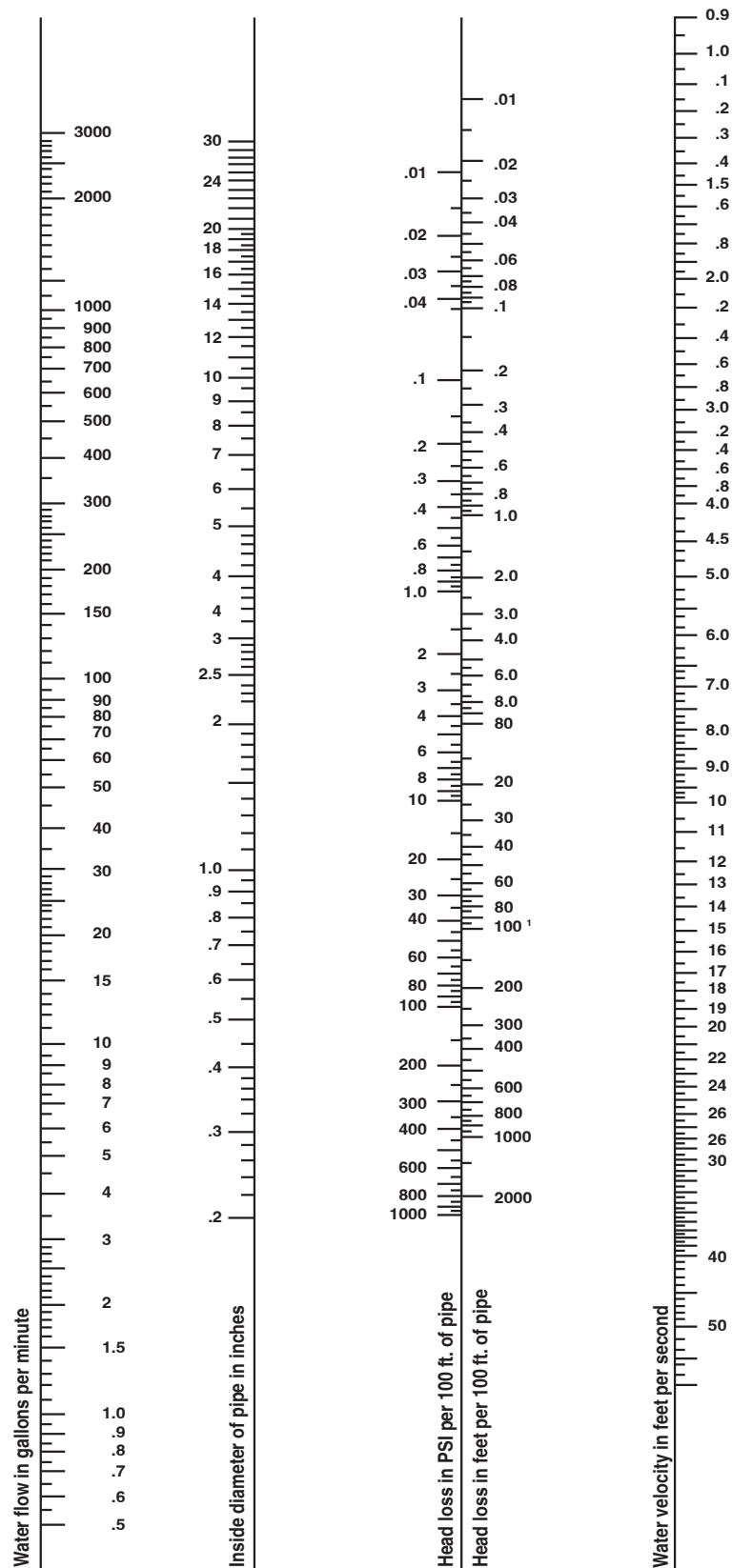
A = inside cross sectional area in square inches

CAUTION: Flow velocities in excess of 5.0 feet per second are not recommended for closed-end systems. Contact Spears® Technical Services for additional information.



Head Loss Characteristics of Water Flow Through Rigid Plastic Pipe – Nomograph

The nomograph provides approximate values for water flow, head loss and water velocity for a wide range of plastic pipe sizes. Two known variables must be used to obtain the other variables by lining up the values on the scales using a ruler or straight edge. Flow velocities in excess of 5.0 feet per second are not recommended.





FLOW VELOCITY & FRICTION LOSS

SCHEDULE 40

Flow Rate (Gallons/Minute)	Flow Velocity (ft/sec)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Rate (Gallons/Minute)
GPM	1/8"			1/4"			3/8"			1/2"			3/4"			1"			1-1/4"			GPM
0.25	1.64	6.54	2.83	0.86	1.36	0.59	0.46	0.29	0.12													0.25
0.50	3.27	23.60	10.23	1.72	4.90	2.12	0.91	1.04	0.45													0.50
0.75	4.91	50.00	21.68	2.59	10.38	4.50	1.37	2.20	0.96													0.75
1	6.55	85.18	36.93	3.45	17.68	7.66	1.82	3.75	1.63	1.13	1.16	0.50	0.63	0.28	0.12	0.39	0.09	0.04	0.22	0.02	0.01	1
2	13.09	307.52	133.31	6.90	63.82	27.67	3.65	13.55	5.88	2.25	4.19	1.82	1.26	1.03	0.44	0.77	0.31	0.13	0.44	0.08	0.03	2
5				17.25	348.29	150.98	9.11	73.96	32.06	5.63	22.88	9.92	3.16	5.60	2.43	1.93	1.69	0.73	1.10	0.43	0.19	5
7							12.76	137.93	59.79	7.88	42.66	18.49	4.42	10.44	4.53	2.70	3.14	1.36	1.55	0.81	0.35	7
10										11.26	82.59	35.80	6.31	20.21	8.76	3.86	6.08	2.64	2.21	1.57	0.68	10
15													9.47	42.82	18.56	5.78	12.89	5.59	3.31	3.32	1.44	15
20													12.63	72.95	31.63	7.71	21.96	9.52	4.42	5.65	2.45	20
25																9.64	33.20	14.39	5.52	8.55	3.71	25
30																11.57	46.54	20.17	6.62	11.98	5.19	30
35																			7.73	15.94	6.91	35
40																			8.83	20.41	8.85	40
45																			9.94	25.39	11.00	45
50																			11.04	30.86	13.38	50

GPM	1-1/2"			2"			2-1/2"			3"			4"			5"			6"			GPM
2	0.32	0.04	0.02																			2
5	0.81	0.20	0.09	0.49	0.06	0.03																5
7	1.13	0.38	0.16	0.68	0.11	0.05	0.48	0.05	0.02													7
10	1.62	0.73	0.32	0.97	0.21	0.09	0.68	0.09	0.04	0.44	0.03	0.01										10
15	2.42	1.55	0.67	1.46	0.45	0.20	1.02	0.19	0.08	0.66	0.07	0.03										15
20	3.23	2.64	1.15	1.95	0.77	0.34	1.37	0.33	0.14	0.88	0.11	0.05	0.51	0.03	0.01							20
25	4.04	4.00	1.73	2.44	1.17	0.51	1.71	0.49	0.21	1.10	0.17	0.07	0.64	0.05	0.02							25
30	4.85	5.60	2.43	2.92	1.64	0.71	2.05	0.69	0.30	1.32	0.24	0.10	0.77	0.06	0.03	0.49	0.02	0.01				30
35	5.65	7.45	3.23	3.41	2.18	0.94	2.39	0.92	0.40	1.54	0.32	0.14	0.89	0.08	0.04	0.57	0.03	0.01				35
40	6.46	9.54	4.14	3.90	2.79	1.21	2.73	1.18	0.51	1.76	0.41	0.18	1.02	0.11	0.05	0.65	0.04	0.02				40
45	7.27	11.87	5.15	4.39	3.47	1.51	3.07	1.46	0.63	1.99	0.51	0.22	1.15	0.13	0.06	0.73	0.04	0.02				45
50	8.08	14.43	6.25	4.87	4.22	1.83	3.41	1.78	0.77	2.21	0.61	0.27	1.28	0.16	0.07	0.81	0.05	0.02	0.56	0.02	0.01	50
60	9.69	20.22	8.77	5.85	5.92	2.56	4.10	2.49	1.08	2.65	0.86	0.37	1.53	0.23	0.10	0.97	0.08	0.03	0.67	0.03	0.01	60
70				6.82	7.87	3.41	4.78	3.32	1.44	3.09	1.15	0.50	1.79	0.30	0.13	1.14	0.10	0.04	0.79	0.04	0.02	70
75				7.31	8.94	3.88	5.12	3.77	1.63	3.31	1.30	0.56	1.92	0.34	0.15	1.22	0.11	0.05	0.84	0.05	0.02	75
80				7.80	10.08	4.37	5.46	4.25	1.84	3.53	1.47	0.64	2.04	0.39	0.17	1.30	0.13	0.06	0.90	0.05	0.02	80
90				8.77	12.53	5.43	6.15	5.28	2.29	3.97	1.82	0.79	2.30	0.48	0.21	1.46	0.16	0.07	1.01	0.07	0.03	90
100				9.74	15.23	6.60	6.83	6.42	2.78	4.41	2.22	0.96	2.55	0.59	0.25	1.62	0.19	0.08	1.12	0.08	0.03	100
125				12.18	23.03	9.98	8.54	9.70	4.21	5.52	3.35	1.45	3.19	0.89	0.38	2.03	0.29	0.13	1.40	0.12	0.05	125
150							10.24	13.60	5.90	6.62	4.70	2.04	3.83	1.24	0.54	2.43	0.41	0.18	1.68	0.17	0.07	150
175										7.72	6.25	2.71	4.47	1.65	0.72	2.84	0.55	0.24	1.96	0.22	0.10	175
200										8.82	8.00	3.47	5.11	2.12	0.92	3.25	0.70	0.30	2.25	0.29	0.12	200
250										11.03	12.10	5.24	6.39	3.20	1.39	4.06	1.06	0.46	2.81	0.43	0.19	250
300													7.66	4.49	1.95	4.87	1.49	0.65	3.37	0.61	0.26	300
350													8.94	5.97	2.59	5.68	1.98	0.86	3.93	0.81	0.35	350
400													10.22	7.64	3.31	6.49	2.54	1.10	4.49	1.03	0.45	400
450																7.30	3.15	1.37	5.05	1.29	0.56	450
500																8.11	3.83	1.66	5.61	1.56	0.68	500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SCHEDULE 40																													
Flow Rate (Gallons/Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Rate (Gallons/Minute)				
GPM	8"			10"			12"			14"			16"			18"			20"			24"			GPM				
100	0.65	0.02	0.01																									100	
125	0.81	0.03	0.01																									125	
150	0.97	0.04	0.02																									150	
175	1.13	0.06	0.03																									175	
200	1.29	0.08	0.03	0.82	0.02	0.01																					200		
250	1.62	0.11	0.05	1.03	0.04	0.02																					250		
300	1.94	0.16	0.07	1.23	0.05	0.02																					300		
350	2.27	0.21	0.09	1.44	0.07	0.03	1.01	0.03	0.01																	350			
400	2.59	0.27	0.12	1.64	0.09	0.04	1.16	0.04	0.02	0.96	0.02	0.01	0.73	0.01	0.01											400			
450	2.91	0.34	0.15	1.85	0.11	0.05	1.30	0.05	0.02	1.08	0.03	0.01	0.82	0.02	0.01											450			
500	3.24	0.41	0.18	2.05	0.14	0.06	1.44	0.06	0.02	1.19	0.04	0.02	0.91	0.02	0.01											500			
750	4.85	0.87	0.38	3.08	0.29	0.12	2.17	0.12	0.05	1.79	0.08	0.03	1.37	0.04	0.02	1.08	0.02	0.01								750			
1000	6.47	1.48	0.64	4.10	0.49	0.21	2.89	0.21	0.09	2.39	0.13	0.06	1.83	0.07	0.03	1.45	0.04	0.02	1.16	0.02	0.01						1000		
1250				5.13	0.74	0.32	3.61	0.31	0.14	2.99	0.20	0.09	2.29	0.10	0.04	1.81	0.06	0.03	1.45	0.03	0.01						1250		
1500				6.15	1.03	0.45	4.33	0.44	0.19	3.58	0.28	0.12	2.74	0.14	0.06	2.17	0.08	0.04	1.74	0.05	0.02	1.21	0.02	0.01		1500			
2000							5.78	0.75	0.33	4.78	0.47	0.20	3.66	0.25	0.11	2.89	0.14	0.06	2.32	0.08	0.04	1.61	0.03	0.01		2000			
2500							7.22	1.13	0.49	5.97	0.71	0.31	4.57	0.37	0.16	3.61	0.21	0.09	2.91	0.12	0.05	2.01	0.05	0.02		2500			
3000									7.17	1.00	0.43	5.49	0.52	0.23	4.34	0.29	0.13	3.49	0.17	0.08	2.41	0.07	0.03		3000				
3500												6.40	0.70	0.30	5.06	0.39	0.17	4.07	0.23	0.10	2.81	0.09	0.04		3500				
4000															5.78	0.50	0.22	4.65	0.30	0.13	3.21	0.12	0.05		4000				
4500																6.50	0.62	0.27	5.23	0.37	0.16	3.62	0.15	0.06		4500			
5000																			5.81	0.45	0.19	4.02	0.18	0.08		5000			
5500																				6.39	0.53	0.23	4.42	0.22	0.09		5500		
6000																					6.97	0.63	0.27	4.82	0.25	0.11		6000	
7000																						5.62	0.34	0.15		7000			
7500																							6.03	0.39	0.17		7500		
8000																								6.43	0.43	0.19		8000	
8500																									6.83	0.49	0.21		8500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SCHEDULE 80																							
Flow Rate (Gallons/Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Rate (Gallons/Minute)	
GPM	1/8"			1/4"			3/8"			1/2"			3/4"			1"			1-1/4"			GPM	
0.25	2.67	21.47	9.31	1.29	3.57	1.55	0.63	0.63	0.27													0.25	
0.50	5.35	77.52	33.60	2.59	12.88	5.58	1.25	2.27	0.98													0.50	
0.75	8.02	164.25	71.20	3.88	27.29	11.83	1.88	4.80	2.08													0.75	
1	10.69	279.84	121.31	5.17	46.49	20.15	2.51	8.18	3.55	1.48	2.24	0.97	0.78	0.48	0.21	0.47	0.14	0.06	0.26	0.03	0.01	1	
2	21.39	1010.21	437.93	10.35	167.84	72.76	5.01	29.54	12.81	2.96	8.08	3.50	1.56	1.73	0.75	0.93	0.49	0.21	0.52	0.12	0.05	2	
5				25.87	915.95	397.07	12.53	161.23	69.89	7.39	44.12	19.12	3.91	9.45	4.10	2.33	2.67	1.16	1.30	0.64	0.28	5	
7							17.54	300.66	130.34	10.35	82.27	35.66	5.48	17.62	7.64	3.26	4.98	2.16	1.81	1.20	0.52	7	
10										14.78	159.26	69.04	7.82	34.11	14.79	4.66	9.65	4.18	2.59	2.32	1.00	10	
15													11.74	72.27	31.33	6.99	20.44	8.86	3.89	4.91	2.13	15	
20														15.65	123.13	53.38	9.33	34.82	15.09	5.18	8.36	3.62	20
25																11.66	52.64	22.82	6.48	12.64	5.48	25	
30																13.99	73.78	31.98	7.77	17.71	7.68	30	
35																16.32	98.16	42.55	9.07	23.56	10.21	35	
40																18.65	125.70	54.49	10.37	30.17	13.08	40	
45																			11.66	37.53	16.27	45	
50																			12.96	45.62	19.77	50	
60																			15.55	63.94	27.72	60	
70																			18.14	85.06	36.87	70	
75																			19.43	96.66	41.90	75	
80																			20.73	108.93	47.22	80	

GPM	1-1/2"			2"			2-1/2"			3"			4"			5"			6"			GPM
1	0.19	0.01	0.01	0.11	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.00										1
2	0.38	0.05	0.02	0.22	0.02	0.01	0.16	0.01	0.00	0.10	0.00	0.00										2
5	0.96	0.29	0.13	0.56	0.08	0.04	0.39	0.03	0.01	0.25	0.01	0.01										5
7	1.34	0.54	0.24	0.78	0.15	0.07	0.55	0.06	0.03	0.35	0.02	0.01										7
10	1.92	1.05	0.46	1.12	0.30	0.13	0.78	0.12	0.05	0.50	0.04	0.02										10
15	2.87	2.23	0.97	1.67	0.63	0.27	1.17	0.26	0.11	0.75	0.09	0.04										15
20	3.83	3.80	1.65	2.23	1.07	0.47	1.56	0.45	0.19	1.00	0.15	0.07	0.57	0.04	0.02							20
25	4.79	5.74	2.49	2.79	1.63	0.70	1.95	0.68	0.29	1.24	0.23	0.10	0.71	0.06	0.03							25
30	5.75	8.04	3.49	3.35	2.28	0.99	2.34	0.95	0.41	1.49	0.32	0.14	0.85	0.08	0.04	0.54	0.03	0.01				30
35	6.71	10.70	4.64	3.91	3.03	1.31	2.73	1.26	0.55	1.74	0.43	0.18	1.00	0.11	0.05	0.63	0.04	0.02				35
40	7.66	13.71	5.94	4.46	3.88	1.68	3.11	1.62	0.70	1.99	0.54	0.24	1.14	0.14	0.06	0.72	0.05	0.02				40
45	8.62	17.05	7.39	5.02	4.83	2.09	3.50	2.01	0.87	2.24	0.68	0.29	1.28	0.17	0.08	0.81	0.06	0.02				45
50	9.58	20.72	8.98	5.58	5.87	2.54	3.89	2.45	1.06	2.49	0.82	0.36	1.42	0.21	0.09	0.90	0.07	0.03	0.63	0.03	0.01	50
60	11.50	29.04	12.59	6.69	8.22	3.56	4.67	3.43	1.49	2.99	1.15	0.50	1.71	0.30	0.13	1.08	0.10	0.04	0.75	0.04	0.02	60
70	13.41	38.64	16.75	7.81	10.94	4.74	5.45	4.56	1.98	3.48	1.54	0.67	1.99	0.39	0.17	1.26	0.13	0.06	0.88	0.05	0.02	70
75	14.37	43.90	19.03	8.37	12.43	5.39	5.84	5.18	2.25	3.73	1.74	0.76	2.14	0.45	0.19	1.35	0.15	0.06	0.94	0.06	0.03	75
80	15.33	49.48	21.45	8.93	14.01	6.07	6.23	5.84	2.53	3.98	1.97	0.85	2.28	0.51	0.22	1.44	0.16	0.07	1.00	0.07	0.03	80
90	17.24	61.54	26.68	10.04	17.42	7.55	7.01	7.26	3.15	4.48	2.45	1.06	2.56	0.63	0.27	1.62	0.20	0.09	1.13	0.09	0.04	90
100	19.16	74.80	32.42	11.16	21.18	9.18	7.79	8.83	3.83	4.98	2.97	1.29	2.85	0.76	0.33	1.80	0.25	0.11	1.25	0.10	0.04	100
125	23.95	113.07	49.02	13.95	32.02	13.88	9.73	13.34	5.78	6.22	4.49	1.95	3.56	1.16	0.50	2.24	0.38	0.16	1.57	0.16	0.07	125
150	28.74	158.49	68.71	16.74	44.88	19.45	11.68	18.70	8.11	7.47	6.30	2.73	4.27	1.62	0.70	2.69	0.53	0.23	1.88	0.22	0.10	150
175				19.53	59.70	25.88	13.63	24.88	10.79	8.71	8.38	3.63	4.98	2.16	0.93	3.14	0.70	0.30	2.19	0.29	0.13	175
200				22.32	76.45	33.14	15.57	31.86	13.81	9.96	10.73	4.65	5.70	2.76	1.20	3.59	0.90	0.39	2.51	0.37	0.16	200
250				27.90	115.58	50.10	19.47	48.17	20.88	12.44	16.22	7.03	7.12	4.17	1.81	4.49	1.36	0.59	3.13	0.57	0.25	250
300							23.36	67.52	29.27	14.93	22.74	9.86	8.55	5.85	2.54	5.39	1.90	0.83	3.76	0.79	0.34	300
350													9.97	7.78	3.37	6.29	2.53	1.10	4.38	1.05	0.46	350
400													11.39	9.96	4.32	7.18	3.24	1.41	5.01	1.35	0.59	400
450													12.82	12.39	5.37	8.08	4.04	1.75	5.64	1.68	0.73	450
500																8.98	4.90	2.13	6.26	2.04	0.89	500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SCHEDULE 80																														
Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)		
GPM	8"			10"			12"			14"			16"			18"			20"			24"			GPM					
125	0.89	0.04	0.02																									125		
150	1.07	0.06	0.02																									150		
175	1.25	0.07	0.03																									175		
200	1.43	0.10	0.04	0.91	0.03	0.01																					200			
250	1.78	0.14	0.06	1.13	0.05	0.02																						250		
300	2.14	0.20	0.09	1.36	0.07	0.03																						300		
350	2.50	0.27	0.12	1.59	0.09	0.04	1.12	0.04	0.02																			350		
400	2.85	0.34	0.15	1.81	0.11	0.05	1.28	0.05	0.02	1.06	0.03	0.01	0.81	0.02	0.01													400		
450	3.21	0.43	0.19	2.04	0.14	0.06	1.44	0.06	0.03	1.19	0.04	0.02	0.91	0.02	0.01													450		
500	3.57	0.52	0.23	2.27	0.17	0.07	1.60	0.07	0.03	1.33	0.05	0.02	1.01	0.02	0.01													500		
750	5.35	1.10	0.48	3.40	0.36	0.16	2.40	0.16	0.07	1.99	0.10	0.04	1.52	0.05	0.02	1.19	0.03	0.01										750		
1000	7.13	1.87	0.81	4.53	0.62	0.27	3.20	0.27	0.12	2.65	0.17	0.07	2.02	0.09	0.04	1.59	0.05	0.02	1.29	0.03	0.01							1000		
1250				5.66	0.94	0.41	4.00	0.40	0.17	3.31	0.25	0.11	2.53	0.13	0.06	1.99	0.07	0.03	1.61	0.04	0.02							1250		
1500				6.80	1.32	0.57	4.80	0.57	0.24	3.98	0.36	0.15	3.03	0.18	0.08	2.39	0.10	0.04	1.93	0.06	0.03	1.34	0.03	0.01			1500			
2000							6.40	0.96	0.42	5.30	0.61	0.26	4.04	0.31	0.14	3.18	0.18	0.08	2.57	0.10	0.05	1.78	0.04	0.02			2000			
2500										6.63	0.92	0.40	5.05	0.48	0.21	3.98	0.27	0.12	3.22	0.16	0.07	2.23	0.06	0.03			2500			
3000										7.95	1.29	0.56	6.06	0.67	0.29	4.78	0.37	0.16	3.86	0.22	0.10	2.67	0.09	0.04			3000			
3500													7.07	0.89	0.38	5.57	0.50	0.22	4.50	0.30	0.13	3.12	0.12	0.05				3500		
4000																6.37	0.64	0.28	5.15	0.38	0.16	3.56	0.15	0.07					4000	
4500																7.16	0.79	0.34	5.79	0.47	0.20	4.01	0.19	0.08					4500	
5000																			6.43	0.57	0.25	4.45	0.23	0.10						5000
5500																			7.08	0.68	0.30	4.90	0.28	0.12						5500
6000																			7.72	0.80	0.35	5.34	0.33	0.14						6000
7000																						6.23	0.44	0.19					7000	
7500																						6.68	0.49	0.21					7500	
8000																						7.12	0.56	0.24					8000	
8500																						7.57	0.62	0.27					8500	

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SCHEDULE 120																									
Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			GPM
1	1.77	3.50	1.52	0.86	0.60	0.26	0.51	0.17	0.07	0.28	0.04	0.02	0.20	0.02	0.01	0.12	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.00	1
2	3.54	12.62	5.47	1.72	2.16	0.94	1.03	0.62	0.27	0.56	0.14	0.06	0.40	0.06	0.03	0.24	0.02	0.01	0.16	0.01	0.00	0.11	0.00	0.00	2
5	8.86	68.86	29.85	4.29	11.78	5.11	2.57	3.40	1.47	1.41	0.78	0.34	1.01	0.35	0.15	0.60	0.10	0.04	0.41	0.04	0.02	0.27	0.01	0.01	5
7	12.41	128.41	55.67	6.00	21.97	9.52	3.60	6.33	2.75	1.97	1.46	0.63	1.41	0.65	0.28	0.84	0.18	0.08	0.57	0.07	0.03	0.38	0.03	0.01	7
10	17.72	248.59	107.76	8.58	42.53	18.43	5.15	12.26	5.31	2.82	2.83	1.23	2.02	1.26	0.54	1.20	0.36	0.15	0.82	0.14	0.06	0.54	0.05	0.02	10
15	4"			12.87	90.11	39.06	7.72	25.98	11.26	4.23	6.00	2.60	3.03	2.66	1.15	1.80	0.75	0.33	1.22	0.29	0.13	0.81	0.11	0.05	15
20	0.64	0.05	0.02	17.16	153.52	66.55	10.30	44.25	19.18	5.64	10.23	4.43	4.04	4.54	1.97	2.40	1.28	0.56	1.63	0.50	0.22	1.07	0.18	0.08	20
25	0.80	0.08	0.03				12.87	66.90	29.00	7.05	15.46	6.70	5.04	6.86	2.97	3.00	1.94	0.84	2.04	0.76	0.33	1.34	0.27	0.12	25
30	0.96	0.11	0.05				15.45	93.77	40.65	8.46	21.67	9.39	6.05	9.61	4.17	3.60	2.72	1.18	2.45	1.06	0.46	1.61	0.38	0.17	30
35	1.12	0.14	0.06				18.02	124.75	54.08	9.87	28.83	12.50	7.06	12.79	5.54	4.20	3.61	1.57	2.85	1.41	0.61	1.88	0.51	0.22	35
40	1.28	0.19	0.08				20.60	159.75	69.25	11.28	36.92	16.01	8.07	16.37	7.10	4.80	4.63	2.01	3.26	1.80	0.78	2.15	0.65	0.28	40
45	1.44	0.23	0.10	5"						12.69	45.92	19.91	9.08	20.37	8.83	5.40	5.76	2.50	3.67	2.24	0.97	2.42	0.81	0.35	45
50	1.60	0.28	0.12	0.69	0.04	0.02				14.09	55.82	24.20	10.09	24.75	10.73	6.00	7.00	3.03	4.08	2.73	1.18	2.69	0.99	0.43	50
60	1.92	0.39	0.17	0.83	0.05	0.02				16.91	78.24	33.92	12.11	34.70	15.04	7.20	9.81	4.25	4.89	3.82	1.66	3.22	1.39	0.60	60
70	2.24	0.52	0.23	0.97	0.07	0.03				19.73	104.09	45.12	14.12	46.16	20.01	8.40	13.05	5.66	5.71	5.09	2.21	3.76	1.84	0.80	70
75	2.40	0.59	0.26	1.04	0.08	0.03				21.14	118.27	51.27	15.13	52.45	22.74	9.00	14.82	6.43	6.11	5.78	2.51	4.03	2.10	0.91	75
80	2.56	0.67	0.29	1.11	0.09	0.04				22.55	133.29	57.78	16.14	59.11	25.62	9.60	16.71	7.24	6.52	6.51	2.82	4.30	2.36	1.02	80
90	2.88	0.83	0.36	1.25	0.11	0.05				25.37	165.78	71.87	18.16	73.52	31.87	10.81	20.78	9.01	7.34	8.10	3.51	4.84	2.94	1.27	90
100	3.20	1.01	0.44	1.38	0.13	0.06	6"						20.18	89.36	38.74	12.01	25.26	10.95	8.15	9.85	4.27	5.37	3.57	1.55	100
125	4.00	1.53	0.66	1.73	0.20	0.09	0.99	0.05	0.02				25.22	135.09	58.56	15.01	38.18	16.55	10.19	14.89	6.45	6.72	5.40	2.34	125
150	4.80	2.14	0.93	2.08	0.28	0.12	1.19	0.07	0.03				30.26	189.35	82.08	18.01	53.52	23.20	12.23	20.87	9.05	8.06	7.57	3.28	150
175	5.60	2.85	1.24	2.42	0.37	0.16	1.38	0.10	0.04							21.01	71.20	30.86	14.27	27.76	12.04	9.40	10.07	4.36	175
200	6.40	3.65	1.58	2.77	0.48	0.21	1.58	0.12	0.05							24.01	91.17	39.52	16.30	35.55	15.41	10.75	12.89	5.59	200
250	8.00	5.52	2.39	3.46	0.72	0.31	1.98	0.18	0.08							30.01	137.83	59.75	20.38	53.75	23.30	13.43	19.49	8.45	250
300	9.60	7.74	3.36	4.15	1.01	0.44	2.37	0.26	0.11																300
350	11.20	10.30	4.46	4.84	1.34	0.58	2.77	0.34	0.15																350
400	12.80	13.19	5.72	5.54	1.72	0.74	3.16	0.44	0.19																400
450	14.40	16.40	7.11	6.23	2.14	0.93	3.56	0.55	0.24																450
500				6.92	2.60	1.13	3.95	0.67	0.29																500
750				10.38	5.50	2.38	5.93	1.14	0.61																750
1,000				13.84	9.37	4.06	7.91	2.40	1.04																1,000
1,250							9.88	3.63	1.57																1,250
1,500							11.86	5.09	2.21																1,500
2,000							15.81	8.67	3.76																2,000

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SDR 11																			
Flow Rate (Gallons/ Minute)	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Flow Rate (Gallons/ Minute)
GPM	1.2"			3/4"			1"			1-1/4"			1-1/2"			2"			GPM
1	1.71	3.19	1.38	0.80	0.50	0.22	0.48	0.15	0.06										1
2	3.42	11.53	5.00	1.60	1.82	0.79	0.96	0.53	0.23										2
3	5.13	24.43	10.59	2.40	3.85	1.67	1.44	1.12	0.49										3
4	6.83	41.62	18.04	3.20	6.55	2.84	1.93	1.91	0.83										4
5	8.54	62.91	27.27	4.00	9.91	4.29	2.41	2.89	1.25										5
6	10.25	88.18	38.23	4.79	13.89	6.02	2.89	4.05	1.76										6
7	11.96	117.32	50.86	5.59	18.47	8.01	3.37	5.39	2.34										7
8	13.67	150.23	65.13	6.39	23.66	10.26	3.85	6.90	2.99										8
9	15.38	186.85	81.00	7.19	29.42	12.76	4.33	8.58	3.72										9
10	17.08	227.11	98.45	7.99	35.76	15.50	4.82	10.43	4.52	3.23	3.94	1.71	2.31	1.75	0.76	1.35	0.49	0.21	10
15				11.99	75.78	32.85	7.22	22.11	9.58	4.84	8.35	3.62	3.47	3.71	1.61	2.03	1.03	0.45	15
20				15.98	129.11	55.97	9.63	37.67	16.33	6.46	14.23	6.17	4.63	6.33	2.74	2.70	1.76	0.76	20
25							12.04	56.94	24.69	8.07	21.51	9.33	5.78	9.56	4.15	3.38	2.66	1.15	25
30							14.45	79.82	34.60	9.68	30.15	13.07	6.94	13.40	5.81	4.05	3.73	1.62	30
35							16.86	106.19	46.03	11.30	40.11	17.39	8.09	17.83	7.73	4.73	4.96	2.15	35
40										12.91	51.37	22.27	9.25	22.83	9.90	5.40	6.35	2.75	40
45										14.52	63.89	27.70	10.41	28.40	12.31	6.08	7.89	3.42	45
50										16.14	77.66	33.66	11.56	34.52	14.96	6.75	9.60	4.16	50
55										17.75	92.65	40.16	12.72	41.18	17.85	7.43	11.45	4.96	55
60													13.88	48.38	20.97	8.10	13.45	5.83	60
70													16.19	64.37	27.90	9.46	17.89	7.76	70
80																10.61	22.91	9.93	80
90																12.16	28.50	12.35	90
100																13.51	34.64	15.02	100
125																16.89	52.37	22.70	125

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SDR 13.5																										
Flow Rate (Gallons/ Minute)	cubic ft/sec	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM		1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			GPM
1	0.002	0.85	1.03	0.45	0.54	0.34	0.15																			1
2	0.004	1.69	2.05	0.89	1.07	0.68	0.29	0.68	0.40	0.17	0.42	0.13	0.06	0.32	0.065	0.028	0.20	0.03	0.013							2
5	0.011	4.22	11.58	5.01	2.68	3.82	1.65	1.69	1.24	0.54	1.05	0.39	0.17	0.80	0.20	0.088	0.51	0.075	0.033	0.35	0.038	0.016	0.24	0.02	0.009	5
7	0.016	5.91	21.24	9.20	3.75	7.01	3.03	2.36	2.28	0.99	1.47	0.72	0.31	1.12	0.37	0.16	0.72	0.125	0.054	0.49	0.53	0.023	0.33	0.03	0.012	7
10	0.022	8.44	40.46	17.52	5.35	13.34	5.78	3.37	4.33	1.87	2.10	1.37	0.59	1.60	0.71	0.31	1.02	0.24	0.10	0.70	0.09	0.039	0.47	0.04	0.017	10
15	0.033	4"			8.03	28.27	12.24	5.06	9.18	3.97	3.15	2.91	1.26	2.40	1.50	0.65	1.53	0.50	0.22	1.04	0.20	0.087	0.70	0.08	0.035	15
20	0.045	0.57	0.04	0.017	10.70	48.17	20.86	6.74	15.64	6.77	4.21	4.96	2.91	3.20	2.55	1.10	2.04	0.85	0.37	1.39	0.34	0.15	0.94	0.13	0.056	20
25	0.056	0.71	0.06	0.026	5"			8.43	23.65	10.24	5.26	7.49	3.24	4.00	3.85	1.67	2.55	1.29	0.56	1.74	0.51	0.22	1.17	0.19	0.082	25
30	0.067	0.85	0.08	0.035	0.56	0.03	0.013	10.11	33.15	14.35	6.31	10.50	4.55	4.80	5.40	2.34	3.05	1.80	0.78	2.09	0.71	0.31	1.41	0.27	0.12	30
35	0.078	0.99	0.11	0.048	0.65	0.04	0.017				7.36	13.97	6.05	5.60	7.19	3.11	3.57	2.40	1.04	2.44	0.95	0.41	1.64	0.36	0.16	35
40	0.089	1.14	0.14	0.060	0.74	0.05	0.022				8.41	17.90	7.75	6.40	9.20	3.98	4.08	3.07	1.33	2.78	1.21	0.52	1.88	0.46	0.20	40
45	0.100	1.28	0.17	0.074	0.84	0.06	0.026	6"			9.46	22.26	9.64	7.20	11.44	4.95	4.59	3.82	1.65	3.13	1.51	0.65	2.11	0.58	0.25	45
50	0.111	1.42	0.21	0.091	0.93	0.07	0.030	0.66	0.03	0.013	10.52	27.05	11.71	8.00	13.91	6.02	5.10	4.64	2.01	3.48	1.83	0.79	2.35	0.70	0.30	50
60	0.134	1.70	0.29	0.13	1.12	0.10	0.043	0.79	0.04	0.017				9.60	19.50	8.44	6.12	6.50	2.81	4.18	2.57	1.11	2.82	0.98	0.42	60
70	0.156	1.99	0.38	0.16	1.30	0.14	0.061	0.92	0.06	0.026							7.14	8.65	3.75	4.87	3.42	1.48	3.29	1.31	0.57	70
75	0.167	2.13	0.44	0.19	1.40	0.16	0.069	0.98	0.07	0.030							7.65	9.83	4.26	5.22	3.88	1.68	3.52	1.49	0.65	75
80	0.178	2.27	0.49	0.21	1.49	0.18	0.078	1.05	0.08	0.035							8.16	11.08	4.80	5.57	4.37	1.89	3.76	1.68	0.73	80
90	0.201	2.56	0.61	0.26	1.67	0.22	0.095	1.18	0.09	0.039							9.18	13.78	5.97	6.27	5.44	2.36	4.23	2.09	0.90	90
100	0.223	2.84	0.74	0.32	1.86	0.27	0.12	1.31	0.11	0.048							10.20	16.75	7.25	6.96	6.61	2.86	4.70	2.54	1.10	100
125	0.279	3.55	1.13	0.49	2.33	0.40	0.18	1.64	0.17	0.074																125
150	0.334	4.26	1.58	0.68	2.79	0.56	0.24	1.97	0.24	0.10																150
175	0.390	4.97	2.10	0.91	3.26	0.75	0.33	2.30	0.32	0.14																175
200	0.446	5.68	2.69	1.16	3.72	0.96	0.42	2.62	0.41	0.18																200
250	0.557	7.10	4.07	1.76	4.66	1.46	0.63	3.28	0.62	0.27																250
300	0.668	8.52	5.69	2.46	5.58	2.03	0.88	3.93	0.87	0.38																300
350	0.780	9.94	7.58	3.29	6.52	2.70	1.17	4.59	1.16	0.50																350
400	0.891	11.36	9.70	4.20	7.44	3.46	1.50	5.24	1.48	0.64																400
450	1.003				8.37	4.31	1.87	5.90	1.84	0.80																450
500	1.114				9.30	5.24	2.27	6.56	2.23	0.97																500
750								9.83	4.73	2.05																750
1000	2.228							13.11	8.06	3.49																1000

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SDR 21																									
Flow Rate (Gallons per Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			GPM
1				0.49	0.16	0.07	0.30	0.05	0.02	0.19	0.01	0.01	0.14	0.01	0.00	0.09	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.00	1
2				0.99	0.56	0.24	0.60	0.17	0.07	0.37	0.05	0.02	0.28	0.03	0.01	0.18	0.01	0.00	0.12	0.00	0.00	0.08	0.00	0.00	2
5				2.46	3.06	1.33	1.49	0.91	0.39	0.93	0.29	0.12	0.71	0.15	0.06	0.45	0.05	0.02	0.31	0.02	0.01	0.21	0.01	0.00	5
7				3.45	5.71	2.48	2.09	1.69	0.73	1.30	0.53	0.23	0.99	0.27	0.12	0.63	0.09	0.04	0.43	0.04	0.02	0.29	0.01	0.01	7
10				4.93	11.06	4.80	2.99	3.27	1.42	1.86	1.03	0.45	1.41	0.53	0.23	0.90	0.18	0.08	0.61	0.07	0.03	0.41	0.03	0.01	10
15	4"			7.39	23.44	10.16	4.48	6.93	3.00	2.79	2.18	0.95	2.12	1.12	0.49	1.35	0.37	0.16	0.92	0.15	0.06	0.62	0.06	0.02	15
20	0.50	0.03	0.01	9.86	39.94	17.31	5.97	11.81	5.12	3.72	3.72	1.61	2.83	1.91	0.83	1.80	0.64	0.28	1.23	0.25	0.11	0.83	0.10	0.04	20
25	0.62	0.04	0.02	5"			7.47	17.85	7.74	4.65	5.63	2.44	3.53	2.89	1.25	2.25	0.97	0.42	1.53	0.38	0.16	1.03	0.14	0.06	25
30	0.75	0.06	0.03	0.49	0.02	0.01	8.96	25.02	10.85	5.58	7.89	3.42	4.24	4.05	1.75	2.70	1.35	0.59	1.84	0.53	0.23	1.24	0.20	0.09	30
35	0.87	0.08	0.03	0.57	0.03	0.01	10.45	33.28	14.43	6.51	10.49	4.55	4.94	5.38	2.33	3.15	1.80	0.78	2.15	0.71	0.31	1.44	0.27	0.12	35
40	1.00	0.10	0.04	0.65	0.04	0.02	6"			7.43	13.44	5.83	5.65	6.89	2.99	3.60	2.31	1.00	2.45	0.90	0.39	1.65	0.34	0.15	40
45	1.12	0.13	0.05	0.73	0.04	0.02	6"			8.36	16.71	7.25	6.36	8.57	3.72	4.05	2.87	1.24	2.76	1.12	0.49	1.86	0.43	0.19	45
50	1.25	0.15	0.07	0.82	0.05	0.02	0.58	0.02	0.01	9.29	20.31	8.81	7.06	10.42	4.52	4.50	3.49	1.51	3.06	1.37	0.59	2.06	0.52	0.23	50
60	1.50	0.21	0.09	0.98	0.08	0.03	0.69	0.03	0.01	8"			8.48	14.60	6.33	5.41	4.89	2.12	3.68	1.91	0.83	2.48	0.73	0.32	60
70	1.75	0.29	0.12	1.14	0.10	0.04	0.81	0.04	0.02	8"			9.89	19.43	8.42	6.31	6.50	2.82	4.29	2.55	1.10	2.89	0.97	0.42	70
75	1.87	0.32	0.14	1.22	0.12	0.05	0.86	0.05	0.02	8"			10.59	22.08	9.57	6.76	7.39	3.20	4.60	2.89	1.25	3.09	1.10	0.48	75
80	2.00	0.37	0.16	1.31	0.13	0.06	0.92	0.06	0.02	8"			8"			7.21	8.32	3.61	4.90	3.26	1.41	3.30	1.25	0.54	80
90	2.24	0.46	0.20	1.47	0.16	0.07	1.04	0.07	0.03	8"			8"			8.11	10.35	4.49	5.52	4.06	1.76	3.71	1.55	0.67	90
100	2.49	0.55	0.24	1.63	0.20	0.09	1.15	0.08	0.04	0.68	0.02	0.01	8"			9.01	12.58	5.46	6.13	4.93	2.14	4.13	1.88	0.82	100
125	3.12	0.84	0.36	2.04	0.30	0.13	1.44	0.13	0.06	0.85	0.04	0.02	8"			8"			7.66	7.46	3.23	5.16	2.85	1.23	125
150	3.74	1.17	0.51	2.45	0.42	0.18	1.73	0.18	0.08	1.02	0.05	0.02	8"			8"			9.19	10.45	4.53	6.19	3.99	1.73	150
175	4.36	1.56	0.68	2.86	0.56	0.24	2.01	0.24	0.10	1.19	0.07	0.03	8"			8"			10.73	13.90	6.03	7.22	5.31	2.30	175
200	4.99	2.00	0.87	3.26	0.71	0.31	2.30	0.30	0.13	1.36	0.08	0.04	8"			8"			8"			8.25	6.80	2.95	200
250	6.24	3.02	1.31	4.08	1.08	0.47	2.88	0.46	0.20	1.70	0.13	0.06	8"			8"			8"			10.31	10.27	4.45	250
300	7.48	4.23	1.84	4.90	1.51	0.65	3.45	0.65	0.28	2.04	0.18	0.08	8"			8"			8"			8"			300
350	8.73	5.63	2.44	5.71	2.01	0.87	4.03	0.86	0.37	2.38	0.24	0.10	8"			8"			8"			8"			350
400	9.98	7.21	3.13	6.53	2.57	1.12	4.61	1.10	0.48	2.71	0.30	0.13	8"			8"			8"			8"			400
450	11.22	8.97	3.89	7.35	3.20	1.39	5.18	1.37	0.59	3.05	0.38	0.16	8"			8"			8"			8"			450
500	8"			8.16	3.89	1.69	5.76	1.66	0.72	3.39	0.46	0.20	8"			8"			8"			8"			500
750	8"			8"			8.64	3.52	1.53	5.09	0.97	0.42	8"			8"			8"			8"			750
1000	8"			8"			8"			6.79	1.66	0.72	8"			8"			8"			8"			1000
1250	8"			8"			8"			8.48	2.51	1.09	8"			8"			8"			8"			1250

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



FLOW VELOCITY & FRICTION LOSS

SDR 26																															
Flow Rate (Gallons per Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)			
GPM	1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			4"			5"			6"			GPM			
1	0.30	0.04	0.02	0.18	0.01	0.01	0.14	0.01	0.00	0.09	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.00	4"			5"			6"			1			
2	0.59	0.16	0.07	0.36	0.05	0.02	0.27	0.02	0.01	0.17	0.01	0.00	0.12	0.00	0.00	0.08	0.00	0.00										2			
5	1.48	0.88	0.38	0.89	0.26	0.11	0.68	0.13	0.06	0.43	0.04	0.02	0.29	0.02	0.01	0.20	0.01	0.00										5			
7	2.07	1.65	0.71	1.25	0.48	0.21	0.95	0.25	0.11	0.61	0.08	0.04	0.41	0.03	0.01	0.28	0.01	0.01										7			
10	2.96	3.19	1.38	1.79	0.94	0.41	1.36	0.48	0.21	0.86	0.16	0.07	0.59	0.06	0.03	0.40	0.02	0.01										10			
15	4.44	6.76	2.93	2.68	1.98	0.86	2.04	1.02	0.44	1.30	0.34	0.15	0.88	0.13	0.06	0.59	0.05	0.02										15			
20	5.91	11.52	4.99	3.57	3.38	1.46	2.72	1.73	0.75	1.73	0.58	0.25	1.18	0.23	0.10	0.79	0.09	0.04	0.48	0.03	0.01							20			
25	7.39	17.41	7.55	4.47	5.10	2.21	3.40	2.62	1.14	2.16	0.87	0.38	1.47	0.34	0.15	0.99	0.13	0.06	0.60	0.04	0.02							25			
30	8.87	24.40	10.58	5.36	7.15	3.10	4.07	3.67	1.59	2.59	1.23	0.53	1.76	0.48	0.21	1.19	0.18	0.08	0.72	0.05	0.02	0.47	0.02	0.01				30			
35	10.35	32.46	14.07	6.25	9.52	4.13	4.75	4.89	2.12	3.03	1.63	0.71	2.06	0.64	0.28	1.39	0.24	0.11	0.84	0.07	0.03	0.55	0.03	0.01				35			
40	11.83	41.57	18.02	7.14	12.19	5.28	5.43	6.26	2.71	3.46	2.09	0.90	2.35	0.82	0.35	1.58	0.31	0.14	0.96	0.09	0.04	0.63	0.03	0.01				40			
45				8.04	15.16	6.57	6.11	7.78	3.37	3.89	2.60	1.13	2.65	1.02	0.44	1.78	0.39	0.17	1.08	0.11	0.05	0.70	0.04	0.02				45			
50				8.93	18.43	7.99	6.79	9.46	4.10	4.32	3.16	1.37	2.94	1.24	0.54	1.98	0.47	0.20	1.19	0.14	0.06	0.78	0.05	0.02	0.55	0.02	0.01	50			
60				10.72	25.83	11.20	8.15	13.26	5.75	5.19	4.42	1.92	3.53	1.73	0.75	2.38	0.66	0.29	1.43	0.19	0.08	0.94	0.07	0.03	0.66	0.03	0.01	60			
70							9.51	17.64	7.65	6.05	5.88	2.55	4.12	2.30	1.00	2.77	0.88	0.38	1.67	0.26	0.11	1.10	0.09	0.04	0.77	0.04	0.02	70			
75							10.19	20.05	8.69	6.49	6.69	2.90	4.41	2.62	1.13	2.97	1.00	0.43	1.79	0.29	0.13	1.17	0.10	0.05	0.83	0.04	0.02	75			
80							10.87	22.59	9.79	6.92	7.54	3.27	4.70	2.95	1.28	3.17	1.13	0.49	1.91	0.33	0.14	1.25	0.12	0.05	0.88	0.05	0.02	80			
90	8"						12.22	28.10	12.18	7.78	9.37	4.06	5.29	3.67	1.59	3.57	1.40	0.61	2.15	0.41	0.18	1.41	0.15	0.06	0.99	0.06	0.03	90			
100	0.65	0.02	0.01				13.58	34.16	14.81	8.65	11.39	4.94	5.88	4.46	1.93	3.96	1.71	0.74	2.39	0.50	0.22	1.56	0.18	0.08	1.10	0.08	0.03	100			
125	0.81	0.03	0.01							10.81	17.22	7.47	7.35	6.74	2.92	4.95	2.58	1.12	2.99	0.75	0.33	1.96	0.27	0.12	1.38	0.11	0.05	125			
150	0.98	0.04	0.02										8.82	9.45	4.10	5.94	3.62	1.57	3.58	1.06	0.46	2.35	0.38	0.16	1.65	0.16	0.07	150			
175	1.14	0.06	0.03	10"									10.29	12.57	5.45	6.93	4.81	2.09	4.18	1.41	0.61	2.74	0.50	0.22	1.93	0.21	0.09	175			
200	1.30	0.08	0.03	0.84	0.03	0.01										7.92	6.16	2.67	4.78	1.80	0.78	3.13	0.64	0.28	2.21	0.27	0.12	200			
250	1.63	0.11	0.05	1.05	0.04	0.02										9.91	9.31	4.04	5.97	2.72	1.18	3.91	0.97	0.42	2.76	0.42	0.18	250			
300	1.95	0.16	0.07	1.26	0.06	0.02	12"									11.89	13.06	5.66	7.17	3.81	1.65	4.69	1.36	0.59	3.31	0.58	0.25	300			
350	2.28	0.21	0.09	1.47	0.07	0.03	1.04	0.03	0.01	14"			16"						8.36	5.07	2.20	5.48	1.81	0.79	3.86	0.77	0.34	350			
400	2.60	0.27	0.12	1.68	0.09	0.04	1.19	0.04	0.02	0.99	0.03	0.01	0.76	0.01	0.01				9.56	6.50	2.82	6.26	2.32	1.01	4.41	0.99	0.43	400			
450	2.93	0.34	0.15	1.88	0.12	0.05	1.34	0.05	0.02	1.11	0.03	0.01	0.85	0.02	0.01				10.75	8.08	3.50	7.04	2.89	1.25	4.96	1.23	0.53	450			
500	3.25	0.41	0.18	2.09	0.14	0.06	1.49	0.06	0.03	1.23	0.04	0.02	0.95	0.02	0.01	18"						7.82	3.51	1.52	5.52	1.50	0.65	500			
750	4.88	0.88	0.38	3.14	0.30	0.13	2.23	0.13	0.06	1.85	0.08	0.04	1.42	0.04	0.02	1.12	0.02	0.01	20"									8.27	3.17	1.38	750
1000	6.51	1.50	0.65	4.19	0.51	0.22	2.98	0.22	0.10	2.47	0.14	0.06	1.89	0.07	0.03	1.49	0.04	0.02	1.21	0.03	0.01				11.03	5.41	2.34	1000			
1250	8.13	2.26	0.98	5.23	0.78	0.34	3.72	0.34	0.15	3.09	0.21	0.09	2.36	0.11	0.05	1.87	0.06	0.03	1.51	0.04	0.02	24"						1250			
1500	9.76	3.17	1.38	6.28	1.09	0.47	4.47	0.47	0.21	3.70	0.30	0.13	2.84	0.16	0.07	2.24	0.09	0.04	1.81	0.05	0.02	1.26	0.02	0.01				1500			
2000				8.38	1.85	0.80	5.95	0.81	0.35	4.94	0.51	0.22	3.78	0.27	0.12	2.99	0.15	0.07	2.42	0.09	0.04	1.68	0.04	0.02				2000			
2500							7.44	1.22	0.53	6.17	0.77	0.34	4.73	0.40	0.18	3.73	0.23	0.10	3.02	0.14	0.06	2.10	0.06	0.02				2500			
3000										7.41	1.08	0.47	5.67	0.57	0.25	4.48	0.32	0.14	3.63	0.19	0.08	2.52	0.08	0.03				3000			
3500													6.62	0.75	0.33	5.23	0.42	0.18	4.23	0.25	0.11	2.94	0.10	0.05				3500			
4000																5.97	0.54	0.24	4.84	0.33	0.14	3.36	0.13	0.06				4000			
4500																6.72	0.68	0.29	5.44	0.41	0.18	3.78	0.17	0.07				4500			
5000																			6.05	0.49	0.21	4.20	0.20	0.09				5000			
5500																			6.65	0.59	0.25	4.62	0.24	0.10				5500			
6000																			7.26	0.69	0.30	5.04	0.28	0.12				6000			
7000																						5.88	0.38	0.16				7000			
7500																						6.30	0.43	0.19				7500			
8000																						6.72	0.48	0.21				8000			
8500																						7.14	0.54	0.24				8500			

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



SDR 32.5

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

Spears® Manufacturing Company



FLOW VELOCITY & FRICTION LOSS

SDR 41										
Flow Rate (Gallons per Minute)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM	18"									GPM
750	1.05	0.02	0.01							750
1000	1.40	0.04	0.02	20"						1000
1250	1.75	0.05	0.02	1.42	0.03	0.01	24"			1250
1500	2.10	0.08	0.03	1.70	0.05	0.02	1.18	0.02	0.01	1500
2000	2.81	0.13	0.06	2.27	0.08	0.03	1.58	0.03	0.01	2000
2500	3.51	0.20	0.08	2.84	0.12	0.05	1.97	0.05	0.02	2500
3000	4.21	0.27	0.12	3.41	0.16	0.07	2.37	0.07	0.03	3000
3500	4.91	0.36	0.16	3.98	0.22	0.09	2.76	0.09	0.04	3500
4000	5.61	0.47	0.20	4.55	0.28	0.12	3.16	0.12	0.05	4000
4500	6.31	0.58	0.25	5.11	0.35	0.15	3.55	0.14	0.06	4500
5000				5.68	0.42	0.18	3.95	0.17	0.08	5000
5500				6.25	0.50	0.22	4.34	0.21	0.09	5500
6000				6.82	0.59	0.26	4.73	0.24	0.11	6000
7000							5.52	0.32	0.14	7000
7500							5.92	0.37	0.16	7500
8000							6.31	0.42	0.18	8000
8500							6.71	0.47	0.20	8500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.



Hydraulic Shock

Hydraulic shock is the rapid increase in pressure due to a shock wave produced by a sudden change in system fluid velocity. If uncontrolled or insufficient pressure rated piping is used, these pressure surges can easily burst pipe and break valves or fittings. The term “water hammer” commonly used is derived from the sounds produced, but it is the hydraulic shock vibrations that can be damaging to piping systems. This is typically the result of sudden starting or stopping of a flowing column of liquid, such as water. Energy from the momentum of water in motion is converted to pressure when the flow is abruptly halted. A shock wave is produced that travels through the piping until it is stopped and bounces back to the original obstruction. This instantaneous shock to the system can lead to excessively high pressures. Hydraulic shock is frequently produced by rapid valve opening and closing, pumps starting and stopping, or even from a high speed wall of water hitting a change of direction fitting, such as an elbow. The effect is greater as piping systems is longer, the velocity change is greater and closing time is shorter.

Evaluating Hydraulic Shock Pressure Surges

An indication of the maximum surge pressure relative to velocity changes is essential in estimating the pressure rating requirements in designing a piping system. The following chart gives the maximum surge pressure at velocities of 1, 5 and 10 feet per second for different sizes of pipe, based on instantaneous valve closure in a PVC system. While listed, 10 feet per second is not recommended and is shown for comparative purposes. Velocity is best held to a maximum of 5 feet per second in plastic systems.

Schedule 40 Pipe Pressure Surge (psi) at Different Velocities

Size ➞	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
1 ft/sec	27.3	24.6	23.8	21.6	20.5	18.8	19.7	18.4	16.9	15.1	14.2	13.5	13.0
5 ft/Sec	136.3	123.2	119.1	108.1	102.6	94.2	98.5	91.8	84.5	75.4	70.8	67.4	65.2
10 ft/sec	272.7	246.3	238.2	216.3	205.1	188.3	196.9	183.5	169.0	150.9	141.6	134.8	130.5

Schedule 80 Pipe Pressure Surge (psi) at Different Velocities

Size ➞	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
1 ft/sec	32.2	29.2	28.0	25.5	24.3	22.6	23.2	21.8	20.3	18.9	17.8	17.3	17.1
5 ft/Sec	161	145.8	139.9	127.7	121.7	113.1	115.8	109.1	101.6	94.4	88.8	86.6	85.5
10 ft/sec	322	291.7	279.9	255.4	243.4	226.2	231.7	218.1	203.1	188.9	177.6	173.1	171.0

SDR Pipe Pressure Surge (psi) at Different Velocities

SDR ➞	13.5	14	17	18	21	25	26	32.5	41
1 ft/sec	20.2	19.8	17.9	17.4	16.0	14.7	14.4	12.8	11.4
5 ft/Sec	101.0	99.1	89.5	86.9	80.2	---	71.9	64.1	57.0
10 ft/sec	201.9	198.1	179.0	173.8	160.4	146.7	143.7	128.2	113.9

Controlling Hydraulic Shock in System Design & Operation

Since hydraulic shock is a function of speed, mass and time, there are several ways to prevent, minimize or eliminate system damage by limiting or controlling the magnitude of pressure surges.

- **Limit Fluid Velocity** – one of the safest surge control techniques in plastic systems is to limit fluid velocities to a maximum of 5 ft./second. Attempt to balance system operation flow demands and the magnitude of velocity variations.
- **Control Valve Closing Time** – avoid rapid opening and closing. Pneumatic or electric actuation may be considered for greater control. Use of multi-turn or gear operated valves may also be beneficial in slowing valve opening and closing. When all valves and controls are properly sized and adjusted, surges generated by changes in pump flows and demands can be reduced to non-harmful levels.
- **Control Pump Operation** – operate the system to maintain uniform pump flow rates. Use slow starting pumps where long runs and larger diameters are downstream. Where possible, partially close discharge valves to minimize volume when starting pumps, until lines are completely filled. Air chambers or surge relief tanks in conjunction with pressure regulating and surge relief valves can be used at pumping stations.
- **Check Valves** – installing a check valve in pump discharge lines will aid in keeping the line full. Be careful in selecting check valves. Check valves operate on flow reversal and can be rapid closing. Spring or lever assisted swing check valves can reduce hydraulic shock by avoiding “slamming” the valve closed.

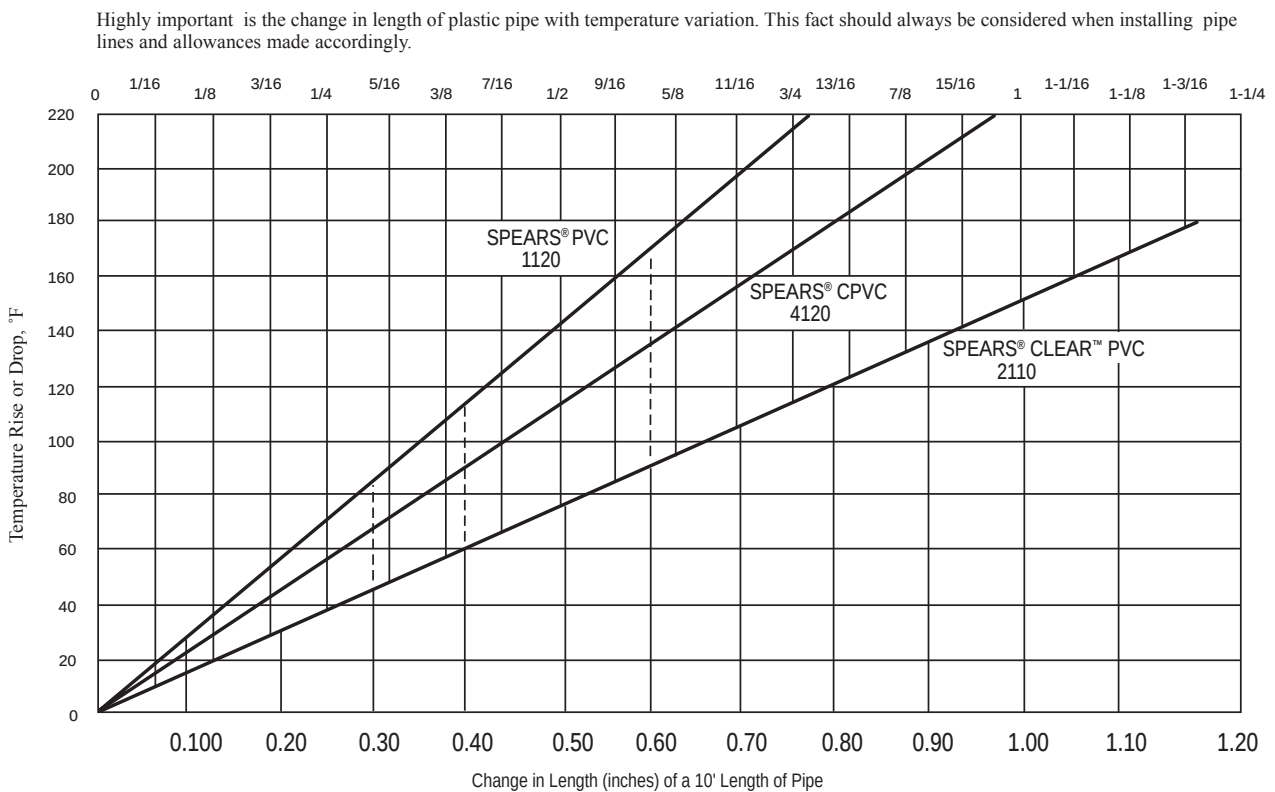


Thermal Expansion & Contraction

Piping systems expand and contract with changes in temperature. Thermoplastic piping expands and contracts more than metallic piping when subjected to temperature changes – as much as ten times that of steel. The effects of thermal expansion and contraction must be considered during the design phase, particularly for systems involving long runs, hot water lines, hot drain lines, and piping systems exposed to environmental temperature extremes. Installation versus working temperature or summer to winter extremes must be considered and addressed with appropriate system design to prevent damage to the piping system.

The degree of movement (change in length) generated as the result of temperature changes, must be calculated based on the type of piping material and the anticipated temperature changes of the system. The rate of expansion does not vary with pipe size. This movement must then be compensated for by the construction of appropriate sized expansion loops, offsets, bends or the installation of expansion joints. This absorbs the stresses generated, minimizing damage to the piping.

The following chart depicts the amount of linear movement (change in length, inches) experienced in a 10 ft length of pipe when exposed to various temperature changes.



The data furnished herein is based on information furnished by manufacturers of the raw material. This information may be considered as a basis for recommendation, but not as a guarantee. Materials should be tested under actual service to determine suitability for a particular purpose.



Calculating Linear Movement Caused by Thermal Expansion

The change in length caused by thermal expansion or contraction can be calculated as follows:

$$\Delta L = 12 y l (\Delta T)$$

Where:

ΔL = expansion or contraction in inches

y = Coefficient of linear expansion of piping material selected

l = length of piping run in feet

ΔT = ($T_1 - T_2$) temperature change °F

Where:

T_1 = maximum system temperature of system and

T_2 = system temperature

Coefficient of Linear Expansion (y) of Various Spears® Piping Products (in/in/°F) per ASTM D 696

Pipe Material	y
PVC Pressure Pipe (all schedules & SDR's) and PVC Duct	2.9×10^{-5}
CPVC Schedule 40 & Schedule 80 Pressure Pipe	3.2×10^{-5}
CPVC Duct	3.2×10^{-5}
CTS CPVC Plumbing Pipe	3.2×10^{-5}
Clear PVC Schedule 40 & Schedule 80 Pipe	4.1×10^{-5}
Spears® Low Extractable UPW Pipe	3.9×10^{-5}

Example 1: Calculate the change in length for a 100 foot straight run of 2" Schedule 80 PVC pipe operating at a temperature of 73°F; installed at 32°F.

$$\Delta L = 12 y l (\Delta T)$$

Where:

ΔL = linear expansion or contraction in inches $y = 2.9 \times 10^{-5}$ in/in/°F

$l = 100$ ft

$\Delta T = 41^\circ\text{F}$ ($73^\circ\text{F} - 32^\circ\text{F}$)

l = Length of expansion loop in inches

E = Modulus of elasticity

D = Average outside diameter of pipe

ΔL = Change in length of pipe due to temperature change

S = Working stress at max. temperature

$\Delta L = 12 \text{ in/ft} \times 0.000029 \text{ in/in/ft} \times 100 \text{ ft} \times 41^\circ\text{F}$

$\Delta L = 1.43"$

In this example the piping would expand approximately 1-1/2" in length over a 100 ft straight run once the operating temperature of 73°F was obtained.

Example 2: 100 foot straight run of 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F

$$\Delta L = 12 y l (\Delta T)$$

Where:

ΔL = linear expansion or contraction in inches

$y = 3.2 \times 10^{-5}$ in/in/°F

$l = 100$ ft

$\Delta T = 100^\circ\text{F}$ ($180^\circ\text{F} - 80^\circ\text{F}$)

$\Delta L = 12 \text{ in/ft} \times 0.000032 \text{ in/in/ft} \times 100 \text{ ft} \times 100^\circ\text{F}$

$\Delta L = 3.84"$

In this example the piping would expand approximately 4" in length over a 100 ft straight run once the operating temperature of 180°F was obtained.

Compensating for Movement Caused by Thermal Expansion/Contraction

Thermal expansion/contraction are usually absorbed by the system at changes of direction. Long, straight runs are more susceptible to measurable movement with changes in temperature and the installation of an expansion joints, expansion loops or offsets is required. This will allow the system to absorb expansion/contraction forces without damage.

Once the change in length (ΔL) has been determined, the length of an offset, expansion loop, or bend can be calculated as follows:

$$l = \frac{\sqrt{3ED(\Delta L)}}{2S}$$

Where:

l = Length of expansion loop in inches

E = Modulus of elasticity

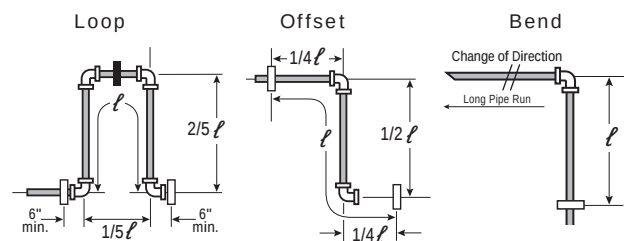
D = Average outside diameter of pipe

ΔL = Change in length of pipe due to temperature change

S = Working stress at max. temperature

$\Delta L = 12 \text{ in/ft} \times 0.000029 \text{ in/in/ft} \times 100 \text{ ft} \times 41^\circ\text{F}$

$\Delta L = 1.43"$



Hangers or guides should only be placed in the loop, offset, or change of direction as indicated above, and must not compress or restrict the pipe from axial movement. Piping supports should restrict lateral movement and should direct axial movement into the expansion loop configuration. Do not restrain "change in direction" configurations by butting up against joists, studs, walls or other structures. Use only solvent-cemented connections on straight pipe lengths in combination with 90° elbows to construct the expansion loop, offset or bend. The use of threaded components to construct the loop configuration is not recommended. Expansion loops, offsets, and bends should be installed as nearly as possible at the midpoint between anchors. Concentrated loads such as valves should not be installed in the developed length. Calculated support guide spacing distances for offsets and bends must not exceed recommended hanger support spacing for the maximum anticipated temperature. If that occurs, the distance between anchors will have

to be reduced until the support guide spacing distance is equal to or less than the maximum recommended support spacing distance for the appropriate pipe size at the temperature used.

Example: 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F where $\Delta L = 4.08"$

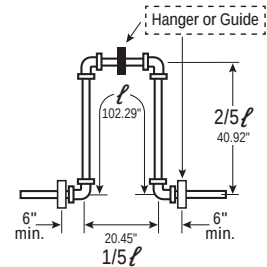
$$\ell = \frac{\sqrt{3ED(\Delta L)}}{2S}$$

$$\ell = \frac{\sqrt{3 \times 360,000 \times 2.375 \times 4.08}}{2 \times 500}$$

$$\ell = 102.29"$$

$$2/5 \ell = 40.92"$$

$$1/5 \ell = 20.46"$$



Thermal Stress

Compressive stress in piping restrained from expanding can damage the piping system and in some cases damage hangers and supports. The amount of stress generated is dependent on the pipe material's coefficient of thermal expansion and its tensile modulus using the following equation:

$$S = E y \Delta T$$

Where:

S = stress induced in the pipe

E = Modulus of Elasticity at maximum system temperature y = Coefficient of thermal expansion

ΔT = total temperature change of the system

The stress induced must not exceed the pipe material maximum allowable working stress (fiber stress). Increases in temperature will reduce the allowable stress as shown the table.

Example: 100 foot straight run of 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F:

$$\Delta L = 12 \text{ y} l (\Delta T) \text{ Where:}$$

ΔL = linear expansion or contraction in inches

$$y = 3.2 \times 10^{-5} \text{ in./in./}^\circ\text{F}$$

$$l = 100 \text{ ft}$$

$$\Delta T = 100^\circ\text{F} (180^\circ\text{F} - 80^\circ\text{F})$$

$$\Delta L = 12 \text{ in./ft} \times 0.000032 \text{ in./in./ft} \times 100 \text{ ft} \times 100^\circ\text{F}$$

$$\Delta L = 3.84"$$

The piping would expand approximately 4" in length in a 100 ft straight run

The equation for determining induced stress can then be used:

$$S = E y \Delta T$$

Where:

S = stress induced in the pipe

E = Modulus of Elasticity at 180°F = 214,000

y = Coefficient of thermal expansion = $3.2 \times 10^{-5} \text{ in./in./}^\circ\text{F}$

ΔT = total temperature change of the system = 100°F

$$S = 214,000 \times 0.000032 \times 100$$

$$S = 685 \text{ psi}$$

From chart, maximum allowable stress for CPVC at 180°F is 500 psi; Stress generated from this expansion in a restrained piping system exceeds the maximum allowable stress and will result in failure of the piping, unless compensation is made for thermal expansion.

Maximum Allowable Working (Fiber) Stress and Tensile Modulus at Various Temperatures

	Temp (°F)	Maximum Allowable Working (Fiber) Stress, psi	Tensile Modulus of Elasticity, psi
PVC	73	2,000	400,000
	80	1,760	396,000
	90	1,500	375,000
	100	1,240	354,000
	110	1,020	333,000
	120	800	312,000
	130	620	291,000
	140	440	270,000
CPVC	73	2,000	364,000
	90	1,820	349,000
	100	1,640	339,000
	110	1,500	328,000
	120	1,300	316,000
	140	1,000	290,000
	160	750	262,000
	180	500	214,000
	200	400	135,000

Thrust Blocking

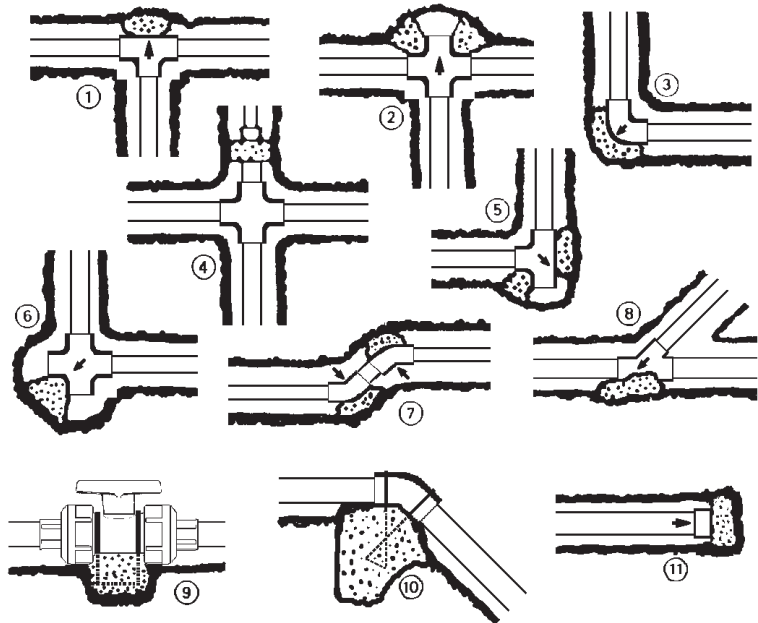
Thrust blocking prevents pipe movement when a pressure system is activated and pressurized. Thrust blocking is required at all points of change of direction in the pipe line. Most blocking is done where a fitting, valve, or hydrant is installed. There may be times when side blocking is necessary because of curvature occurring without the use of fittings. Usually good compacted backfill will provide the necessary anchor for side thrust. Concrete blocking is the most commonly recommended method of blocking. Concrete is placed directly on the fitting against the line of thrust. The concrete must also pour against undisturbed earth. The size of the blocking will vary with the size of pipe, working pressure exerted, type of fitting, degree of flow direction change, and the soil conditions. PVC and CPVC pipe are flexible and may pulsate under pressure variations. This does not harm the pipe or that part which is enclosed in concrete. It may cause wear at the interface of the concrete block and the backfill. For this reason, pipe and fittings should be wrapped with a one mill or heavier plastic sheeting prior to being embedded in concrete to prevent any possible damage.

THRUST BLOCKING – Water under pressure exerts thrust forces in piping systems. Thrust blocking should be provided, as necessary, to prevent movement of pipe or appurtenances in response to thrust.

Types Of Thrust Blocking:

If thrusts due to high pressure are expected, anchor valves as below. At vertical bends anchor to resist outward thrusts.

1. Thru line connection, tee
2. Thru line connection, cross used as tee
3. Direction change, elbow
4. Change line size, reducer
5. Direction change, tee used as elbow
6. Direction change, cross used as elbow
7. Direction change
8. Thru line connection, wye
9. Valve anchor
10. Direction change vertical, bend anchor
11. End Caps (above or below ground)



Thrust Blocking Is Required Wherever The Pipeline:

- * Changes direction (e.g., tees, bends, elbows and crosses)
- * Changes size at its reducers
- * Stops, as at dead ends
- * Valves and hydrants, at which thrust develops when closed.

Size And Type Of Thrust Blocking Depends On:

- * Maximum system pressure
- * Pipe size
- * Type and size of fittings or appurtenance
- * Line profile (horizontal or vertical bends)
- * Soil type

[See additional information under Installation Gasketed Pipe](#)



Critical Collapse Pressures

The **Critical Collapse Pressure** is directly related to the pipe wall thickness and represents the maximum allowable external load. External loads can result from conditions such as buried pipe soil loads; underwater applications; vacuum service; and pipe installed on pump suction lines. The actual external load being applied to the pipe is the difference between the external pressure and the internal pressure. As a result, a pressurized pipe can withstand a greater external load than an empty pipe.

Critical Collapse Pressure Rating of Various PVC and CPVC Pipe & Duct @ 73°F with No Safety Factor in PSI (Inches of Water)

Size(in.)	Duct	SDR 41	SDR 26	SDR 21	SCH 40	SCH 80	SCH 120
2	N/A	17* (470)	74* (2,048)	126* (3,487)	316 (8,746)	939 (25,989)	1309 (36,230)
2-1/2	N/A	17* (470)	74* (2,048)	126* (3,487)	451 (12,483)	975 (26,986)	1309 (36,230)
3	N/A	17* (470)	74* (2,048)	126* (3,487)	307 (8,497)	722 (19,983)	1128 (31,221)
3-1/2	N/A	17* (470)	74* (2,048)	126* (3,487)	217 (6,006)	578 (15,998)	N/A
4	N/A	17* (470)	74* (2,048)	126* (3,487)	190 (5,259)	451 (12,482)	1128 (31,221)
5	N/A	17* (470)	74* (2,048)	126* (3,487)	117 (3,238)	361 (10,000)	N/A
6	N/A (470)	17* (2,048)	74* (3,487)	126* (2,491)	90 (9,493)	343 (19,983)	722
6 x 1/8	5.2 (144)	N/A	N/A	N/A	N/A	N/A	N/A
6 x 3/16	0.7 (426)	N/A	N/A	N/A	N/A	N/A	N/A
8	10.0 (193)	17* (470)	74* (2,048)	126* (3,487)	58 (1,605)	235 (6,504)	N/A
10	5.4 (100)	17* (470)	74* (2,048)	126* (3,487)	49 (1,605)	217 (6,504)	N/A
12	3.0 (60)	17* (470)	74* (2,048)	126* (3,487)	42 (1,162)	199 (5,508)	N/A
14	2.5 (45)	17* (470)	74* (2,048)	126* (3,487)	40 (1,107)	194 (5,369)	N/A
16	1.6 (30)	17* (470)	74* (2,048)	126* (3,487)	40 (1,107)	181 (5,010)	N/A
18	1.0 (26)	17* (470)	74* (2,048)	126* (3,487)	33 (913)	162 (4,484)	N/A
20	1.3 (28)	17* (470)	74* (2,048)	126* (3,487)	28 (775)	157 (4,346)	N/A
24	1.0 (20)	17* (470)	74* (2,048)	126* (3,487)	25 (692)	150 (4,152)	N/A

1 psi = 2.036 inches of mercury

* SDR Pipe carries the same collapse ratings for all sizes due to the wall thickness/O.D. ratio

Standard temperature de-rating factors must be applied for use at elevated temperatures (see following Temperature Limitations section). Multiply the collapse pressure rating @ 73°F from the chart by the appropriate material de-rating factor.

Solvent-cemented connections are preferred over threaded or flanged joining in vacuum applications to reduce potential for leaks.

Temperature Limitations

PVC & CPVC

The maximum operating temperature for PVC pipe is 140°F and the maximum operating pressure for CPVC pipe is 200°F. As temperatures increase, impact strength typically increases while tensile strength and pipe stiffness decrease resulting in reduced applicable pressure ratings. Physical properties of PVC and CPVC pipe are generally specified at 73°F per applicable ASTM material test standards. The maximum allowable pressure at elevated temperatures is determined by multiplying the 73°F pressure rating by the applicable material de-rating factor for the elevated use temperature shown in the following chart:

De-Rating Factors

PVC Pipe		CPVC Pipe	
Temp (°F)	Working De-Rating Factor	Temp (°F)	Working De-Rating Factor
73	1.00	73-80	1.00
80	0.88	90	0.91
90	0.75	100	0.82
100	0.62	110	0.72
110	0.51	120	0.65
120	0.40	130	0.57
130	0.31	140	0.50
140	0.22	150	0.42
---	---	160	0.40
---	---	170	0.29
---	---	180	0.25
---	---	200	0.20

Appropriate temperature de-rating factors must be applied at temperatures other than 73°F based on the material selected.

Multiply the collapse pressure rating of the selected pipe at 73°F, by the appropriate de-rating factor to determine the collapse pressure rating of the pipe at the elevated temperature chosen.

Weatherability

When standard rigid PVC or CPVC pipe is exposed to UV radiation from sunlight the following conditions have been noted:

- A color change, slight increase in tensile strength, slight increase in modulus of tensile elasticity, and a slight decrease in impact strength may occur.
- Material directly exposed to UV radiation results in extremely shallow penetration depths (frequently less than 0.001 inch).
- The effects of UV exposure do not continue when exposure to UV is terminated.
- The effects of UV exposure do not penetrate even thin shields such as paint coatings, or wrapping.

It is recommended that PVC and CPVC piping products exposed to the direct affects of sunlight be painted with a light colored acrylic or latex paint that is chemically compatible with the PVC/CPVC products. Check with paint manufacture for compatibility. Oil-based paints should **NOT** be used.

Additional consideration should be given to the affects of expansion/contraction caused by heat absorption from sunlight in outdoor applications.



Plastic piping systems must be engineered, installed, operated and maintained in accordance with accepted standards and procedures. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Handling & Storage

Spears® products are packaged and shipped with care to avoid damage. Pipe and fittings should be stored and protected from direct exposure to sunlight. All pipe and accessories should be stored above ground and fully supported so as not to bend or excessively deflect under its own weight. Proper stacking techniques are necessary. Improper stacking can result in instability that may result in pipe damage or personnel injury.

Use care when transporting and storing the product to prevent damage. Piping products should not be dropped or have objects dropped on them. Do not drag pipe over articles or across the ground and do not subject pipe to external loads or over stacking. If extended storage in direct sunlight is expected, pipe should be covered with an opaque material while permitting adequate air circulation above and around the pipe as required to prevent excessive heat accumulation.

Spears® products should not be stored or installed close to heat-producing sources. PVC storage should not exceed 150°F and CPVC storage should not exceed 210°F. Handling techniques for PVC and CPVC pipe considered acceptable at warm temperatures may be unacceptable at very cold temperatures. When handling pipe in cold weather, consideration must be given to its lower impact strength. In subfreezing temperatures, extra caution in handling must be taken to prevent impact damage.

All pipe should be inspected for any scratches, splits or gouges before use. Damaged sections must be cut out and discarded.

Plastic Piping Tools

Basic tools used with Plastic Piping

Use tools that have been specifically designed for use with thermoplastic pipe and fittings when installing. A variety of tools that are designed for cutting, beveling, and assembling plastic pipe and fittings, are readily available through local wholesale supply houses dealing in plastic pipe and fittings.

▲ Warning Tools normally used with metal piping systems, such as hacksaws, water pump pliers, pipe wrenches, etc., can cause damage to plastic pipe and fittings. Visible and hidden fractures, scoring or gouging of material, and over tightening of plastic threaded connections are some of the common problems resulting from the use of incorrect tools and procedures.

Pipe Cutters

Pipe must be square-cut to allow for the proper joining of pipe end and the fitting socket bottom. Wheel type pipe cutters designed for plastic pipe provides easy and clean cuts on smaller pipe sizes. Care should be used with similar ratchet-type cutters to avoid damage to pipe. A slightly raised edge left on the outside of the pipe end after cutting with either device must be removed.

Pipe Cutters for Large Diameter Pipe

Blade cutters made for use with large diameter plastic pipe are easy to adjust and operate for square, burr-less cuts. Blades with carbide edges will provide longer life. With one style blade cutter, pipe ends may also be beveled for solvent joints while being cut by using an optional bevel tool in place of one cutter blade.

Hand Saws

A miter box or similar guide can be used with a fine-toothed saw blades (16 to 18 teeth per inch) having little or no set (maximum 0.025 inch).

Power Saws

Power saws are quite useful in operations where a large quantity of pipe is being cut. Blades designed for plastic pipe **MUST** be used. A cutting speed of 6,000 RPM, using ordinary hand pressure is recommended.

Pipe Beveling Tools

Power beveling tools, as well as hand beveling tools designed for use with plastic pipe are available. Pipe ends must be beveled (chamfered) to allow easy insertion of the pipe into the fitting and to help spread solvent cement and to prevent scraping cement from the inside of the fitting socket. A recommended bevel of 1/16" to 3/32" at a 10° to 15° angle can be achieved using a plastic pipe beveling tool, but can also be accomplished using a file designed for use on plastic.

Deburring Tools

Special plastic pipe deburring tools remove burrs from pipe ends quickly and efficiently. All burrs must be removed from the inside, as well as the outside, of the pipe ends to properly spread solvent cement when joining pipe and fitting.

Strap Wrenches

Strap wrenches with nylon straps treated for slip resistance and designed for use with plastic pipe provide gripping power for turning without scratching or deforming the pipe.

Chain Vises

Chain vises can be used to hold pipe. Vises made with jaws engineered for use with plastic pipe provide holding power without damage to the pipe.

Pullers & Joining Devices

Pipe and fitting pullers are available for joining large diameter plastic pipe and fittings. These tools are designed to allow the pipe to be inserted to the proper insertion depth, maintain proper alignment during assembly, and hold freshly solvent-cemented connections to prevent the fitting from backing-off until the initial set time is achieved.

Joining Methods –Solvent Cement Welding

Solvent cement welding is the most widely used joining method for PVC and CPVC pipe and fittings. Other methods such as threads, flanges and groove adapters can also be used. These are specifically useful where it is anticipated that the joint will have to be disassembled in the future.

Solvent Cement Safety Precautions

Solvent cement products are flammable and contain chemical solvents. Appropriate safety precautions must be taken BEFORE APPLYING PRIMER AND CEMENT. Read the cement can label!

▲ CAUTION

*Virtually all solvent cements and primers for plastic pipe are flammable and should not be used or stored near heat, spark or open flames. Do not smoke during use. Eliminate all ignition sources. Primer and PVC cement should be stored in closed containers in the shade at temperatures between 40°F and 110°F; CPVC cement at temperatures between 40°F and 90°F. Use of a can with applicator attached to its lid is recommended. **Verify expiration dates stamped on cements and primers prior to use.***

***Avoid breathing vapors.** They should be used only with adequate ventilation. Explosion-proof general mechanical ventilation is recommended. In confined or partially enclosed areas, a ventilating device should be used. Containers should be kept tightly closed when not in use, and covered as much as possible when in use.*

Avoid contact with skin and eyes. May be absorbed through the skin; wearing PVA coated protective gloves and an impervious apron are recommended. May cause eye injury. Use Eye protection and avoid eye contact. In case of contact flush with plenty of water for 15 minutes. If irritation persists, get medical attention. If swallowed, call a physician immediately and follow precautionary statement given on side panel of cement container. Keep out of reach of children.

Refer to Solvent Cement Material Safety Data Sheet (MSDS)

Use Caution with Welding Torches or other equipment where sparks might be involved at construction sites where plastic pipe has recently been solvent welded. Flammable vapors from cemented joints can stay within a piping system for some time. In all cases, lines should be flushed and purged to remove solvent vapors before welding.

Use Caution with Calcium Hypochlorite. Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. Granules or pellets of calcium hypochlorite (including their vapors) may react violently with solvent cements and primers if a water solution is not used. Chlorinated water solutions are nonvolatile and may be pumped into the piping system. Dry granular calcium hypochlorite should not be stored or used near solvent cements or primers.

Actually, solvent cementing is no more dangerous than putting gasoline in your automobile.

Solvent Cement and Primer Spills

Protect work areas prior to starting by using drop cloths in the event of a spill. Accidental spills should be wiped up immediately before the cement sets. Cement and/or primer spills can cause irreparable damage depending on the type of surface affected. Consult the manufacturer of the affected surface for possible suggestions.

Basic Solvent Cement Joints

The following is a general description of basic techniques used to make solvent cement joints. Adjustments will need to be made to method and tools used according to size of piping, but the same principles apply. Additional guidance can be found in ASTM D 2855, Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings. **Important:** Installers should verify that they can make satisfactory joints under varying conditions and should receive training in installation and safety procedures.

To consistently make good joints in PVC and CPVC piping products, the following should be carefully understood:

1. The joining surfaces of pipe and fitting must be softened and made semi-fluid.
2. Sufficient cement must be applied to fill the gap between pipe and fitting.
3. Assembly of pipe and fittings must be made while the surfaces are still wet and fluid.
4. Joint strength develops as the cement dries (cures). In the tight part of the joint (interference area) the surfaces will fuse together, in the loose part the cement will bond to both surfaces.

Cutting the Pipe

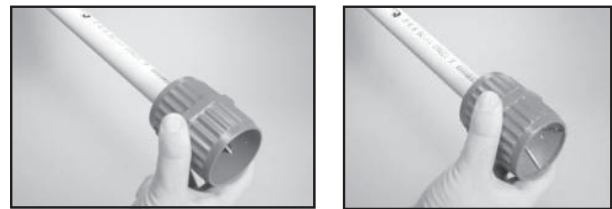
PVC or CPVC pipe can be cut easily with a ratchet cutter, wheel-type plastic pipe cutter (**NOTE:** be sure to remove any raised ridge produced by wheel cutters), a power saw, or any other fine-tooth saw. It is important that the cutting tools being used are designed for plastic pipe. To ensure that the pipe is cut square, use a miter box when cutting with a saw. Cutting pipe as square as possible provides the maximum bonding surface area.



Be careful not to split the tube if using a ratchet-type cutter, especially in temperatures below 50°F. If any damage or cracking is evident, cut off at least 2" of the pipe beyond any visible crack.

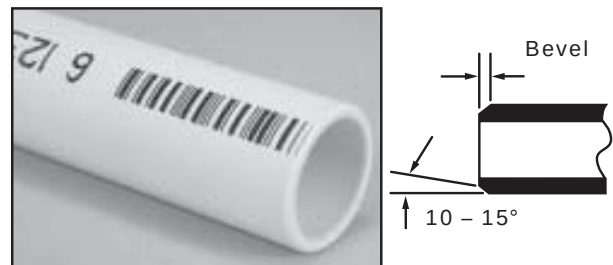
Deburring & Beveling

Burrs and filings can prevent contact between the tube and the fitting during assembly and must be removed from the outside and the inside of the pipe. A deburring/chamfering tool (or file) is suitable for this purpose:



Burrs Being Removed from Outside & Inside

A slight bevel (chamfer) must be placed at the outside end of the pipe to ease the entry of the tube into the socket and minimize the chance of cement being wiped off the fitting:



Bevel Outside End

Fitting & Joining Preparation

1. Using a clean, dry rag, wipe any loose dirt and moisture from the fitting's socket and pipe end. Moisture can slow the cure time, and at this stage of assembly, excessive moisture can reduce joint strength.
2. Check the dry fit of the pipe and fitting. The pipe should enter the fitting's socket easily 1/4 - 3/4 of the way (interference fit), or at least have interference between pipe and fitting bottom (net fit). **DO NOT** use any components that appear irregular or do not fit properly. Contact Spears® regarding any questions about usability.
3. Measure socket depth and mark on pipe for reference during cement application.
4. It is advisable to additionally mark pipe and fitting for alignment orientation position, especially with larger fittings.



Solvent Cementing Assembly

Verify the expiration date located on the solvent cement can. The cement can be used for a period of 2 years from the date stamped on the can. When cementing pipe and fittings in extremely cold temperatures, make sure the cement has not “JELLED.” Jelled or expired cement must be discarded in an environmentally friendly fashion, in accordance with local regulations. To prolong the life of solvent cement, keep the containers tightly closed when not in use, and cover the container as much as possible during use. If an unopened solvent cement container is subjected to freezing temperatures, the cement may become extremely thick. Place the closed container in a room temperature area where, after a short time period, the cement will return to a usable condition. **DO NOT** attempt to heat solvent cement. The cement must be applied when the pipe and fittings are clean and free from any moisture and debris.

Primer Use - Softening of pipe and fitting joining surfaces can be achieved by the cement itself or by using a suitable primer. A primer will usually penetrate and soften the surfaces more quickly than the cement alone. However, special “one-step” cements formulated for use without primers are available. Check local codes (where required) for acceptable applications.

Apply Primer - USING AN APPLICATOR THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, vigorously scrub joining surface of fitting, of pipe and then again of fitting. Work quickly to apply 2-3 coats in this manner. SOLVENT CEMENT SHOULD THEN BE APPLIED WHILE PRIMER IS STILL WET.

Apply Solvent Cement - USING AN APPLICATOR THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, WORK THE CEMENT INTO THE JOINING SURFACES USING A CONTINUOUS, CIRCULAR MOTION.

Use sufficient cement, but avoid puddling the cement on or within the fitting and pipe. Puddled cement causes excess softening and damage to the PVC or CPVC material. If interference fit was at the bottom of the socket, use extra cement and make a 2nd application to pipe. WORK QUICKLY SO THAT PIPE AND FITTING CAN BE JOINED WHILE CEMENT IS STILL WET.

Apply the cement in the sequence pictured below:



1. Apply a coat to the pipe to depth of fitting socket

Work the cement into the joining surfaces using a continuous, circular motion.



2. Apply a medium coat to the fitting socket

Avoid puddling the cement in the sockets and avoid getting cement in other sockets or threaded connections.

3. Apply a second coat to the pipe end for sizes 1-1/4 inch and larger joints, or if interference fit was at socket bottom during dry-fit.

Assemble Joint

Immediately insert pipe into the fitting socket while rotating the pipe 1/4 turn. Align the fitting in the proper orientation at this time. Make sure the pipe bottoms out at the fitting's stop. Hold the assembly for at least 30 seconds to ensure initial bonding. Tapered pipe sockets can result in pipe backing out of the joint if not held under constant pressure. A bead of cement must be present around the pipe and fitting juncture. If this bead is not continuous around the socket's shoulder, insufficient cement was applied and the joint must be disassembled or cut out and replaced.



Any cement, in excess of the bead, can be wiped off with a dry, clean rag.

Set and Cure Times

SET TIME: The initial set time is the recommended waiting period before handling newly assembled joints. After initial set, the joints will withstand the stresses of normal installation. However, a badly misaligned installation will cause excessive stresses in the joint, pipe and fittings.

CURE TIME: The cure time is the recommended waiting period before pressurizing newly assembled joints.

The following basic guidelines should be used:

- The set and cure times for solvent cement depend on pipe size, temperature, relative humidity, and tightness of fit. Drying time is faster for drier environments, smaller pipe sizes, high temperatures, and tighter fits.
- Special care must be taken when assembling products in low temperatures (below 40°F) or high temperatures (above 80°F).
- Extra set and handling times must be allowed in colder temperatures. When cementing pipe and fittings in cold temperatures, make sure the cement has not “JELLED.” Jelled cement must be discarded.
- In higher temperatures, make sure both surfaces to be joined are still wet with cement during assembly.
- The assembly must be allowed an initial set, without any stress on the joint
- Following the initial set period, the assembly can be handled carefully by avoiding stress on the joint.

Average Set Times

Temp. Range	Pipe Sizes 1/2" - 1-1/4"	Pipe Sizes 1-1/2" - 2"	Pipe Sizes 2-1/2" - 8"	Pipe Sizes 10" - 15"	Pipe Sizes 16" - 24"
60° - 100°F	2 Min.	5 Min.	30 Min.	2 Hrs.	4 Hrs.
40° - 60°F	5 Min.	10 Min.	2 Hrs.	8 Hrs.	16 Hrs.
0° - 40°F	10 Min.	15 Min.	12 Hrs.	24 Hrs.	48 Hrs.



Average Cure Times

Relative Humidity 60% or Less*	Pipe Sizes 1/2" – 1-1/4"		Pipe Sizes 1-1/2" – 2"		Pipe Sizes 2-1/2" – 8"		Pipe Sizes 10" – 15"	Pipe Sizes 16" – 24"
Temperature Range During Assembly and Cure Periods	Up to 160 psi	Above 160 to 370 psi	Up to 160 psi	Above 160 to 315 psi	Up to 160 psi	Above 160 to 315 psi	Up to 100 psi	Up to 100 psi
60° - 100°F	15 Min.	6 Hrs.	30 Min.	12 Hrs.	1-1/2 Hrs.	24 Hrs.	48 Hrs.	72 Hrs
40° - 60°F	20 Min.	12 Hrs.	45 Min.	24 Hrs.	4 Hrs.	48 Hrs.	96 Hrs.	6 Days
0° - 40°F	30 Min.	48 Hrs.	1 Hr.	96 Hrs.	72 Hrs.	8 Days	8 days	14 Days

NOTE In damp or humid weather allow 50%, more cure time. The cure schedules shown are suggested as guides only. They are based on laboratory test data, and should not be taken to be the recommendations of all cement manufacturers. Individual solvent cement manufacturer's recommendations for the particular cement being used should be followed.

Special Considerations for Working with Solvent Cement Welding

Handling of Cement

Keep cement containers covered while not in use. Cement with the lid left off can become thick and viscous, or gel like. This condition is typically a result of tetrahydrofuran (THF) solvent evaporation and the cement is useless. Do not try to restore the cement by stirring in a thinner. Smaller containers of cement are recommended to be used, especially in warm or hot weather. Prior to opening cans of cement, shake vigorously to properly mix resin and solvents. Solvents contained in PVC and CPVC cements are highly flammable and should not be used near an open flame. The area in which the cement is being used should be well ventilated, and prolonged breathing of the fumes should be avoided, as well as contact with the skin or eyes. Verify the expiration dates stamped on the cements and primers prior to use.

CEMENT AND PRIMER SHELF LIFE

Spears® Products	Shelf Life	Spears® Products	Shelf Life
Primers / Cleaners	3 years	CPVC Solvent Cement	2 years
PVC Solvent Cement	3 years	ABS Solvent Cement	3 years

Hot Weather Use

Problems can be avoided when solvent cementing in 95°F or higher temperatures by taking a few special precautions. Solvent cements evaporate faster at elevated temperatures and can dry out prematurely. This is especially true when there is a hot wind blowing. Dry cement on pipe or fitting socket prior to assembly will not bond. If the pipe has been in direct sunlight for any length of time, surface temperatures may be 20°F to 30°F above air temperature. Solvents attack these hot surfaces faster, deeper and dry out quicker. As a result, it is very important to avoid puddling inside sockets, assemble immediately while wet and to wipe off excess cement at the joint exterior.

Tips for Solvent Cementing in High Temperatures:

1. Store solvent cements in a cool or shaded area prior to use.
2. If possible, store the fittings and pipe, or at least the ends to be solvent welded, in a shady area before cementing.
3. Cool surfaces to be joined by wiping with a damp rag. HOWEVER, be sure that surfaces are dry prior to applying solvent cement.
4. Try to do the solvent cementing in cooler morning hours.
5. Make sure that both surfaces to be joined are still wet with cement when putting them together.

Cold Weather Use

Solvent Cements and primers have excellent cold weather stability and are formulated to have well balanced drying characteristics even in subfreezing temperatures. Good solvent cemented joints can be made in very cold conditions provided proper care and a little common sense are used. In cold weather, solvents penetrate and soften surfaces more slowly than in warm weather. The plastic is also more resistant to solvent penetration, therefore, it becomes more important to pre-soften surfaces. A longer cure time is necessary due to slower evaporation.

Tips for Solvent Cementing in Cold Temperatures:

1. Prefabricate as much of the system as possible in a heated work area.
2. Store cements in a warmer area when not in use and make sure they remain fluid.
3. Take special care to remove moisture, including ice and snow.
4. Use special care to ensure joining surfaces are adequately softened; more than one application may be necessary.
5. Allow a longer cure period before the system is used.

Effects of Tolerances and Fits

PVC pipe and fittings are manufactured to applicable ASTM Standards to produce an interference fit when assembled. However, minimum and maximum allowable tolerances permitted for pipe and fittings can result in variations. For example, fitting with the maximum diameter and the pipe with the minimum diameter, may result in a loose fit. Applying two coats of solvent cement will help assure a good joint. Conversely, if the pipe diameter is on the maximum side and the fitting on the minimum side, the interference may be too great and sanding of the pipe O.D. may be necessary to permit entrance.

Always check dry fits prior to making a joint. If fit is loose, multiple coats and use of an extra heavy bodied cement may be required. Mating components should be checked to assure that tolerances and engagements are compatible (see preceding Basic Solvent Cement Joints instructions). Inspect all pipe and fittings for damage or irregularities. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the product in question to determine usability.



Large Diameter Pipe

Basic Solvent Cement Joint instructions apply to all sizes of pipe, but when making joints larger than 4", the use of two persons is recommended to properly apply cement and immediately assemble the joint while the cemented surfaces are still wet. Alignment of large diameter pipe and fittings during joining is critical since there is a greater potential for movement in the upper portion of a tapered socket that can result in misalignment. Special tools are commercially available for joining large diameter pipe.

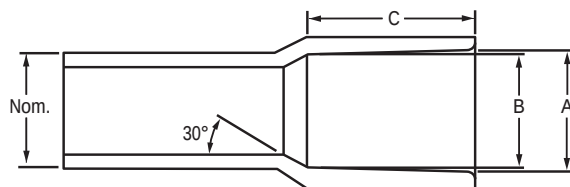
Be sure to use an appropriate size roller applicator with large diameter pipe, along with a heavy or extra heavy bodied cement that is medium to slow setting. These have increased gap filling capability and allow somewhat longer assembly time. However, applications of heavy coats of solvent cement and speed in making the joint is important. Under a damp or wet condition, solvent cement may absorb some moisture. Excessive moisture can slow down the cure and reduce joint strength. Spears® CPVC-24 heavy body or PVC-19 extra-heavy body solvent cements are excellent for joining large diameter pipe (see Solvent Cement Selection Guide in following sections).

Belled End Pipe

Commercially available belled end pipe can be used to eliminate the need for couplings. Where belled end pipe is used, it is suggested that the interior surface of the bell be penetrated exceptionally well with the primer.

NOTE some manufacturers use a silicone release agent on the bellings plug, and a residue of this agent can remain inside the bell. Silicone will contaminate the joint and not allow proper solvent cement welding. All silicone residue must be removed in the cleaning process prior to solvent cementing.

Belled-End Pipe Dimensions



Nominal Size (in.)	A		B		C
	Min.	Max.	Min.	Max.	Min.
1-1/4	1.675	1.680	1.648	1.658	1.870
1-1/2	1.905	1.914	1.880	1.888	2.000
2	2.381	2.393	2.363	2.375	2.250
2-1/2	2.882	2.896	2.861	2.875	2.500
3	3.508	3.524	3.484	3.500	3.250
4	4.509	4.527	4.482	4.500	4.000
5	5.573	5.593	5.543	5.563	4.000
6	6.636	6.658	6.603	6.625	6.000
8	8.640	8.670	8.595	8.625	6.000
10	10.761	10.791	10.722	10.752	8.000
12	12.763	12.793	12.721	12.751	8.500
14	14.030	14.045	13.985	14.000	9.000
16	16.037	16.052	15.985	16.000	10.000
18	18.041	18.056	17.985	18.000	12.000
20	20.045	20.060	19.985	20.000	12.000
24	24.060	24.075	24.000	24.015	14.000

Estimated Quantities of Solvent Cement

A variety of conditions can affect the amount of solvent cement required for making reliable joints. These include pipe size, tolerances, socket depths as well as installation conditions and type of cement used. Fitting sockets are tapered for proper assembly, which produces a slight gap at the socket entrance when installed with pipe. As pipe sizes increase, heavier bodied cements should be used for increase gap filling capabilities. It is best to use liberal amounts of solvent cement since insufficient cement use is one of the most common reasons for joint failure. The following information on cement usage is a recommendation only and other factors or unanticipated conditions may be encountered. Quantities are based on use with average socket lengths of Spears® molded and fabricated fittings.

Standard Pipe Joints

Fitting Size (in.)	Joints per Pint	Joints per Quart	Joints per Gallon
1/2	150	300	1200
3/4	100	200	800
1	63	125	500
1-1/4	70	140	560
1-1/2	45	90	360
2	30	60	240
2-1/2	25	50	200
3	20	40	160
4	15	30	120
6	5	10	40
8	3	5	20
10	---	2-3	4-6
12	---	1-2	2-4

Large Diameter Pipe Joints

Fitting Size (in.)	Quarts per Joint	Joints per Gallon
14	0.75	5.33
16	1.25	3.20
18	1.50	2.67
20	2.00	2.00
24	2.75	1.45



Supplemental Information on Solvent Cementing

Applicators

A wide variety of daubers, brushes, and rollers are available. For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe. Sufficient cement cannot be applied using daubers attached to the cement can lid on large diameter products (> 3"dia.) The following chart shows a variety of Spears® applicator sizes for use on different pipe diameters

SPEARS® APPLICATOR SELECTION GUIDE

For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe

DAUBERS	Pipe Diameters						
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
3/8" Dauber	•	•	•				
1/2" Dauber			•	•			
3/4" Dauber					•	•	
1-1/4" Dauber							•
ROLLERS & SWABS		SIZE		FOR PIPE DIAMETERS			
3020		3" Roller		3" - 6"			
6020		4" Roller		3" - 8"			
7020		7" Roller		6" +			
5520		4" Roller		6" +			
6520		6" Roller		6" +			
4020		4" Swab		6" +			
5020		4" Swab		3" - 8"			
4520		4" Swab		6" +			

Cleaners

Cleaners can be used to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene pipe and fittings. Use of a cleaner is recommended before priming of pipe and fittings.

Primers

The use of Primer is necessary to penetrate and dissolve the surface of the pipe and fitting prior to the application of cement. Special "one-step" cements formulated for use without primers are available. Check cement instructions and local codes (where required) for acceptable applications. Primer must be applied to both the pipe and fittings. Apply multiple coats of primer to the fitting socket and to the outside of the pipe ensuring that the entire surface is wet. Solvent cement must be applied immediately after primer while the surfaces are still tacky.

Solvent Cements

Solvent cements are produced for joining a variety of commercially available pipe and fitting materials, including PVC, CPVC and ABS plastics. Solvent cements are typically formulated using tetra hydro furan (THF). When properly applied, this solvent dissolves the mating surfaces of the pipe and fittings. Cyclohexanone is a typical retardant used to slow the rate of solvent evaporation. Immediate joining of the wet mating surfaces in one minute or less is essential to eliminate dry spots that will not bond. The bond interface is strongest at the area of interference fit where the softened semi-fluid surfaces of the pipe and fitting chemically fuse. Plastic resin fillers (dissolved PVC or CPVC) in the cement fill the gaps

between pipe and fitting. Cements are available in clear, white, gray and other colors to match the pipe or for specific application. **Inert pigments are used for coloration.** For example, white cements are made from titanium dioxide while gray cements are made from titanium dioxide and carbon black. As the solvent evaporates, pipe and fitting joint "cures", except for some residual solvent that dissipates over time. The resulting fused area is why this method is called "solvent cement welding" although no heat is applied to melt and fuse the bonded areas as in metal welding.

Solvent cements are formulated in regular bodied, medium bodied, heavy bodied, extra heavy bodied and specialty cements. Different types of cements have different set and cure times. Low VOC products - with lesser VOC emissions - will contribute to cleaner air and better workplace conditions. All Spears® solvent cement and primer products are certified as Low VOC.

1. Regular Bodied – Cements for smaller diameters (i.e.<4") and thin-wall classes and Schedule 40 piping with interference fits. Generally referred to as "regular body" such as Spears® PVC-00 and PVC-02 cements, these cements are fast setting.

2. Medium Bodied – Cements for smaller diameters (i.e. <4") for all classes, Schedule 40 and Schedule 80 pipe with interference fits such as Spears® PVC-05 and PVC-21 cements. These cements have better gap filling capability than regular bodied cement and are also considered fast setting

3. Heavy Bodied & Extra Heavy Bodied – Cements for both small and large diameters of heavier-wall Schedule 80 and Schedule 120 products. Heavy-body such as Spears® PVC-11 and CPVC-24 cements are classified as medium setting and extra heavy-body such as Spears® PVC-19 cement is classified as slow setting. These cements are formulated to fill larger gaps, dry slower and typically take longer to dry in order to provide more time to assemble joints.

4. Specialty Cements – Specialty cements formulated for use with specific products and applications, but can also be used with other applications of similar products. Examples include special cements such as Spears® PVC-25 Wet-N-Dry; transition cements such as Spears® MULTIPURPOSE-90 and Spears® ABS TO PVC-94; product specific cements such as Spears® ABS-71 and ABS-73; and one-step specialty cements. One-step cements do not require the use of primer prior to the application of the cement. Examples include Spears® FS-5 one-step cement for use with FlameGuard® CPVC Fire Sprinkler Products, Spears® LW-4 one-step cement for use with **LabWaste™** CPVC Chemical Drainage Systems; Spears® **EverTUFF®** CTS-5 for use with CPVC hot and cold water plumbing systems, and Spears® LX-5 Low Extractable PVC cement for use in high purity applications (i.e. Spears® LOW EXTRACTABLE PVC products). In addition, special application cements such as Spears® CPVC-24 is formulated for improved chemical resistance to caustics and chemical applications with both PVC and CPVC products. In fact, CPVC-24 is one of the most versatile solvent cements on the market today!

Selecting the appropriate solvent cement and primer for the type of products being joined is important. The following selection guide can be used in selecting the right Spears® solvent cement and primer for your application.



Installation

Spears® Solvent Cement & Primer Selection Guide

Type	Body	Product	Color	Relative Set	Capacity	Features
PVC	Regular	PVC-00	Clear	Fast	Schedule 40 - 4"	
		PVC-02	Clear	Fast	Schedule 40 - 4"	Dries Clearest, slightly thicker than PVC-00
	Medium	PVC-05	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	<i>Industrial Duty</i> Primerless Capability ¹
		PVC-21	Blue	Fast	Schedule 40 - 6" Schedule 80 - 4"	Primerless Capability ¹
	Heavy	PVC-11	Gray	Medium	All Classes & Schedules - 12"	<i>Industrial Duty</i>
		PVC-17	Clear/ Gray	Medium	All Classes & Schedules - 12" Non-pressure - 18"	<i>Industrial Duty</i>
	Heavy Extra	PVC-19	White/ Gray	Slow	All Classes & Schedules Requiring High Gap Filling - 30"	<i>Industrial Duty</i>
	Specialty Cements	PVC-25	Aqua Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Wet-N-Dry Formulation Primerless Capability ¹
		PVC-27	Clear	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Cold-N-Hot Formulation -15°F to 110°F Primerless Capability ¹
		PVC-50	Blue	Very Fast	Schedule 40 - 6" Schedule 80 - 4"	HOT PVC Formulation Primerless Capability ¹
		PVC-95	Clear/ Blue	Fast	All Classes & Schedules - 6" Schedule 80 - 3"	Flexible PVC for Flex-Flex, Flex-Rigid Joints
		LX-5	Clear	Fast	Low Extractable PVC Systems - 6"	One Step ² Low Extractable, High Purity Cement
CPVC	Heavy	CPVC-24	Gray/ Orange	Medium	All Classes & Schedules PVC or CPVC - All Sizes	Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct - <i>Industrial Duty</i>
	Specialty Cements	LW-5	Mustard	Medium	LabWaste™ CPVC Drainage Systems - 24"	One Step ² Cement -Only LabWaste™ System Chemically Approved Cement
		FS-5	Red	Fast	CPVC Fire Sprinkler Systems - 3"	One-Step ² Cement for all CPVC Fire Sprinkler Systems - FlameGuard® & BlazeMaster®
		CTS-5	Yellow	Fast	CTS CPVC Systems - 2"	One-Step ² Cement for all CTS CPVC Systems - EverTUFF® & FlowGuard Gold®
ABS	Medium	ABS-71	Yellow/ Milky	Fast	All ABS Classes & Schedules - 8"	
		ABS-73	Black	Fast	All ABS Classes & Schedules - 8"	
Transition & Multipurpose	Medium	ABS TO PVC-94	Green	Fast	All Classes & Schedules - 6" (Except Schedule 80)	For ABS-to-PVC Transition Joints
		MULTIPOSE-90	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	For PVC and CPVC pressure ABS and Styrene low-pressure systems
Primers & Cleaners		Primer-70	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	<i>Industrial Duty</i>
		Primer-68	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	
		Cleaner-65	Clear		All Classes & Schedules -All Sizes	For PVC, CPVC, ABS or Styrene

Notes

1= Primerless Capability indicates a cement can be used without primer in certain applications if local code permits. See specific cement information for further restrictions.

2 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.

CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems.

Joining Method - Threaded Connections

Threaded connections require the application of a thread sealant that is compatible with PVC and CPVC material. Spears® recommends the use of Spears® Blue 75™ Thread Sealant.

CAUTION - Use only thread sealants recommended for PVC or CPVC plastic. Other joint compounds or pastes may contain substances that could cause stress cracks in PVC or CPVC materials.

Apply sealant to the male threads only. Make sure all threads are covered. **DO NOT** clog the waterway with excess sealant. If PTFE tape must be used, Spears® recommends a thickness of at least .0025" that meets or exceeds military specification, MIL-T-27730A. **DO NOT** use a combination of tape and thread sealant on the same joint. Apply PTFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 – 3 wraps are sufficient to produce a watertight connection

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Use a smooth-jawed wrench or strap wrench when installing threaded connections.

Threading Pipe

PVC and CPVC pipe can be threaded using either standard hand pipe stocks or power-operated equipment. Since rigid PVC plastic pipe has the same outside diameter as standard steel pipe in comparable sizes, standard steel pipe taps and dies can be used. A cut thread or deep scratch results in a stress concentration point. As a result, only Schedule 80 and Schedule 120 pipe should be threaded. A 50% pressure de-rating is applied to threaded pipe to compensate for this. **DO NOT** thread Schedule 40 pipe. For optimum results in threading, use new taps and dies; but in any case, they should be cleaned and sharpened and in good condition. Power threading machines should be fitted with dies having a 5° negative front rake and ground especially for this type of pipe; tapered guide sleeves are not required. For hand stocks the dies should have a negative front rake of 5° to 10°. Dies which have been designed for use on brass or copper pipes may be used successfully. Carboly dies give longer service. (Taps should be ground with a 0° to 10° negative rake, depending upon the size and pitch of the thread. Die chasers should have a 33° chamfer on the lead; a 10° front or negative

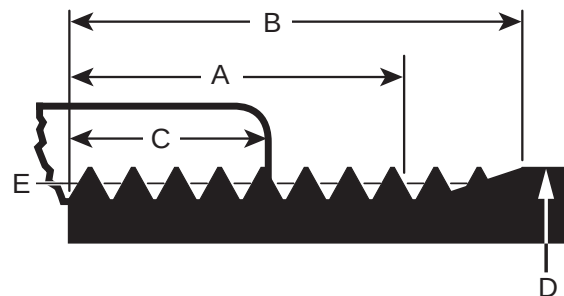
rake; and a 5° rake on the back or relief edge.). Self-opening die heads and collapsible taps, power threading machines and a slight chamfer to lead the tap or dies will speed production; however, taps and dies should not be driven at high speeds or with heavy pressure.

A tapered plug should be inserted into the pipe when threading, to hold the pipe round and to prevent the die from distorting and digging into the pipe wall. This insures uniform thread depth all the way around. Pipe for threading should be held in a suitable pipe vise, but saw-tooth jaws should not be used. Flanges and close nipples should be threaded in jigs or tapping fixtures. To prevent crushing or scoring the pipe, some type of protective wrap, such as canvas, emery paper, or a light metal sleeve should be used; rounding of chuck jaws will also be helpful. Rigid PVC or CPVC plastic pipe should be threaded without use of lubricants. Standard cutting oils can cause stress cracking in plastics and should not be used. Water-soluble oil or plain water is recommended. Degreasing with any solvents is not recommended, nor should solvents be used in any cleanup. Always clear cuttings from the die.

DO NOT OVER THREAD - To obtain a tight, leak proof joint, the thread dimensions shown in the table should be used. If pipe is over threaded, fittings cannot be run on far enough to make a tight seal.

American National Standards Institute Code B1.20.1 covers dimensions and tolerances for tapered pipe threads. **Only Schedule 80 or heavier wall pipe should be threaded.**

Angle between sides of thread is 60 degrees. Taper of thread, on diameter, is 3/4 inch per foot. The basic thread depth is 0.8 x pitch of thread and the crest and root are truncated an amount equal to 0.033 x pitch, excepting 8 threads per inch which have a basic depth of 0.788 x pitch and are truncated 0.045 x pitch at the crest and 0.033 x pitch at the root.



PIPE THREADS

Nominal Size (in.) (Max.) (in.)	Outside Diameter (in.) D	Number of Threads Per Inch	Normal Engagement By Hand (in.) C	Length of Effective Thread (in.) A	Total Length: End of pipe to vanish point (in.) B	Pitch Diameter at end of Internal Thread (in.) E	Depth of Thread (Max.) (in.)
1/8	0.405	27	0.180	0.2639	0.3924	0.37476	0.02963
1/4	0.540	18	0.228	0.4018	0.5946	0.49163	0.04444
3/8	0.675	18	0.240	0.4078	0.6006	0.62701	0.04444
1/2	0.840	14	0.320	0.5337	0.7815	0.77843	0.05714
3/4	1.050	14	0.339	0.5457	0.7935	0.98887	0.05714
1	1.315	11-1/2	0.400	0.6828	0.9845	1.23863	0.06957
1-1/4	1.660	11-1/2	0.420	0.7068	1.0085	1.58338	0.06957
1-1/2	1.900	11-1/2	0.420	0.7235	1.0252	1.82234	0.06957
2	2.375	11-1/2	0.436	0.7565	1.0582	2.29627	0.06957
2-1/2	2.875	8	0.682	1.1375	1.5712	2.76216	0.10000
3	3.500	8	0.766	1.2000	1.6337	3.38850	0.10000
4	4.500	8	0.844	1.3000	1.7337	4.38713	0.10000
5	5.563	8	0.937	1.4063	1.8400	5.44929	0.10000
6	6.625	8	0.958	1.5125	1.9462	6.50597	0.10000



Joining Method - Flanged Connections

PVC and CPVC flanges are available in several designs, including solid one-piece flanges, two piece Van Stone style flanges featuring a moveable ring for bolt alignment, and blind flanges for capping off a piping run. Flanges are available in socket, spigot and threaded configurations and are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems where frequent disassembly may be required, can be used as a transitional fitting for joining plastic to metal piping systems, and for connection to other flanged type valves and equipment. A gasket is used between flanges to form a water-tight seal. Proper gasket material should be selected for fluids compatibility. Most plastic flanges carry a maximum working pressure rating of 150 psi non-shock for water at 73°F. Pressure ratings may vary according to size and construction of the flange. Consult flange manufacturer.

Gaskets

Select appropriate size and bolt pattern gasket. Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 are recommended. Verify that the gasket material is suitable for use with the application fluids.

Bolt Patterns & Selection

Most PVC and CPVC flanges are produced with ANSI B16.5 Bolt Patterns for Class 125/150 flanges. Optional Class 300 bolt patterns (NOT a 300 psi rating), certain ANSI/Metric dual pattern flanges, and metric bolt patterns can be produced. Proper bolt size, number and length should be selected for the specific flanges and equipment being assembled. Bolt length requirements will vary according to the flange or equipment manufacturer. Always use 2-wide flat washers for each bolt, one under the bolt head and one under the nut (do not use thin "fender" washers).

Bolt Torque

Threads should be cleaned and well lubricated (**WARNING:** Use only bolt lubricants compatible with PVC or CPVC material). Actual field conditions may require variations in these recommendations. **UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.** Torque should always be applied in approximately 5 ft-lb. increments using a 180° opposing sequence.

Flange Make-up

Follow proper solvent cementing and/or threaded component procedures as applicable to join the flange to the pipe. Once a flange is joined to pipe, the method for joining two flanges is as follows:

1. Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.
2. With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position.
3. Insert all bolts, washers (two standard flat washers per bolt), and nuts.
4. Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.
5. Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lb. increments according to the sequence shown in the following table using a 180° opposing sequence.

6. Care must be taken to avoid "bending" the flange when joining a Spears® flange to a "raised face" flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Recommended Flange Bolt Torque for Plastic Flanges

Flange Size (in.)	No. of Bolt Holes	Bolt Dia. (in.)	Min. Bolt Length (in.)	Torque ft.-lb.
1/2	4	1/2	2	12
3/4	4	1/2	2	12
1	4	1/2	2-1/4	12
1-1/4	4	1/2	2-1/4	12
1-1/2	4	1/2	2-1/2	25
2	4	5/8	3	25
2-1/2	4	5/8	3-1/4	25
3	4	5/8	3-1/4	25
4	8	5/8	3-1/2	25
6	8	3/4	4	40
8	8	3/4	4-1/2	40
10	12	7/8	5	64
12	12	7/8	5	95
14	12	1	5-1/2	110
16	16	1	6-1/2	110
18	16	1-1/8	4-1/8	110
20	20	1-1/8	5-1/2	110
24	20	1-1/4	5-1/2	110

Note: Minimum bolt length is based on connecting two (2) Spears® flanges, two flat washers, gasket and nut. Adjustments will need to be made to accommodate valves and other equipment.

Joining Method – Mechanical Grooved Couplings

In many installations where transition to metal pipe, or where disassembly is a prime factor, metallic grooved style couplings with gasket seal can be used to join PVC and CPVC pipe to alternate IPS size piping materials. In addition to the ease of disassembly, this type of connection also allows for a certain degree of angular adjustment and expansion/contraction. Special rolled-groove pipe can be joined, but easy to use molded Grooved Coupling Adapters then can be solvent cemented to plain end pipe are available for use with metallic grooved couplings.

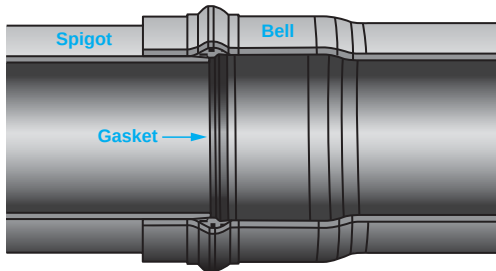
Only flexible style metallic grooved couplings are recommended for use with plastic pipe. Rigid style couplings should not be used as these can provide a compressive/shear load to plastic pipe resulting in failure. Always check the compatibility of the grooved coupling gasket material with the intended application fluids.

INOTE A gasket/joint lubricant is recommended to prevent pinching the gasket and to assist the seating and alignment processes during assembly of grooved couplings. Certain lubricants may contain a petroleum base or other chemicals, which will cause damage to the plastic pipe, gasket and adapter. Always verify the suitability for use of the selected lubricant with the lubricant manufacturer.

Joining Method - Gasketed Pipe

Standards and Specifications

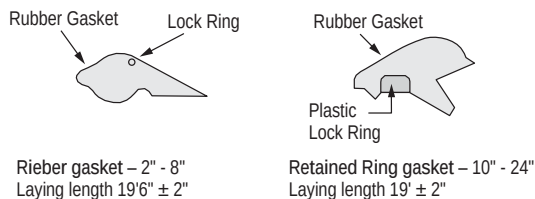
Since integral gasket bells are commercially available on a variety of pipe dimensions, applicable standards are dependent on the pipe dimension chosen. PVC pipe is manufactured from a Type I, Grade I PVC material per ASTM D 1784. Gasket pipe utilizes flexible elastomeric seals for pressure pipe. When properly assembled these joints meet the requirements of push-on joints per ASTM D 3139. The gaskets used should be manufactured in strict compliance with ASTM F477 requirements. SDR Series gasketed pipe is manufactured to ASTM D 2241. PVC Schedule 40, 80 and 120 gasketed pipe is manufactured to ASTM D 1785.



Typical Gasket Joint

Gasket Design

Gasketed pipe utilizes either gaskets that are locked in place at the factory as part of the manufacturing process, or insertable elastomer gaskets. Two styles of factory-installed gaskets are typically used. The Rieber style gasket with internally molded-in metal ring, and the Retained Ring style gasket. This technique also prevents fish mouthing or dislocation of the seal during assembly. The standard gasket material typically used for both factory-installed gasket systems is Styrene Butadiene Rubber (SBR) which offers excellent physical properties and good chemical resistance. Other gasket materials are commercially available to meet demanding chemical resistance requirements.



Gasketed pipe offers low assembly force; flexibility to allow for variations in line pressure and changing working conditions; compensation for movement due to thermal expansion and contraction; a certain amount of allowable joint deflection; and positive, leak-free seals for both high- and low-pressure applications as well as vacuum service.

Field Assembly of Gasketed Joint

PVC pipes are assembled in the field by following a few simple steps, as outlined below:

Step 1: Pipe end should have 15° bevel. Field cut pipe must be cut square and a 15° bevel applied to the cut spigot end. Factory pipe ends may have an insertion depth guide mark. If not, or if field cut, measure bell depth and mark on spigot end for insertion reference.

Step 2: Check that gasket is properly positioned in the bell groove. Clean the beveled end of the spigot and the gasket in the bell groove to be sure they are free of any particles or debris

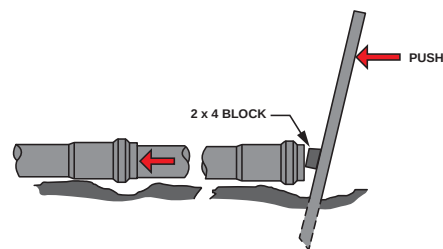


Step 3: Apply a lubricant recommended for PVC to the spigot end. Avoid applying lubricant directly on the gasket in the bell instead of the spigot.

WARNING: Some lubricants, oils or greases may not be compatible with PVC and can cause stress cracking. Verify PVC compatibility with the lubricant manufacturer.



Step 4: Insert and push lubricated spigot past the gasket into the bell until the guide mark on the spigot is meets the end of the bell. It is usually possible to manually insert the spigot into the bell on pipe sizes 3" and smaller. Mechanical assistance may be needed for insertion on larger sizes. The "bar and block method" can be used, which allows the installer to feel the amount of force being used and whether the joint goes together smoothly.



"Bar and Block" Method for Mechanical Insertion of Spigot Into Bell



Installation

Deflection

Gasketed joints permit an angular deflection of 2° at the joint. Adequate deflection can usually be achieved for gentle curves by using the inherent flexibility of the pipe itself, without using joint deflection.

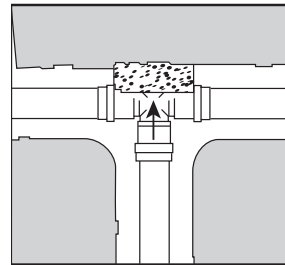
Thrust Blocking Gasket Joints

All gasket-joint piping requires adequate thrust restraints to prevent movement from forces generated by changes in direction, valve operation, dead ends, reduction in pipe size, and other areas where thrusts can be developed. The size and type of thrust restraint depends on the pipe size, type of fitting, soil properties, and water-hammer possibilities. Keeping flow velocities at or below 5 ft/sec will help minimize surge pressures. Fittings and valves used to make vertical changes in direction should be anchored to the thrust restraint to prevent outward and upward thrusts at the fitting junctures. In pressure lines, valves 3" in diameter and larger should be anchored to the thrust restraint to prevent movement when operated. Consideration should also be given for the proper support, anchoring, and thrust restraint for lines installed on slopes.

The size of thrust block required (in square feet) can be determined by dividing the total thrust developed (in psi) by the capacity of the soil (in pounds/square foot).

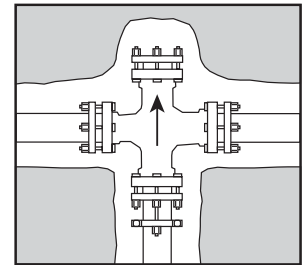
The most common method of thrust blocking involves the pouring of concrete (to the size of block required) between the pipe fitting and the bearing wall of the trench. Mechanical thrust restraint with PVC pipe.

Thrust Blocks

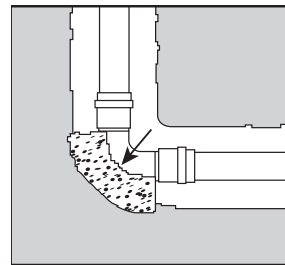


Thru Line connection, tee

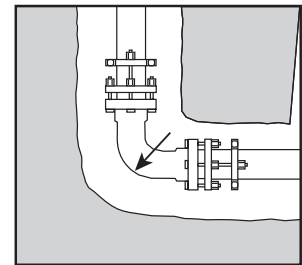
Thrust Retainers



Thru Line connection, cross used as tee



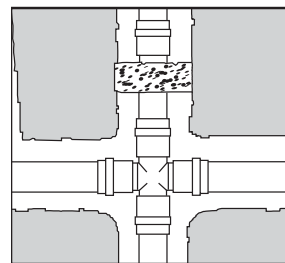
Direction change, elbow



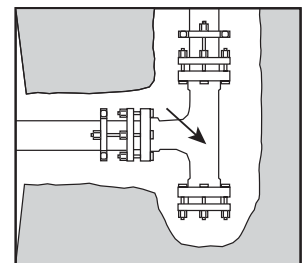
Direction change, elbow

Thrust in lb. @ 100 psi Operating Pressure

Pipe Size (in.)	90° Bend	45° Bend	22.5° Bend	Tee, Cap Plug, 60° Bend
2	645	350	180	455
2-1/2	935	510	260	660
3	1,395	755	385	985
4	2,295	1,245	635	1,620
6	4,950	2,680	1,370	3,500
8	8,375	4,540	2,320	5,930
10	13,040	7,060	3,600	9,230
12	18,340	10,000	5,240	13,000
14	21,780	11,770	6,010	15,400
16	28,440	15,370	7,850	20,110
18	35,990	19,450	9,930	25,450
20	44,430	24,010	12,260	31,420
24	63,970	34,570	17,650	45,240



Change line size, reducer



Direction change, tee used as elbow

Safe Bearing Capacity

Soil	Capacity (lb./sq. ft.)
Muck, peat, etc.	0
Soft clay	1,000
Sand	2,000
Sand and gravel	3,000
Sand and gravel cemented with clay	4,000
Hard shale	10,000



Assembly Instructions

Step One: Make certain pipe ends and gasket areas are free of dirt and debris. Support spigot end of pipe above ground to prevent dirt contamination when lubricant is applied.

Step Two: Apply a light coating of recommended lubricant to spigot end and sealing section of gasket.

WARNING – Use only lubricants specifically designated for use with PVC pipe. Certain greases, oils and vegetable oils will cause stress cracking in PVC materials.

Step Three: Align pipe ends. Push spigot end into gasket bell so that the reference mark is even with the entrance of the gasket bell.

Pounds of Force Required to Assemble Gasket Pipe

Rieber		Retaining Ring	
Pipe Size (in.)	ft.-lb.	Pipe Size (in.)	ft.-lb.
2	113	10	250
2-1/2	124	12	300
3	137	14	385
4	157	16	360
6	284	18	450
8	352	20	520
		24	600

Estimated Gasket Pipe Lubricant Use

Nominal Pipe Size (in.)	Avg. Number of Joints Per Pint (1 lb.) Container of Lubricant
2	70
2-1/2	60
3	50
4	35
6	20
8	14
10	10
12	7
14	5
16	3
18	2
20	1.5
24	1

Trenching: Initial Backfill

Trench depth is determined by the intended service and local conditions. Gasket pipe should be buried a minimum of 12" below frost line in areas subject to freezing, or a minimum depth of 18" - 24" where there is no frost. Permanent lines subjected to heavy traffic should have a minimum cover of 24". In areas not subject to freezing, a minimum cover of 12" to 18" is usually sufficient for small-diameter piping subjected to light traffic. Bearing stresses must be calculated to determine the amount of cover required. Reference to applicable local, state, or national codes is also recommended.

The trench bottom should be continuous, relatively smooth, and free of rocks and debris. Adequate backfill should be in place immediately after installation, prior to filling or testing the line, to help distribute the effects of expansion/contraction evenly over each pipe length. The initial backfill material should consist of particles of 1/2" in size or less, and properly tamped. Generally a minimum of 6" - 12" of backfill is desirable for the initial phase.

Where hardpan, ledge rock, or large boulders are encountered, the trench bottom should be padded with sand or compacted fine-grain soils to provide adequate protection. Joints should be left exposed for visual inspection during testing. Testing should be done before final backfill.

Testing

If separate tests are to be conducted for pressure and leakage, pressure testing should be conducted first.

WARNING: Air must be completely vented from the line prior to pressure testing; entrapped air can generate excessive surge pressures that are potentially damaging and can cause bodily injury or death. Air relief valves should be provided.

Section of pipe should be tested as it is installed to verify proper installation and joint assembly. Make certain the section of piping to be tested is backfilled sufficiently to prevent movement under test pressure. If concrete thrust blocks are utilized, allow sufficient time for concrete to set up prior to testing. Test ends must be capped and braced properly to withstand thrusts developed during testing. The following table provides the water volume requirements of various sizes of schedule and SDR series pipe.

Water Volume Gallons / 100'

Pipe Size (in.)	Sch. 40	Sch. 80	Sch. 120	SDR. 21	SDR. 26	SDR. 41
2	17	15	14	19	20	–
3	38	34	32	41	43	–
4	66	60	54	68	70	–
6	150	135	123	146	152	–
8	260	237	–	248	258	–
10	409	373	–	–	401	–
12	582	528	–	–	565	–
14	703	637	–	–	681	–
16	917	836	–	–	889	–
18	–	1060	–	–	1125	1195
20	–	–	–	–	1390	1475
24	–	–	–	–	2000	2125

Final Backfill

Backfilling should be conducted in layers; each layer must be compacted sufficiently so that lateral soil forces are developed uniformly. Under certain conditions it may be desirable to pressurize line during the backfill operation. Vibratory methods are recommended when compacting sand or gravel. Sand and gravel containing a significant proportion of fine-grained materials (silt, clay, etc.) should be compacted by mechanical tampers. When water flooding is used, sufficient cover must be provided by the initial backfill to ensure complete coverage of the pipe; precautions must be taken to prevent "floating" the pipe in the trench. Additional layers of backfill should not be applied until the water flooded backfill is firm enough to walk on. In all cases, the backfill should be placed and spread in uniform layers to eliminate voids. Large rocks, frozen dirt clods, and other debris larger than 3" should be removed to prevent damage to the pipe. Rolling equipment or heavy tampers should only be used to consolidate the final backfill. Additional information pertaining to underground installation is contained in ASTM D 2774 (Underground Installation of Thermoplastic Pressure Pipe), and ASTM D 2321 (Underground Installation of Flexible Thermoplastic Sewer Pipe).



Transition Joints & Specialty Fittings

PVC and CPVC pipe can be connected to steel, copper, brass, other metals and other plastic materials using a variety of transition fittings including unions, compression fittings, special reinforced adapters, flanged joints and grooved mechanical coupling joints.

Do not use regular PVC or CPVC female threaded fittings for connection to metal male threads. Spears® Special Reinforced (SR) female plastic threaded fittings are excellent for plastic to metal transitions. Unlike conventional plastic female adapters, these fittings incorporate the use of a stainless steel restraining collar located on the exterior of the FIPT threads of the adapter. This design allows direct connection to male metal threads without the need for pressure de-rating normally associated with conventional FIPT adapters, as the radial stress generated by thread engagement is contained. Other PVC/CPVC adapter fittings with brass or steel threads can also be used for transition to metal male threads.

If regular non-reinforced plastic threads must be transitioned to metal threads, the recommended joint is to use male plastic threads into female metal threads.

Underground Installation

Underground piping must be installed in accordance with any applicable codes. Attention should be given to local pipe laying techniques applicable to area subsoil. This may provide insights to particular pipe bedding issues. The following information is applicable to solvent cement joining of PVC and CPVC piping as a general guide. Refer to Gasketed Pipe section for additional information on installation of gasketed pipe.

Inspection: Before installation, PVC and CPVC piping products should be inspected for cuts, scratches, gouges or split ends. Damaged sections found must be cut-out and discarded.

Trenching: The trench should be as narrow as possible while providing adequate width to allow convenient installation. Minimum trench widths may be utilized by joining pipe outside of the trench and lowering it into the trench after adequate joint strength has been achieved. Refer to solvent cement instructions for recommended joint set and cure time.

Trench widths will have to be wider where pipe is joined in the trench or where thermal expansion and contraction is a factor.

Thermoplastic pipe should ALWAYS be installed below the frost level according to local conditions. Pipe for conveying liquids susceptible to freezing should be buried no less than 12" below the maximum frost level. Permanent lines subjected to heavy traffic should have a minimum cover of 24". For light traffic 12" to 18" is normally sufficient for small diameter pipe (typically < 3" diameter). With larger sizes, bearing stresses should be calculated to determine cover required.

When it is installed beneath surfaces that are subject to heavy weight or constant traffic such as roadways and railroad tracks, thermoplastic piping should be run within a metal or concrete casing. Refer to Critical Collapse Pressure Ratings for additional information.

The trench bottom should be continuous, relatively smooth and free of rocks. Where ledge rock, hardpan or boulders are encountered, it is necessary to pad the trench bottom using a minimum of four (4) inches of tamped earth or sand beneath the pipe as a cushion and for protection of the pipe from damage.

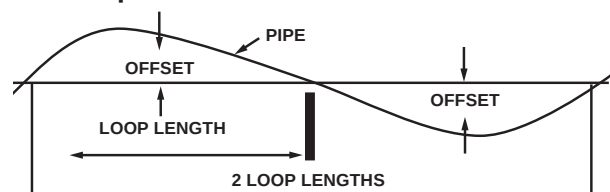
Sufficient cover must be maintained to keep external stress levels below acceptable design stress. Reliability and safety of service is of major importance in determining minimum cover. Local, state and national codes may also govern.

Snaking of Pipe may be used for small diameter piping systems (typically < 3"), but may also apply to larger diameter piping under specific applications and site conditions. Snaking of pipe is used to compensate for thermal expansion and contraction due to temperature changes. Snaking is particularly necessary on piping solvent welded during the late afternoon or a hot summer's day where drying time will extend through the cool of the night where thermal contraction could result in joint pull out. This snaking is also especially necessary with pipe that is laid in its and is backfilled with cool earth before the joints are thoroughly dry.

After the pipe has been solvent welded and allowed to set properly, snake the pipe beside the trench during its required cure time. **BE ESPECIALLY CAREFUL NOT TO APPLY ANY STRESS THAT WILL DISTURB THE UNCURED JOINT.**

For Pipe Diameters < 3" diameter

Loop Offset in Inches for Contraction:



Maximum Temperature Variation, °F, Between Time of Solvent Welding and Final Use

Loop Length	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
LOOP OFFSET										
20	3"	4"	5"	5"	6"	6"	7"	7"	8"	8"
50	7"	9"	11"	13"	14"	16"	17"	18"	19"	20"
100	13"	18"	22"	26"	29"	32"	35"	37"	40"	42"

Expansion and contraction can be excessive in systems operating at near or at the maximum allowable temperature ranges with intermittent flow and buried lines. In these cases the lines should not be snaked. The use of properly installed expansion joints within a suitable concrete enclosure can be used. A section of larger diameter PVC pipe or other suitable sleeve should be used over the carrier pipe to pass through the wall of the concrete to minimize the potential for damage (scratching & scarring) as the result of movement caused by thermal expansion/contraction. Expansion joints should be suitably anchored independently of the carrier line. Axial guides should be used to direct movement into the expansion joint.



Backfilling: Underground pipe should be inspected and tested for leaks prior to backfilling. In hot weather, it is best to backfill early in the morning when the line is fully contracted and there is reduced chance of insufficiently dried joints being subject to contraction stresses.

The pipe should be uniformly and continuously supported over its entire length on firm, stable material. Blocking should not be used to change pipe grade or to intermittently support pipe across excavated sections.

Pipe is installed in a wide range of subsoils that must be stable and applied so as to physically shield the pipe from damage. Follow local pipe laying experience that may indicate particular pipe bedding problems.

Surround the pipe with 6" or 8" of backfill materials free of rocks and having a particle size of 1/2" or less. It should be placed in layers. Each soil layer should be sufficiently compacted to uniformly develop lateral passive soil forces during the backfill operation. It may be advisable to pressurize the pipe to 15 - 25 psi during the backfilling.

Vibratory methods are preferred when compacting sand or gravels. Best results are obtained when the soils are in a nearly saturated condition. Where water flooding is used, the initial backfill should be sufficient to insure complete coverage of the pipe. Additional material should not be added until the water flooded backfill is firm enough to walk on. Care should be taken to avoid floating the pipe.

Sand and gravel containing a significant proportion of fine-grained material, such as silt and clay, should be compacted by hand or, preferably by mechanical tamper.

The remainder of the backfill should be placed and spread in uniform layers to fill the trench completely so that there will be no unfilled spaces under or around rocks or lumps of earth in the backfill. Remove large or sharp rocks, frozen clods and other debris greater than 3" in diameter. Rolling equipment or heavy tampers should only be used to consolidate the final backfill.

Avoid threaded connections in underground applications. Where transition to alternate materials is required the use of a flange component with suitable gasket is recommended. At vertical transitions from below ground systems to connections above ground, follow above ground installation procedures with regard to compensating for thermal expansion/contraction, weatherability, and proper support recommendations. Valves and other concentrated weight loads should be independently supported. Avoid excessive bending of pipe; excessive deflection of pipe and joints can reduce pressure bearing capability and cause failure.

Additional information on underground installations is contained in ASTM D 2774 "Underground Installation of Thermoplastic Pressure Piping", ASTM F 645, Standard Guide For "Selection Design and Installation of Thermoplastic Water Pressure Piping Systems", and ASTM D 2321 "Underground Installation of Flexible Thermoplastic Sewer Pipe."

Above Ground Installation

Thermal Expansion & Contraction

Attention must be given to above ground installations where ambient temperature swings can be cause thermoplastic systems to expand and contract both indoors and out. For example, a system installed in an unheated building during the winter months will expand considerably when temperatures rise. Conversely, systems installed at higher ambient temperatures will contract as temperatures fall. Refer to Thermal Expansion & Contraction section for additional information.

Outdoor Applications & Protection

PVC and CPVC piping system must be protected from freezing. Many standard cold weather piping design and installation practices can be used to protect the system from freezing such as use of pipe insulation, anti-freeze solutions, and heat trace tapes. The suitability and compatibility of these products for use with PVC and CPVC should be verified with product manufacturers prior to use.

Caution should be exercised in installing PVC and CPVC piping products in metal boxes or enclosures exposed to direct sunlight. Such enclosures can act as "ovens" that significantly increase the environmental temperature over ambient air conditions, resulting in product damage and failure.

PVC and CPVC piping exposed to the direct sunlight (UV radiation) should be painted with a reflective, light colored acrylic or latex paint. Avoid dark colors, especially black. Heat absorption can exceed the heat handling capacity of the pipe and fitting material. Compatibility information regarding use with PVC/CPVC products should be confirmed with the paint manufacturer. Oil-based paints should not be used.

Hangers and Supports

Hanger Support Spacing

Support location and spacing depends on the pipe diameter, system operating temperature, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use. Hangers also must not restrict linear movement of the system in order to allow thermal expansion and contraction from temperature changes.

Proper support spacing can be calculated similarly to that of metal systems by using simple and continuous beam calculations. This can be achieved using the maximum fiber stress of the material, or deflection based on the long term modulus of the material at the temperature selected as the limiting factors.



Hangar Selection

Hangers designed for metallic pipe can be used if they provide an adequate load-bearing surface, which is smooth and free of rough or sharp edges that could damage the pipe. Improper supports can generate excessive sag resulting in failure. Movement caused by thermal expansion/contraction and pressure fluctuations must be considered. Hangers and supports used must permit axial movement of the system, but not compress the pipe. Supplemental guides may be required in addition to hangers in order to maintain alignment and direct movement into in-line Expansion Joints.

Placement

Hangers should be installed within two feet of each side of a pipe joint; while changes in direction should be supported as close as possible to the fitting to reduce stress. Heavy system components such as valves, flanged assemblies, tees and other concentrated stress loads must be independently supported. Valves should additionally be adequately braced to prevent movement/stress loads from operational torque. Support of potential solids accumulation loads within the line should also be considered.

Precautions

Protective sleeves or pads used between the pipe and the hanger will distribute stress loads over a greater surface area, especially when using U-bolt or roller type hangers. Protective sleeves or pads should also be used when horizontal pipe is resting on concrete or other abrasive support structures. Do not allow piping to contact abrasive surfaces that could cause damage during axial movement. Avoid contact with heat producing sources. Do not install plastic piping in close proximity to steam lines or other high temperature equipment without providing appropriate protection to prevent damage from distortion or expansion/contraction.

Care should be taken to avoid over tightening of anchors, clamps or other support devices. This can distort or even fracture the piping.

Vertical lines must be supported properly at intervals that will prevent excessive loading on the fitting at the lower end. Hangers and clamps suitable for this purpose include riser clamps or double bolt type clamps installed in such a manner that will allow for movement of the pipe due to thermal expansion and contraction. Clamps and hangers used must not compress, distort, cut or abrade the piping. Common practice is to install clamps just below a coupling so that the shoulder of the coupling rests on the clamp. Fittings can be modified in the field to achieve this by cutting a coupling in two, just above the stop at the socket bottom, and then cutting this piece in half lengthwise to provide two halves which do not contain the stop. The two halves are then solvent cemented to the pipe at the proper location so that the shoulder of the modified coupling rests on the clamp. Riser clamps that utilize compression to support the pipe weight should not be used.

Anchor Guides

Anchors direct movement of the piping by providing restraint at key points such as long straight runs, at changes in direction of the system, and where expansion joints and other methods of thermal compensation are utilized. They may be used to control forces caused by expansion and contraction, generated by pressure surges, vibration, and other transient conditions. Guides are necessary to help direct this movement between anchors by allowing longitudinal movement while restricting lateral movement. Depending on the application and type, guides may or may not act as supports. Support guides should have the same load bearing surface and other requirements of hangers designed for the system. Guides must be rigidly attached to the structure to prevent lateral movement, but should not restrict longitudinal movement of the pipe through the guide. Anchors and guides must be engineered and installed without point loading the system.

Recommended Pipe Support Spacing

The following hanger support spacing recommendations are according to size, schedule, and operating temperatures. Do not clamp supports tightly – this restricts axial movement of the pipe. If short spacing is necessary, continuous supports may be more economical. These are considered conservative in nature and are based on straight runs of un-insulated lines with fluids with a specific gravity of 1.00 or less. These values do not consider concentrated weight loads or aggressive reagents.

Installation



PVC PIPE SUPPORT SPACING (ft.)

PIPE SIZE (in.)	SCHEDULE 40					SCHEDULE 80					SCHEDULE 120				
	60°F	80°F	100°F	120°F	140°F	60°F	80°F	100°F	120°F	140°F	60°F	80°F	100°F	120°F	140°F
1/4	4	3-1/2	3-1/2	2	2	4	4	3-1/2	2-1/2	2	---	---	---	---	---
3/8	4	4	3-1/2	2-1/2	2	4-1/2	4-1/2	4	2-1/2	2-1/2	---	---	---	---	---
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5	5	4-1/2	3	2-1/2
3/4	5	1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5	4-1/2	3	3
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	5-1/2	5	3-1/2	3
1-1/4	5-1/2	5-1/2	5	3	3	6	6	5-1/2	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	6-1/2	6-1/2	6	4	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7-1/2	7	6-1/2	4	3-1/2
2-1/2	7	6-1/2	6	4	3-1/2	7-1/2	7-1/2	6-1/2	4-1/2	4	8	7-1/2	7	7-1/2	4
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8-1/2	8	7-1/2	5	4-1/2
3-1/2	7-1/2	7	6-1/2	4	4	8-1/2	8	7-1/2	5	4-1/2	9	8-1/2	7-1/2	5	4-1/2
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9-1/2	9	8-1/2	5-1/2	5
5	8	7-1/2	7	4-1/2	4	9-1/2	9	8	5-1/2	5	10-1/2	10	9	6	5-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	11-1/2	10-1/2	9-1/2	6-1/2	6
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	---	---	---	---	---
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	---	---	---	---	---
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	---	---	---	---	---
14	12	11	10	7	6	13-1/2	13	11	8	7	---	---	---	---	---
16	12-1/2	11-1/2	10-1/2	7-1/2	6-1/2	14	13-1/2	11-1/2	8-1/2	7-1/2	---	---	---	---	---
18	13	12	11	8	7	14-1/2	14	12	11	9	---	---	---	---	---
20	14	12-1/2	11-1/2	10	8-1/2	15-1/2	14-1/2	12-1/2	9-1/2		---	---	---	---	---
24	15	13	12-1/2	11	9-1/2	17	15	14	12-1/2	10-1/2	---	---	---	---	---
SDR 41						SDR 26									
18	13	12	11	8	7	14-1/2	14	12	9	8	---	---	---	---	---
20	13-1/2	12-1/2	11-1/2	8-1/2	7-1/2	15	14-1/2	12-1/2	9-1/2	8-1/2	---	---	---	---	---
24	14	13	12	9	8	15-1/2	15	13	10	9	---	---	---	---	---

■ **NOTE** Although support spacing is shown at 140°F for PVC, consideration should be given to the use of CPVC or continuous support above 120°F. The possibility of temperature overrides beyond regular working temperatures and cost may make either of the alternatives more desirable. This chart based on continuous spans and for un-insulated line carrying fluids of specific gravity up to 1.00.



Installation

CPVC PIPE SUPPORT SPACING (ft.)

PIPE SIZE (in.)	SCHEDULE 40						SCHEDULE 80					
	73°F	100°F	120°F	140°F	160°F	180°F	73°F	100°F	120°F	140°F	160°F	180°F
1/2	5	4-1/2	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5-1/2	5	4-1/2	3	2-1/2	6	6	5-1/2	5	3 1/2	3
1-1/4	5-1/2	5-1/2	5-1/2	5	3	3	6-1/2	6	6	5-1/2	3 1/2	3
1-1/2	6	6	5-1/2	5	3-1/2	3	7	6-1/2	6	5-1/2	3 1/2	3-1/2
2	6	6	5-1/2	5	3-1/2	3	7	7	6-1/2	6	4	3-1/2
2-1/2	7	7	6-1/2	6	4	3-1/2	8	7-1/2	7-1/2	6-1/2	4 1/2	4
3	7	7	7	6	4	3-1/2	8	8	7-1/2	7	4 1/2	4
3-1/2	7-1/2	7-1/2	7	6-1/2	4	4	8-1/2	8-1/2	8	7-1/2	5	4-1/2
4	7-1/2	7-1/2	7	6-1/2	4-1/2	4	8-1/2	9	8-1/2	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	7	5	4-1/2	10	9-1/2	9	8	5 1/2	5
8	9-1/2	9	8-1/2	7-1/2	5-1/2	5	11	10-1/2	10	9	6	5-1/2
10	10-1/2	10	9-1/2	8	6	5-1/2	11-1/2	11	10-1/2	9-1/2	6 1/2	6
12	11-1/2	10-1/2	10	8-1/2	6-1/2	6	12-1/2	12	11-1/2	10-1/2	7 1/2	6-1/2
14	12	11	10	9	8	6	15	13-1/2	12-1/2	11	9 1/2	8
16	13	12	11	9-1/2	8-1/2	7	16	15	13-1/2	12	10	8-1/2

NOTE This chart based on continuous spans and for un-insulated line carrying fluids of specific gravity up to 1.00.

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 40					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	3.5	3.5	2.0	2.0
3/8	4.5	4.0	4.0	3.5	2.5	2.0
1/2	5.0	4.5	4.5	4.0	2.5	2.5
3/4	5.5	5.0	4.5	4.0	2.5	2.5
1	6.0	5.5	5.0	4.5	3.0	2.5
1 1/4	6.0	5.5	5.5	5.0	3.0	3.0
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0
2	6.5	6.0	5.5	5.0	3.5	3.0
2 1/2	7.5	7.0	6.5	6.0	4.0	3.5
3	8.0	7.0	7.0	6.0	4.0	3.5
4	8.5	7.5	7.0	6.5	4.5	4.0
6	9.5	8.5	8.0	7.5	5.0	4.5
8	10.0	9.0	8.5	8.0	5.0	4.5
10	11.0	10.0	9.0	8.5	5.5	5.0
12	12.0	11.5	10.5	9.5	6.5	5.5
14	13.0	12.0	11.0	10.0	7.0	5.0
16	14.0	13.0	12.0	11.0	8.0	6.0

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 80					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	4.0	3.5	2.5	2.0
3/8	5.0	4.5	4.0	4.0	2.5	2.5
1/2	5.5	5.0	4.5	4.5	3.0	2.5
3/4	6.0	5.5	5.0	4.5	3.0	2.5
1	6.5	6.0	5.5	5.0	3.5	3.0
1 1/4	7.0	6.0	6.0	5.5	3.5	3.0
1 1/2	7.0	6.5	6.0	5.5	3.5	3.5
2	7.5	7.0	6.5	6.0	4.0	3.5
2 1/2	8.5	7.5	7.5	6.5	4.5	4.0
3	9.0	8.0	7.5	7.0	4.5	4.0
4	10.0	9.0	8.5	7.5	5.0	4.5
6	11.0	10.0	9.5	9.0	6.0	5.0
8	12.5	11.0	10.5	9.5	6.5	5.5
10	13.5	12.0	11.5	10.0	7.0	6.0
12	14.5	13.0	12.0	10.5	7.5	6.5



PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR 13.5					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	4.0	3.5	C	C
3/4	5.0	4.5	4.0	3.5	C	C
1	5.5	5.0	4.5	4.0	2.5	C
1 1/4	5.5	5.0	5.0	4.5	2.5	2.5
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0
2	7.0	6.5	6.0	5.5	3.5	3.0
2 1/2	8.0	7.0	7.0	6.0	4.0	3.5
3	8.5	7.5	7.0	6.5	4.0	3.5
4	9.5	8.5	8.0	7.0	5.0	4.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-21					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	2.5	2.0	2.0	C	C	C
1	3.0	2.5	2.5	2.0	C	C
1 1/4	3.5	3.0	3.0	2.5	C	C
1 1/2	4.0	3.5	3.0	2.5	2.0	C
2	4.0	3.5	3.0	3.0	2.0	2.0
2 1/2	4.5	4.0	4.0	3.5	2.0	2.0
3	5.0	4.0	3.5	3.5	2.5	2.0
4	8.0	7.0	6.5	6.0	4.0	3.5
5	7.0	6.5	4.0	4.0	2.0	1.5
6	6.0	5.5	5.0	5.0	3.0	2.5
8	6.5	6.0	5.5	5.0	3.5	3.0
10	7.0	6.5	6.0	5.5	3.5	3.0
12	7.5	7.0	6.5	5.5	4.0	3.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

PIPE SIZE (in.)	SDR-26					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1	3.0	2.5	2.5	2.5	C	C
1 1/4	3.0	2.5	2.5	2.5	C	C
1 1/2	3.0	3.0	2.5	2.5	C	C
2	3.0	3.0	2.5	2.5	C	C
2 1/2	3.5	3.5	3.0	2.5	2.0	C
3	5.0	4.0	4.0	3.5	2.5	2.0
4	6.0	5.5	4.5	4.0	3.0	2.0
5	6.0	5.5	5.0	4.5	3.0	2.5
6	6.5	6.0	5.5	5.0	3.5	3.0
8	7.0	6.0	6.0	5.5	3.5	3.0
10	7.5	7.0	6.0	6.0	4.0	3.5
12	8.5	8.0	7.5	6.5	4.5	4.0
14	9.0	8.5	7.5	7.0	5.0	2.5
16	10.0	9.0	8.5	7.5	5.5	4.0
18	11.0	9.5	9.0	8.0	6.0	4.5
20	12.0	10.0	9.5	8.5	6.5	5.0
24	13.0	11.0	10.0	9.0	7.0	5.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-41					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
4	3.5	3.0	2.5	2.5	C	C
6	4.0	3.5	3.0	3.0	2.0	C
8	4.0	3.5	3.5	3.0	2.0	C
10	4.5	4.0	3.5	3.5	2.5	2.0
12	5.0	5.0	4.5	4.0	2.5	2.5
14	5.5	5.0	4.5	4.0	3.0	2.0
16	6.0	5.0	5.0	4.5	3.0	2.5
18	6.5	6.0	5.5	5.0	3.5	2.5
20	7.5	6.0	6.0	5.0	4.0	3.0
24	8.0	6.5	6.5	5.5	4.0	3.0



Installation

CPVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 40						
	60°F (16°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)	160°F (71°C)	180°F (82°C)	200°F (93°C)
1/4	4.5	4.0	3.5	3.5	2.0	2.0	C
3/8	4.5	4.0	4.0	3.5	2.5	2.0	C
1/2	5.0	4.5	4.5	4.0	2.5	2.5	C
3/4	5.5	5.0	4.5	4.0	2.5	2.5	C
1	6.0	5.5	5.0	4.5	3.0	2.5	C
1 1/4	6.0	5.5	5.5	5.0	3.0	3.0	1.5
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0	1.5
2	6.5	6.0	5.5	5.0	3.5	3.0	1.5
2 1/2	7.5	7.0	6.5	6.0	4.0	3.5	1.5
3	8.0	7.0	7.0	6.0	4.0	3.5	2.0
4	8.5	7.5	7.0	6.5	4.5	4.0	2.0
5	9.5	8.5	8.0	7.5	5.0	4.5	2.0
6	9.5	8.5	8.0	7.5	5.0	4.5	2.0
8	10.0	9.0	8.5	8.0	5.0	4.5	2.0
10	10.5	9.5	9.0	8.5	5.5	5.0	2.0
12	11.0	10.0	9.5	9.0	6.0	5.5	2.5

CPVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 80						
	60°F (16°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)	160°F (71°C)	180°F (82°C)	200°F (93°C)
1/4	4.5	4.0	4.0	3.5	2.5	2.0	C
3/8	5.0	4.5	4.5	4.0	2.5	2.5	C
1/2	5.5	5.0	4.5	4.5	3.0	2.5	C
3/4	5.5	5.5	5.0	4.5	3.0	2.5	C
1	6.0	6.0	5.5	5.0	3.5	3.0	1.5
1 1/4	6.5	6.0	6.0	5.5	3.5	3.0	1.5
1 1/2	7.0	6.5	6.0	5.5	3.5	3.5	2.0
2	7.0	7.0	6.5	6.0	4.0	3.5	2.0
2 1/2	8.0	7.5	7.5	6.5	4.5	4.0	2.5
3	8.0	8.0	7.5	7.0	4.5	4.0	2.5
4	8.5	9.0	8.5	7.5	5.0	4.5	2.5
5	10.0	9.5	9.0	8.0	5.5	5.0	3.0
6	10.0	9.5	9.0	8.0	5.5	5.0	3.0
8	11.0	10.5	10.0	9.0	6.0	5.5	3.5
10	11.5	11.0	10.5	9.5	6.5	6.0	4.0
12	12.5	12.0	11.5	10.5	7.5	6.5	4.5



Spears® PVC clear Schedule 40 or Schedule 80 piping provides optimum clarity for critical visual monitoring of processes fluids. Joined using standard solvent cement welding with clear cement, clear systems provide the many benefits of regular PVC, such as excellent corrosion resistance, smooth interior walls, non-contaminating, non-conductive, light weight, good pressure handling capacity, superior impact strength and does not support bacterial growth.

A supplemental line of 1/4" through 12" Spears® PVC clear fittings are available. Socket-style fittings are manufactured in strict dimensional compliance with ASTM D 2466 to Schedule 40 requirements. Spears® Special Reinforced Plastic Thread (SR) female threaded transition fittings, incorporating a stainless steel retaining ring, reduce problems associated with over tightening and provide a strong, leak-tight seal for plastic-to-metal transitions. Specialty transition fittings are manufactured to Schedule 80 dimensions per the applicable requirements of ASTM D 2467. See Spears® Schedule 40 or Schedule 80 fitting weight and dimension publications for available sizes and configurations. Spears® PVC clear can be easily installed with systems of regular PVC pipe, fittings and valves. In addition, an endless selection of fully compatible PVC components and accessories are readily available.

Material

Spears® PVC clear piping is produced from a rigid, lead-free virgin Polyvinyl Chloride (PVC) compound with superior impact resistance and a maximum service temperature of 140°F when appropriate temperature/pressure de-rating factors are applied. Spears® PVC clear materials are certified by the NSF International for use with potable water under ANSI/NSF® Standard 61 and acceptable for food contact under the provisions of Title 21 of the United States FDA Code of Federal Regulations. Spears® PVC clear piping also exhibits excellent flammability characteristics and will not sustain combustion when flame source is removed.

Spears® PVC clear provides the excellent chemical resistance properties of PVC piping. It is resistant to most acids, bases, salts and oxidants. PVC chemical resistance data should be referenced for proper application. Although this material maintains its physical properties when exposed to many substances, exposure to certain chemicals can affect the clarity of the product over time. Certain nitrogen containing organics, bleaches, oxidative agents and acids may result in discoloration. Testing under actual use conditions is recommended. Exposure to sunlight (Ultra Violet Radiation) will also affect clarity. Clear products do not contain UV stabilizers and are not recommended for outdoor use unless adequate protection is applied.

Clear PVC Pipe Physical Properties

GENERAL	Value	Test Method
Cell Classification	12454	ASTM D 1784
Maximum Service Temp.	140°F	
Color	Transparent	
Specific Gravity, (g/cu.cm @ 73°F)	1.33	ASTM D 792
Hardness, Shore D	84	ASTM D 2240
Hazen-Williams Factor	C = 150	
MECHANICAL		
Tensile Strength, psi @ 73°F	7,260	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	392,000	ASTM D 638
Flexural Strength, psi @ 75°F	12,000	ASTM D 790
Flexural Modulus, psi @ 75°F	389,000	ASTM D 790
Compressive Strength, psi @ 75°F	8,300	ASTM D 695
Compressive Modulus, psi @ 75°F	307,000	ASTM D 695
Notched Izod Impact - .125" Injection Molded	23 ft-lbs./in.	ASTM D 256
Notched Izod Impact - .125" With Flow-Comp. Molded	8.0 ft-lbs./in.	ASTM D 256
Notched Izod Impact - .125" Cross Flow-Comp. Molded	2.0 ft-lbs./in	ASTM D 256
THERMAL		
Coefficient of Linear Expansion (in/in/°F)	4.1 x 10 ⁻⁵	ASTM D 696
Heat Distortion Temp., 264 psi, .125 in. Bars	154°F	ASTM D 648
Glass Transition Temp.	176°F	
FIRE PERFORMANCE		
Flammability Rating	V-0	UL-94



Special Pipe – Spears® PVC Clear

Schedule 40 Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P. PSI
1/4	0.540	0.344	0.088	0.086	390
3/8	0.675	0.473	0.091	0.115	310
1/2	0.840	0.602	0.109	0.170	300
3/4	1.050	0.804	0.113	0.226	240
1	1.315	1.029	0.133	0.333	220
1-1/4	1.660	1.360	0.140	0.450	180
1-1/2	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2	4.000	3.521	0.226	1.789	120
4	4.500	3.998	0.237	2.118	110
6	6.625	6.031	0.280	3.73	90
6-1/2	6.625	6.335	0.110	1.64	45
8	8.625	7.942	0.322	5.619	80
10	10.750	9.976	0.365	7.532	70

Schedule 80 Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P. PSI
1/4	0.540	0.282	0.119	0.105	570
3/8	0.675	0.403	0.126	0.146	460
1/2	0.840	0.526	0.147	0.213	420
3/4	1.050	0.722	0.154	0.289	340
1	1.315	0.936	0.179	0.424	320
1-1/4	1.660	1.255	0.191	0.586	260
1-1/2	1.900	1.476	0.200	0.711	240
2	2.375	1.913	0.218	0.984	200
3	3.500	2.864	0.300	2.010	190
4	4.500	3.786	0.337	2.938	160
6	6.625	5.709	0.432	5.610	140

De-Rating Factor

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

EX: 4" PVC SCHEDULE 40
CLEAR @ 120°F = ?
110 psi x 0.40 = 44 psi max.
@ 120°F

Critical Collapse Pressure PSI @ 73°F

Pipe Size (in.)	SCH 40	SCH 80
1/4	7,504	22,172
3/8	3,714	11,869
1/2	3,255	9,370
3/4	1,722	4,985
1	1,399	3,841
1-1/4	767	2,158
1-1/2	554	1,599
2	327	1,014
2-1/2	431	1,176
3	279	809
3-1/2	211	632
4	169	521
6	84	333
8	57	-
10	43	-

THE MAXIMUM SERVICE TEMPERATURE FOR PVC CLEAR IS 140°F.

Threading of Schedule 40 PVC Clear pipe is not a recommended practice due to insufficient wall thickness.

Joining Methods

Spears® PVC Clear pipe is easily joined by standard solvent cementing process, threaded connections and flanges. To maintain system clarity, Spears® recommends the use of a clear, medium-bodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. See Installation section for industrial pressure pipe for guidelines.

Thermal Expansion and Contraction

Standard calculations for thermal expansion and contraction may be applied to Spears® PVC clear. The coefficient of linear expansion for Spears® Clear pipe is 4.1×10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$$\Delta L = 12 yL (\Delta T)$$

Where:

ΔL = expansion or contraction in inches

$y = 4.1 \times 10^{-5}$ (coefficient of linear expansion)

L = length of piping run in feet

T = temperature change °F ($T_{\text{max.}} - T_{\text{@ installation}}$)

Hangers and Supports

Spears® PVC clear piping should be mounted and supported in the same manner as PVC industrial piping. Support location and spacing are based on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, and any other heavy system components). As with regular PVC piping, hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the piping during use. They must also not restrict linear movement of the system due to the effects of expansion and contraction; over tightening must be avoided. See Hangers and Supports section for industrial pressure pipe for additional information.

Special Pipe – Clear Ultra Violet Resistant (UVR) PVC



UV Resistant Clear Pipe Dimensions & Pressure Ratings

Thin Walled UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
2	2.375	2.173	0.091	0.456	80
3	3.500	3.210	0.135	0.966	80
4	4.500	4.134	0.172	1.569	80
6	6.625	6.251	0.172	2.391	70
8	8.625	8.251	0.172	3.134	53
10	10.750	10.376	0.172	3.923	43
12	12.750	12.376	0.172	4.666	36

De-rating Factors @ Elevated Temperature	
Operating Temp °F	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Schedule 40 UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
1/2	0.840	0.602	0.109	0.170	300
3/4	1.050	0.804	0.113	0.226	240
1	1.315	1.029	0.133	0.333	220
1-1/4	1.660	1.360	0.140	0.450	180
1-1/2	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2	4.000	3.521	0.226	1.789	120
4	4.500	3.998	0.237	2.118	110
6	6.625	6.031	0.280	3.733	90

Maximum Service Temperature = 140°F

The temperature de-rating factors shown in table at left can be multiplied by the pressure ratings listed for each pipe size to determine the maximum pressure rating of the pipe at the specified elevated Operating temperatures.

*Pressure Rating @ 73 °F

Developed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe

Produced in both Thin Walled UVR pipe down to 0.135" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Commercial use has found that UV blocking PVC provides excellent Photosynthetically Available Radiation (PAR) for algae growth. Using specialty clear PVC piping is beneficial in construction of photobioreactors since clarity is critical in allowing as optimum light into the process to allow the algae to grow and feed. The Thin Walled version of Spears® Clear Ultraviolet Resistant (UVR) PVC pipe has been found to optimize light transmission while maintaining the necessary rigidity for durable construction. The advantages of Clear UVR PVC include corrosion resistance, durability, non-conductivity, light weight construction and can be easily joined using Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Material

Spears® Clear UV Resistant (UVR) PVC piping material has been specially developed for optimum UV resistance. Independent testing has shown high stability of clarity and color in Spears® Clear UVR piping material from actual one year weather exposure tests in Arizona, Florida, and Ohio.

Spears® Clear UVR chemical resistance is similar to conventional clear PVC, and is generally resistant to most acids, bases, salts, and oxidants. However, exposure to chemicals may result in discoloration over time, especially certain bleaches, oxidizing agents, and nitrogen containing organics. As a result, in service testing under actual conditions is recommended.

THE MAXIMUM SERVICE TEMPERATURE FOR PVC UVR CLEAR IS 140°F

SPEARS® CLEAR UVR PIPE MUST BE PROTECTED FROM FREEZING



Special Pipe – Clear Ultra Violet Resistant (UVR) PVC

PVC Physical Properties

GENERAL	Value	Test Method
Specific Gravity, (g/cu.cm @ 73°F)	1.38	ASTM D792
Cell Classification	11553	ASTM D1784
Maximum Service Temperature	140°F	
Color	Transparent / slight blue tint	
Hardness, Shore D	85	ASTM D2240
Hazen-Williams Factor	C=150	
MECHANICAL		
Tensile Modulus of Elasticity, psi @ 73°F	416,000	ASTM D638
Tensile Strength, psi @ 73°F	8,250	ASTM D638
Flexural Modulus, psi @ 75°F	423,000	ASTM D790
Flexural Strength, psi @ 75°F	13,600	ASTM D790
Izod Impact notched – injection molded, 125 in. bars, 73°F	3.9 ft-lbs./in.	ASTM D256
THERMAL		
Coefficient of Linear Expansion (in/in/°F)	3.9 x 10-5	ASTM D696
Deflection Temperature Under Load, Annealed, 264 psi, 125 in. Bars	142°F	ASTM D648
FLAMMABILITY		
Flame Rating	V-0	UL-94

Joining Methods

Spears® PVC Clear pipe is easily joined by standard solvent cementing process, threaded connections and flanges. To maintain system clarity, Spears® recommends the use of a clear, medium-bodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. See Installation section for industrial pressure pipe for guidelines. Threading of Thin Walled or Schedule 40 Clear UVR PVC pipe is not a recommended practice due to insufficient wall thickness.

Thermal Expansion and Contraction

Standard calculations for thermal expansion and contraction may be applied to Spears® Clear UVR PVC. The coefficient of linear expansion for Spears® Clear UVR pipe is 3.9 x 10-5 in./in./°F. The rate of expansion or contraction can be calculated as follows:

$$\Delta L = 12 yL (\Delta T)$$

Where:

ΔL = expansion or contraction in inches

$y = 4.1 \times 10^{-5}$ (coefficient of linear expansion)

L = length of piping run in feet

T = temperature change °F ($T_{\text{max.}} - T_{\text{@ installation}}$)

Hangers and Supports

Spears® Clear UVR PVC piping should be mounted and supported in the same manner as PVC industrial piping. However heat deformation and mechanical loads need additional consideration with Clear UVR piping and should not be deflected more than 3% of the outside diameter. Thin Walled pipe must be supported properly to avoid buckling and provide circumferential support to maintain roundness. Support location and spacing are based on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the piping during use. They must also not restrict linear movement of the system due to the effects of expansion and contraction; over tightening must be avoided.

Thin Walled UVR Support Spacing

Pipe Size (inches)	Maximum Support Spacing in Feet				
	60°F	80°F	100°F	120°F	140°F
2	4-1/2	4-1/2	4	3-1/2	3
3	5-1/2	5-1/2	5	4-1/2	3-1/2
4	6-1/2	6	5-1/2	5	4
6	6-1/2	6	5-1/2	5	4
8	6	5-1/2	5	4-1/2	4
10	5-1/2	5-1/2	5	4-1/2	3-1/2
12	5	5	4-1/2	4	3-1/2

Schedule 40 UVR Support Spacing

Pipe Size (inches)	Maximum Support Spacing in Feet				
	60°F	80°F	100°F	120°F	140°F
1/2	4 1/2	4 1/2	4	2 1/2	2 1/2
3/4	4 1/2	4 1/2	4	2 1/2	2 1/2
1	5 1/2	5	4 1/2	3	2 1/2
1-1/4	5 1/2	5 1/2	5	3	3
1-1/2	6	5 1/2	5	3 1/2	3
2	6	5 1/2	5	3 1/2	3
2-1/2	7	6 1/2	6	4	3 1/2
3	7	7	6	4	3 1/2
3-1/2	7 1/2	7	6 1/2	4	4
4	7 1/2	7	6 1/2	4 1/2	4
6	8 1/2	8	7 1/2	5	4 1/2



Developed for Ultra-pure Water

Spears® Low Extractable piping is produced from a non-contaminating PVC material specially developed for ultra-pure water (UPW) systems in semiconductor, electronics, university research laboratories, hospital dialysis, industrial laboratories, Federal and state police forensic laboratories and biotechnology applications. Spears® Low Extractable PVC material has been subjected to independent laboratory leach studies during both static and dynamic exposure to 18.2 meg-ohm deionized water. Tests have shown relatively low TOC, Anion/Cation and trace metal contamination levels in comparison to conventional high purity piping system materials including PVDF and Natural Polypropylenes

Spears® Low Extractable Piping Systems offer unique advantages for many ultra-pure water applications:

- Complete line of pipe, fittings and valves IPS Sizes 1/2" – 6" diameters
- Strong Schedule 80 dimensions for pressure service
- Advanced Spears® Low Extractable material significantly reduces leachable contamination compared to conventional PVC and other piping materials.
- Exceptionally smooth interior walls minimize particle generation and reduce potential for bacterial growth.
- Fast, reliable installation with simple, inexpensive joining methods
- Proprietary one-step fast-setting joining method reduces TOC contamination and rinses up quickly
- Unique blue translucency enables visual inspection of joint integrity
- Good chemical/corrosion resistance, high-impact strength, low thermal conductivity
- Bagged, sealed and boxed on-line for use in high-purity environments
- High Quality
- Low Maintenance
- Cost Effective

Material

Spears® Low Extractable piping is produced from an innovative PVC compound that has been specifically formulated to reduce leachable contamination when exposed to ultra-pure water environments. Minor ingredients necessary for processing have been scrupulously selected to address their potential for contamination, and are then carefully blended in precise ratios. This results in a much cleaner material than conventional PVC compounds, and compares favorably to alternate materials typically used for UPW piping applications. This has been validated with extensive static and dynamic leach studies during exposure to 18.2 megohm ultra-pure water conducted by a reputable third party.

Spears® Low Extractable material meets the toxicological requirements of NSF International Standard 61 as being safe for use in potable water applications, and also complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations as being safe for use in food contact applications.

Physical Properties

Although the extractable contaminants of Spears® Low Extractable are much lower than common PVC piping, Spears® Low Extractable has physical properties very similar to those of conventional PVC piping. As a result, Spears® Low Extractable products exhibit the well-known physical characteristics and other benefits of conventional PVC piping, such as good chemical and corrosion resistance, low thermal conductivity, high strength-to-weight ratio, good impact resistance, and ease of installation.

Physical Properties	Value	Test Method
Cell Classification	12343	ASTM D 1784
Specific Gravity	1.327	ASTM D 792
	(g/cu.Cm @ 73°F)	
Tensile Strength, @ yield	6720 psi	ASTM D 638
Tensile Modulus of Elasticity	384,200 psi	ASTM D 638
Flexural Strength, @ yield	11,440 psi	ASTM D 790
Flexural Modulus of Elasticity	378,000 psi	ASTM D 790
Izod Impact (avg 2 complete breaks) (avg 3 partial & 2 complete breaks)	1.3 ft-lbs /inch 10.9 ft-lbs /inch	ASTM D 256
Coefficient of Linear Expansion	3.89×10^{-5} in/in°F	ASTM D 696
Compressive Strength	8732 psi	ASTM D 695
Heat Distortion Temperature	152°F	ASTM D 648
Hardness, Shore D	82.2 ± 3	ASTM D 2240
Maximum Temperature Use	140°F	



Special Pipe – Spears® Low Extractable PVC

Design and Dimensions

Spears® Low Extractable piping is produced to Schedule 80 dimensions in strict accordance with ASTM D 1785, and exhibits a Type II pressure rating. Spears® Low Extractable fittings are produced to Schedule 80 dimensions per ASTM D 2467. Joining of product produced to the dimensional requirements of these standards ensures that strong connections with good pressure-bearing capability can be made up quickly and consistently using common, inexpensive tools. See Spears® Low Extractable fitting weight & dimension and price list publication for fitting information and selection.

SCHEDULE 80

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P.
1/2	0.840	0.526	0.147	0.213	420
3/4	1.050	0.722	0.154	0.289	340
1	1.315	0.936	0.179	0.424	320
1-1/4	1.660	1.255	0.191	0.586	260
1-1/2	1.900	1.476	0.200	0.711	240
2	2.375	1.913	0.218	0.984	200
3	3.500	2.864	0.300	2.010	190
4	4.500	3.786	0.337	2.938	160
6	6.625	5.709	0.432	5.610	140

The pressure ratings given are for water, non-shock, @ 73°F. The following temperature de-rating factors are to be applied to the working pressure ratings (WP) listed when operating at elevated temperatures.

Multiply the working pressure rating of the selected pipe at 73°F, by the appropriate de-rating factor to determine the maximum working pressure rating of the pipe at the elevated temperature chosen.

De-Rating Factors

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Processing & Packaging

Correct processing techniques ensure proper dispersion and fusion of the compound, resulting in uniform properties of this special materials. Optimizing processing conditions and providing smooth internal surfaces greatly reduce the potential for extractable and particle contaminants.

Spears® Low Extractable pipe and fittings are specially handled to minimize contamination, sealed in anti-static polybags and boxed on-line at time of manufacture.

Solvent Cement Joining

The Spears® Low Extractable system is primarily joined with standard solvent cementing using a special one-step solvent-cement specifically formulated for use with this product in UPW application. When properly used, this system results in very short cure times prior to pressure testing, and produces a solvent-cemented assembly with an exceptionally low percentage of chemical additives, reducing the potential for system contamination. The use of solvent cements and/or primers other than Low Extractable One-Step is not acceptable. Installers must become familiar with solvent cementing procedures prior to assembly. See Installation section for basic guidelines to solvent cement welding. All solvent cemented connections must be allowed to set and cure properly prior to pressure testing or rinsing.

Low Extractable UPW Solvent Cement Set and Cure Times

Set and cure times are a function of pipe size, temperature, pressure, humidity and tightness of fit. The initial set time is the recommended waiting period prior to handling a newly assembled joint. After the initial set time, the joints will withstand the stresses of normal installation. The cure time is the recommended waiting period prior to pressurizing newly assembled joints. Minimum cure time prior to pressure testing is dependent on pipe size, temperature, humidity, tightness of fit and test pressure required. Longer cure times must be allowed when working at higher humidity and colder temperatures. Refer to the following tables for minimum set and cure times.

Initial Set Time

Temp	Pipe Size 1/2" – 1-1/4"	Pipe Size 1-1/2" – 2"	Pipe Size 3" – 6"
60° - 100°F	2 min	3 min	30 min
40° - 60°F	5 min	8 min	2 hrs
0° - 40°F	10 min	15 min	12 hrs

Joint Cure Schedule

Relative Humidity 60% or less*	Pipe Size 1/2" – 1-1/4"		Pipe Size 1-1/2" – 2"		Pipe Size 3" – 6"
Temp Range during assembly and cure periods	up to 160 psi	160 to 370 psi	up to 160 psi	160 to 315 psi	up to 160 psi
60° - 100°F	15 min	6 hrs	25 min	12 hrs	1-1/2 hrs
40° - 60°F	20 min	12 hrs	30 min	24 hrs	4 hrs
0° - 40°F	30 min	48 hrs	45 min	96 hrs	72 hrs

If damp or humid weather allow 50 percent longer cure times.

Additional Joining Methods

Additional joining devices include flanges, unions, and threaded adapters produced from this special material. See Installation section for basic guidelines to flange and threaded joint make up. UPW applications typically require use of PTFE envelope gaskets for flanges and TFE tap sealant on threaded joints.



Hangers and Supports

As with standard PVC piping, support location and spacing is dependent on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use, must not restrict linear movement due to thermal expansion and contraction. See Installation section specified spacing and guideline applicable to Schedule 80 PVC pipe.

Thermal Expansion and Contraction

As with all thermoplastic piping materials, consideration must be given during the design of the system to the effects of thermal expansion and contraction. The coefficient of linear expansion for Spears® Low Extractable pipe is 3.89×10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$$\Delta L = 12 \text{ yL (T)}$$

Where:

ΔL = amount of expansion or contraction in inches $y = 3.89 \times 10^{-5}$

L = length of piping run in feet

ΔT = temperature change °F

(T max. - T @ time of installation or lowest system temperature or maximum system temperature, whichever is greater.)

Additional Considerations

Proper system engineering, design, construction practices and operation are the responsibility of the design authority. Consideration must be given to ensure the Spears® Low Extractable system is not exposed to any conditions that will exceed the product limitations regarding temperature, pressure, chemical compatibility, and mechanical strength.

Spears® does not recommend the use of this product for the distribution of compressed air or gases.

Excessive surge pressure must be avoided. The system must be designed to ensure that surge potentials generated by pump operation, entrapped air, flow velocity, and valve closure are kept to a minimum. Spears® does not recommend flow velocities in excess of five feet per second.

Spears® Low Extractable piping systems are not formulated for outdoor use. Prolonged exposure to ultraviolet radiation (UVR) will affect physical properties.

Spears® recommends that newly installed systems be allowed to cure for a minimum period of 24 hours prior to rinsing procedures to reduce the potential for TOC contamination. Rinsing procedures, chemical rinse and other cleanup/disinfection procedures to be used are at the discretion of the system design authority.

Spears® Low Extractable piping is compatible with hydrogen peroxide at concentrations up to 30% at 73°F. Contact Spears® for additional chemical compatibility information concerning the use of Spears® Low Extractable products.

Application Qualification Testing

Static Leach Analysis

Detailed extractable analysis is conducted on piping samples after seven-day static leach utilizing 18.2 megohm ultra-pure water at ambient temperature. Static leach of large pipe samples (120-square-inch wet surface area) is representative of a piping system “off-line” for an extended period of time. Under these conditions the effects of UPW can be extremely aggressive, severely affecting the amount of leachable contaminants present within the piping material.

Pipe Material

Element	DL (Detection Limit) ppb	Spears® Low Extractable	High Purity PVDF	High Purity PP	Brand X Clean PVC	Conv. PVC	CPVC
TO C	5	59	90	94	1176	*	50
Fluoride	2	*	77	*	*	*	*
Chloride	0.25	2.33	1.0	0.66	2.45	0.84	49.54
Aluminum	0.05	0.30	2.3	0.68	0.54	3.10	1.16
Barium	0.01	0.04	0.24	0.09	0.01	0.22	0.05
Calcium	3	7	*	12	206	2787	15
Magnesium	0.02	0.81	0.66	1.0	2.15	11.15	2.17
Sodium	0.06	0.83	0.51	0.18	0.49	1.23	23.22
Tin	0.02	0.93	*	*	0.15	0.51	1.19
Zinc	0.06	0.49	0.47	0.96	*	0.51	1.19

* = Below Detection Limit

- All samples pre-rinsed identically with UPW prior to test.
- Independent Laboratory Extractable Analysis (Balazs Analytical Laboratory)
- Seven-Day Static Leach @ ambient temperature
- 450mL 18.2 megohm ultra-pure water
- 120-square-inch wet surface contact area
- Based on 1" diameter pipe without solvent-cemented joint
- Concentration units expressed as ug/L of Leachate (ppb)



Special Pipe – Spears® Low Extractable PVC

Dynamic Leach Analysis

Spears® Low Extractable piping has been subjected to on-line dynamic flow analysis with 18.2 megohm UPW to evaluate particles, TOC, resistivity, anions, cations, and trace metals. This testing utilized solvent-cemented flange assemblies (spool piece) to see the effect that the cement had on TOC, resistivity and particle generation in a freshly assembled pipe section. Grab samples were also pulled periodically (at start-up, five minutes, 50 minutes and five hours) to analyze anions, cations and trace metals under flowing conditions. Spears® Low Extractable Flanges were assembled utilizing Low Extractable One-Step Cement and allowed to cure 24 hours prior to testing. Dynamic testing revealed that Spears® Low Extractable piping assemblies did not contribute significantly to particle generation or leachable contamination under flowing conditions throughout the test duration. Additional detailed information is available from Spears®.

Dynamic Test Description

Ambient temperature dynamic leach utilizing 18.2 megohm UPW flowing at 9.35 GPM (turbulent flow). 1" diameter pipe 30" long, solvent-cemented flanges each end (approximately 82-square-inch wet surface contact area). Approximately 1-1/2 grams of Low Extractable solvent cement used in assembly of components. Solvent-cemented assembly was allowed to cure 24 hours prior to start-up. Dynamic test was conducted for a period of five hours.

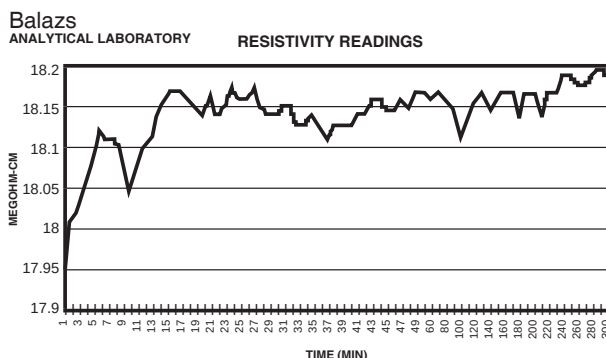
Leachable Contamination

Anions/Cations – IC grab sample analysis revealed low levels of sulfate (0.15 ppb) five minutes into the test, and low levels of ammonium at 50 minutes (0.05 ppb) and five hours (0.07 ppb) into the test. All other IC contaminants were below the limit of detection.

Trace Metals – Of the 68 trace metal contaminants evaluated, all were below the limit of detection with the exception of aluminum, detected at 0.012 ppb at the five-minute interval. This element remained below the limit of detection throughout the remainder of the leach.

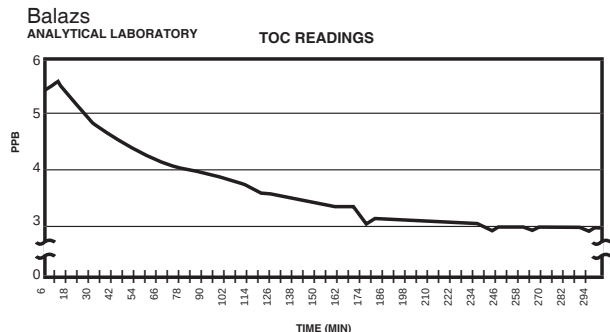
Resistivity

Resistivity measured 17.95 megohms at the start of the leach and rose quickly to 18.12 megohms during the first 6 minutes. Resistivity readings continued to rise until reaching the background level of 18.2 megohms after five hours of leaching.



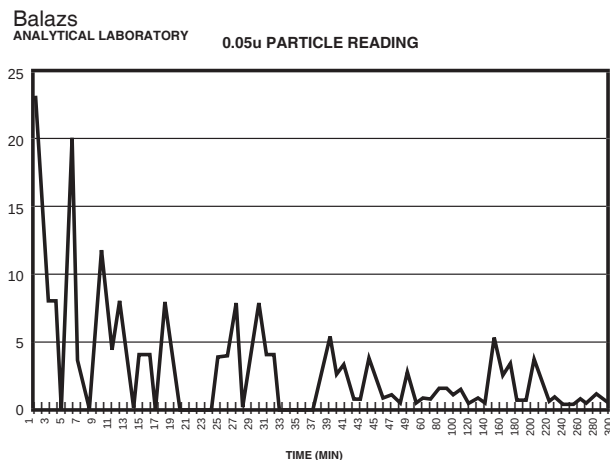
Total Oxidizable Carbon (TOC)

Dynamic testing revealed that after four hours of leaching, TOC readings reached and maintained the background levels throughout the test duration. This data confirmed the fast cure time of Low Extractable One-Step Cement. Conventional solvent cements and primers used for joining typically effect TOC contamination as a result of the leach.



Particles

Dynamic testing revealed that average particle counts decreased rapidly during the first six minutes of the leach. After 12 minutes of leaching the average smallest particles measured (0.05 micron size range) were representative of the background levels.



Surface Analysis

Spears® Low Extractable piping has a non-porous, exceptionally smooth interior surface that greatly reduces the potential for extractable and particle contamination while impeding bacterial growth. Spears® Low Extractable components (pipe and fittings) exhibit an average Roughness Analysis value of: $\leq .25 \mu\text{m}$ ($\leq 10 \mu\text{inch}$) and has been evaluated side-by-side with other common piping materials at various magnifications for surface roughness comparison.



Patented

Spears® **LabWaste™** CPVC Drainage System is a Complete system of pipe, fittings & solvent cement featuring excellent chemical resistance, fire performance properties, light weight and ease of installation. Designed and specifically tested for use in commercial, industrial, and institutional drainage system applications involving corrosive /acid wastes, this unique product developed by Spears® has been awarded a U.S. Patent, No. 7,178,557. Available in nominal 1-1/2" through 24" Iron Pipe Size (IPS) diameters..

IMPORTANT – The information in this section is introductory only. Please refer to Spears® publication, **LabWaste™ CPVC Technical Information & Installation Guide**, for additional details and technical information.

Laboratory Applications

Its broad range of resistance to chemical and corrosive wastes make Spears® **LabWaste™** CPVC systems very well suited for commercial, institutional and academic laboratory drainage installations. These applications are best characterized as the routine disposal of a wide variety of hot and cold chemicals in relatively small quantities accompanied by water for the purpose of dilution and flushing. Due to the interactions potentially encountered in multi-chemical laboratory drainage disposal, Spears® recommends routine flushing of the system with water during disposal as a part of prudent laboratory practices. A properly designed and installed **LabWaste™** CPVC system provides total dilution and disposal need for years of dependable service.

Industrial & Commercial Special Waste Applications

Spears® **LabWaste™** CPVC products can be used in a very broad variety of dedicated waste applications with proper evaluation of waste medium and service conditions. For non-laboratory applications, refer to CPVC pressure system resistance data in this manual for appropriate chemical resistance guidelines. DO NOT follow **LabWaste™** Chemical Resistance Table recommendations for laboratory use in Spears® technical information guide. Please contact Spears® Technical Services for additional information.

Listings & Approvals

Spears® **LabWaste™** CPVC Drainage System is manufactured in strict compliance to ASTM F 2618, is listed by IC-ES-PMG for conformance to both the Uniform Plumbing Code and the International Plumbing for chemical waste systems under PMG-1018, and is certified by NSF International both to IAPMO IGC 210 and for use in corrosive waste systems (NSF®-cw).

Fire Resistance

Material used in Spears® **LabWaste™** CPVC systems has a UL 94 flammability rating of V-0, 5VB. Pipe and fittings have been Listed and rated based on *finished product* tests, as opposed to a material test only, for surface burning characteristics of flame spread and smoke density developed by Underwriters Laboratories of Canada under standard test method CAN/ULC S102.2-M88. Additional test of **LabWaste™** pipe with dry fit caps was conducted by Southwest Research Institute (SwRI) Department of Fire Technology under UL 723/ ASTM E 84 (modified to test finished product). Pipe and fitting components ratings are below the 25 maximum flame spread and 50 maximum smoke density developed typically required for exposed air plenum installation. Check local codes for acceptability. Use of approved plenum wrap or transition connectors to other material may be used if required.

Pipe Dimensions

Spears® **LabWaste™** CPVC Drainage System products produced to ASTM F 2618 have the same dimensional specifications for pipe as for Schedule 40 CPVC through 24" nominal IPS diameters. See corresponding pipe dimensions section in this manual.

Fittings Configurations

Spears® a wide variety of **LabWaste™** CPVC drainage pattern fittings produced to ASTM F 2618. See Spears® publication, **LabWaste™ CPVC Technical Information & Installation Guide** for fitting details.

Joining Methods

Solvent Cement Welding

Spears® **LabWaste™** CPVC Drainage System piping is joined using a special one-step solvent cement specifically listed and approved for use in CPVC corrosive waste applications. Follow basic solvent cementing guideline under the Installation section using only **LabWaste™** CPVC one-step solvent cement.

Transitions & Other Connections

Standard threaded and flanged connections can be made using system components. A variety of special connectors are produced for transition to polypropylene, Duriron and glass systems waste piping systems.

Please refer to Spears® publication, **LabWaste™ CPVC Technical Information & Installation Guide**, for Physical Properties, Engineering Data, and **LabWaste™** Chemical Resistance Guide for laboratory applications. **DO NOT** use Chemical Resistance Guide for Pressure Piping contained in this manual.



Special Pipe – Spears® FlameGuard® CPVC Fire Sprinkler Piping Systems

Spears® **FlameGuard®** CPVC Fire Sprinkler Products are manufactured from high quality, Post-Chlorinated Poly Vinyl Chloride (CPVC), a specialty thermoplastic material tested and approved by certifying agencies for use in CPVC fire sprinkler systems. Spears® FlameGuard® CPVC Fire Sprinkler Products provide unique advantages over traditional metal fire sprinkler systems through superior hydraulics, ease of installation and handling.

IMPORTANT – The information in this section is introductory only. **Spears® publication FG-3, FlameGuard® CPVC Fire Sprinkler Products, must be used and followed.** National Fire Protection Association (NFPA) Standards 13, 13R, and 13D must be referenced for design and installation requirements in conjunction with the FG-3 manual and all local codes. Details of product listings, requirements and limitations are beyond the scope of this publication.

Listings & Approvals

Spears® FlameGuard® CPVC Fire Sprinkler Products are fully tested and approved for use in wet pipe fire sprinkler systems by Underwriters Laboratories Inc., FM Global, and the Loss Prevention Certification Board. Spears® FlameGuard® CPVC Fire Sprinkler Products are approved for use in low pressure dry pipe or pre-action systems by Underwriters Laboratories Inc. and for use in Light Hazard Occupancies (NFPA 13), and Residential Occupancies (NFPA 13R & 13D). The Listing also includes use in Return Air Plenums (NFPA 90A), use in Underground Service Mains (NFPA 24), and use in exposed systems with certain restrictions when installed in accordance with Spears® FG-3 installation instructions. Spears® FlameGuard® CPVC Fire Sprinkler Products are listed by NSF International for use in potable water systems.

Product Ratings

Spears® FlameGuard® CPVC fire sprinkler pipe is produced to SDR 13.5 dimensions in strict accordance with ASTM F 442 and Listed for a rated working pressure of 175 psi @150°

Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.
3/4	1.050	0.874	0.078	0.168
1	1.315	1.101	0.097	0.262
1-1/4	1.660	1.394	0.123	0.418
1-1/2	1.900	1.598	0.141	0.548
2	2.375	2.003	0.176	0.859
2-1/2	2.875	2.423	0.213	1.257
3	3.500	2.950	0.259	1.867

Joining Method

Spears® **FlameGuard®** CPVC piping is joined using a special one-step solvent cement specifically listed and approved for use in CPVC fire sprinkler systems. See Spears® FG-3 installation instructions for use, applicable set and cure times and additional information.



Hot & Cold Water Distribution Systems

Spears® **EverTUFF®** Copper Tube Size (CTS) CPVC is a complete hot and cold water plumbing system consisting of pipe, fittings and solvent cement for plumbing applications. Spears® **EverTUFF®** CTS CPVC pipe is easily joined using solvent cement welding, is light weight, thermally efficient and code approved to provide cost-effective long-term system service.

Product Standards

Spears® **EverTUFF®** CTS pipe and fittings are manufactured in strict compliance to ASTM D 2846, Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold-Water Distribution Systems. This standard defines requirements for materials, workmanship, dimensions, tolerances, pressure-bearing capability, and thermocycling resistance. Spears® **EverTUFF®** CTS SDR 11 plumbing pipe and fittings are manufactured to specifications in accordance with this standard. SDR series pipe is based on an outside-diameter-to-wall- thickness ratio. This is a constant regardless of pipe diameter, therefore all sizes of pipe carry the same pressure rating of 100 psi @ 180°F and is suitable for use with commercial hot water.

Performance Testing

Spears® **EverTUFF®** CTS CPVC pipe is tested and independently certified by NSF International to the requirements of ASTM D 2846 under NSF® Standard 14 and for use in potable (drinking) water service under NSF® Standard 61.

Code Approvals

Major building codes have approved the use of CPVC piping as an acceptable material for plumbing systems, provided that the piping conforms to applicable industry standards and has been listed by a third party for conformance to NSF® Standard 14 and/or NSF® Standard 61 requirements. Code bodies that accept the use of CPVC include BOCA National Plumbing Code, National Standard Plumbing Code, SBCCI Standard Plumbing Code, International Plumbing Code, and the Uniform Plumbing Code to name a few. The user should determine approval and installation requirements according to local code having jurisdiction prior to use.

Dimensions

CPVC CTS Series pipe shall be manufactured in strict accordance to the requirements of ASTM D 2846 to SDR 11 dimensions and tolerances. Each production run of pipe manufactured in compliance to this standard, shall also meet or exceed the test requirements for materials, workmanship, burst pressure, flattening resistance, and extrusion quality and dimensions as defined in ASTM D 2846. This pipe shall be produced in CTS diameters (1/2" through 2" sizes) to SDR 11 specifications.

Nominal Pipe Size (in.)	Average O.D.	O.D. TOL	Average I.D.	Min. Wall	Rating @ Wt./ft.	PSI Pressure Rating @	
						73°F	180°F
1/2	0.625	±.003	0.469	0.068	0.090	400	100
3/4	0.875	±.003	0.695	0.080	0.149	400	100
1	1.125	±.003	0.901	0.102	0.240	400	100
1-1/4	1.375	±.003	1.105	0.125	0.353	400	100
1-1/2	1.625	±.004	1.309	0.148	0.489	400	100
2	2.125	±.004	1.716	0.193	0.829	400	100

PIPE SIZES SHOWN ARE MANUFACTURED IN STRICT COMPLIANCE WITH ASTM D 2846 ASTM STANDARD D 1784 MATERIAL EQUIVALENTS:

Cell Classification 23447 = PVC Type IV Grade I CPVC = CPVC 4120

Pressure Ratings

The Spears® CPVC system, including the joint, has a continuous rated working pressure of 100 psi at 180°F or 400 psi at 73°F. CPVC systems have the capability to withstand short term temperature/pressure increases above 100 psi at 180°F, as evidenced by their ability to consistently surpass the 48-hour, 150-psi Uniform Building Code test at 210°F. CPVC pipe should not be used where temperatures will consistently exceed 180°F.

Pressure-Temperature De-Rating Factors For CTS CPVC 4120 SDR 11 Piping Systems

°F	Factor	Rating, PSI
73	1.00	400
80	1.00	400
90	0.91	360
100	0.82	325
120	0.65	260
140	0.50	200
160	0.40	160
180	0.25	100

The pressure de-rating factor is the same for all pipe sizes. Example: Determine the maximum allowable operating pressure for a CTS CPVC piping system with an operating temperature of 140°F. Using de-rating factor of 0.50 for 140° from the above chart, the maximum allowable operating pressure = 400 x 0.50 = 200 psi.



Special Pipe – Spears® CTS CPVC Piping Systems

Installation

Installation shall be in accordance with the requirements of the local code having jurisdiction, the solvent cement manufacturer recommendations, and Spears® publication CTS-3, CPVC CTS Products Design and Installation Manual.

Joining Methods

Spears® **EverTUFF®** CTS CPVC pipe is easily joined by standard solvent cementing process, threaded connections and flanges Solvent Cement Welding.

Solvent Cement Welding

This is the most common joining method used with CTS CPVC. See Installation section for industrial pressure pipe for basic solvent cementing guidelines.

CTS Solvent Cement Selection

Codes require use of solvent cement conforming ASTM F 493 and designated specifically for use with CTS CPVC products in accordance with ASTM D 2846. Spears® **EverTUFF®** CTS-5 CTS CPVC “One-step” (primerless) cements may be used without primer if codes permit, or may be used with a primer where required by code - always CHECK LOCAL CODES.

Set and Cure Times

Pipe and fitting joint assembly must be allowed to set without any stress on the joint for one to five minutes depending on the pipe size and temperature. Following the initial set period, the assembly can be handled carefully.

FOLLOW THE CEMENT MANUFACTURER’S RECOMMENDED CURE TIMES PRIOR TO PRESSURE TESTING – FAILURE TO DO SO WILL RESULT IN JOINT FAILURE.

Minimum Cure Time Prior to Testing at 150 psi with Cold Water (based on use of one-step CPVC cement or two-step cement systems)

Pipe Size (in.)	Ambient Temperature During Cure Time		
	>60°F	40°F - 60°F	<40°F
3/8	1 hr	2 hrs	4 hrs
1/2	1 hr	2 hrs	4 hrs
3/4	1 hr	2 hrs	4 hrs
1	1 hr	2 hrs	4 hrs
1-1/4	2 hrs	4 hrs	8 hrs
1-1/2	2 hrs	4 hrs	8 hrs
2	2 hrs	4 hrs	8 hrs

NOTE Wait 24 hours prior to putting system into hot water service when installed at cure temperatures above 60°F; wait 48 hours prior to putting system into hot water service when installed at cure temperatures below 40°F Solvent Cement Joining

Wall Penetration

Building codes require that a fire-rated wall or floor must be sealed back to its original integrity when penetrated. Several sealants and materials are suitable for use with Spears® **EverTUFF®** CTS CPVC pipe to construct an appropriate UL Classified fire-rated penetration system. (When installed properly, these systems will provide a two-hour fire rating. Consult local building code requirements.

NOTE Caution: Certain fire-stopping sealants and components contain stress cracking agents and other chemicals which may cause damage to CPVC piping; contact the appropriate manufacturer for compatibility with CPVC prior to use.

NOTE When installing CPVC in areas where the system must be drained to protect it from freezing, the lines must be sloped to drain.

Underslab Installations

Spears® **EverTUFF®** CTS CPVC products are approved for underslab installations (with joints) in all model-plumbing codes. When performing underslab installations, it is important to support the tube evenly on a smooth surface. The bedding and backfill should be sand or clean soil that is free from sharp rocks and other debris that could damage the pipe.

Underslab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, “Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems,” requires a test at 150 psi for 2 hours. The pipe should be sleeved where it penetrates the slab, along with construction joints within the slab. Spears® **EverTUFF®** CTS pipe is also manufactured in coils for underslab installations to eliminate joints. When turning coiled pipe up through a slab, into walls, etc., make sure the pipe does not kink. Sections of pipe that contain kinks must be cut out and replaced.

Freeze Protection/Sunlight Exposure

CPVC piping must be protected from freezing in all installation locations. Attention shall be paid to local insulating techniques and codes that require a particular method. Use only methods and materials suitable for use with CPVC piping. Where freezing is not an issue, CPVC shall not be installed so as to be subject to direct sunlight after installation and not installed on the surface of a building, unless protected by a covering or a chemically compatible paint, such as water based Latex.

Hose Bibb Installation

Hose bibbs are to be connected only to metal system components which are adequately anchored to the building structure. CPVC plastic systems must terminate in the wall.



Water Heater Connections

Before attempting to use Spears® EverTUFF® CTS CPVC in water heater connections, determine if local plumbing codes contain detailed requirements for connections to gas or electric storage-type heaters.

DO NOT use Spears® EverTUFF® CTS CPVC products with commercial-type, non-storage water heaters.

For areas where local plumbing codes do not have requirements, the following information can be used as a guide for water heater connections:

- On electric water heaters, CPVC can be joined directly to the heater, using metal-to-CPVC transition fittings.
- On high-efficiency gas water heaters that use plastic vent piping, CPVC can be joined directly to the heater in the same way as an electric water-heater connection.
- On all other gas water heaters, there should be at least 6" of clearance between the exhaust flue and any CPVC tubing. A minimum of 6" metallic pipe should connect directly to the heater so that the CPVC tubing cannot be damaged by the buildup of excessive, radiant heat from the flue.
- A temperature/pressure relief valve should be installed so that the sensing element contacts the water at the top of the heater.
- Spears® EverTUFF® CTS CPVC products are approved by all model codes for use as relief-valve drain lines. A metal-to-CPVC transition fitting should be used to connect the tubing to the relief valve, with the tubing continued to the outlet. Both horizontal and vertical pressure relief drain should be supported every 3 feet. For horizontal runs, slope the tubing toward the outlet. Pipe must discharge to the atmosphere at an approved location.
- Instantaneous water heaters (i.e., under sink units) require at least 6" of metallic pipe connected to heater inlet and no CPVC installed down stream.

TRANSITION JOINTS AND FITTINGS

Spears® EverTUFF® CTS CPVC pipe can be connected to copper, brass, valves, and other materials using a variety of transition fittings including unions, compression fittings, specially reinforced male and female adapters, flanged joints, grooved joints and other readily available transition fittings.

Do not thread CPVC pipe and do not use regular CPVC female threaded fittings. Regular CPVC male threaded fittings shall only be used on cold water applications. Special reinforced male adapters, female adapters and other fittings with brass threads are recommended for hot water applications and threaded transitions to metal pipe. All approved threaded CPVC joints must be accessible. (See also Water Heater Connections section for additional installation details).

Standard compression fittings with brass ferrules can be used; however, TFE tape must be applied over the brass ferrule to compensate for the dissimilar thermal expansion rates

between the brass and CPVC. Caution must be exercised to prevent over tightening of compression fittings. Use extreme care when soldering any metal system to prevent flame contact with or heat distortion in CPVC pipe and fittings .

Assembling Threaded Connections

Threaded connections require the application of a thread sealant that is compatible with CPVC material. Spears® recommends the use of Spears® Blue 75™ Thread Sealant. Apply sealant to the male threads only. Make sure all threads are covered. DO NOT clog the waterway with excess sealant. If TFE tape is used, Spears® recommends a thickness of at least .0025" that meets or exceeds military specification, MIL-T-27730A. DO NOT use a combination of tape and thread sealant on the same joint. Apply TFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 - 3 wraps are sufficient to produce a watertight connection.

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Factory testing has indicated that 10 - 25 ft-lbs of torque is adequate to obtain a leak-free seal. Spears® recommends the use of a strap wrench when installing threaded connections.

Hanger/Support Spacing

Spears® EverTUFF® CTS CPVC pipe is rigid, it requires fewer supports than flexible, plastic systems.

Vertical runs should be supported at each level so that the weight of the run is not placed on a fitting or a joint. Horizontal runs require support every 3 feet for 1/2" - 1" diameter pipe and every 4 feet for 1-1/4" and larger diameters. Support spacing should be in accordance with applicable local codes. Horizontal runs must be braced so that the stress loads (caused by bending or snaking) will not be placed on a fitting or a joint. Hanger support spacing information is shown in Table A.

Spears® recommends that hangers, designed for supporting CPVC, be used to support CPVC piping. However, some hangers, designed for steel pipe, may be used if their suitability is clearly established. These hangers must be selected to accommodate the specific pipe size. In addition, they cannot contain rough or sharp edges that contact the pipe, and they must not bind the pipe from axial movement that is caused by expansion and contraction.

Pipe Size (in.)	Maximum Hanger Support Spacing
3/8	3 ft
1/2	3 ft
3/4	3 ft
1	3 ft
1-1/4	4 ft
1-1/2	4 ft
2	4 ft



Thermal Expansion

All piping systems expand and contract with changes in temperature. This issue must be addressed with appropriate system design to prevent damage to the system. Spears® **EverTUFF®** CTS CPVC pipe will expand or contract approximately 3.8 inches per 100 feet of pipe with every 100°F of temperature rise or fall. The effects of expansion/contraction are usually absorbed by the system at changes of direction in the piping. In other words, long, straight runs of piping are more susceptible to experiencing measurable movement with changes in temperature. As with other piping materials, the installation of an expansion loop or offset is required on long, straight runs which will allow the piping system to absorb the forces generated by expansion/contraction without damage. The rate of expansion does not vary with pipe size. The effects of expansion/contraction are more pronounced on hot water lines. See Thermal Expansion & Contraction section under Engineering and Design Data for Industrial Piping in this manual for information on calculating movement and expansion loops.

System Testing

Once the system has been installed and allowed to cure properly the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Air must be removed from piping systems to prevent it from being locked in the system when pressure is applied. Failure to do so could be harmful to job site personnel should a failure occur. If a leak is found, the affected product must be cut out and discarded. A new section can be installed using couplings or other approved means.



PVC & CPVC Corrosion Resistant Duct

PVC & CPVC DUCT

Spears® PVC and CPVC seamless round extruded duct is available in 6" through 24" diameters with cold-rolled fabricated duct available in 26" through 48". Excellent for industrial and institutional corrosive fume exhaust.

Physical Properties

Spears® PVC and CPVC Duct Systems exhibit high tensile strength, various temperature ranges, low thermal conductivity, good electrical properties and excellent chemical/corrosion resistance to a variety of aggressive substances. Its physical properties allow it to perform great in aggressive environments that are not suitable for other types of materials, plus its lightweight provides construction advantages, ease of fabrication and at a lower cost.

PVC & CPVC Duct Physical Properties

GENERAL	VALUE		TEST METHOD
	PVC Duct	CPVC Duct	
Cell Classification	12454	23437	ASTM D 1784
Maximum Service Temp.	140°F	200°F	---
Color	Dark Gray	Medium Gray	---
Specific Gravity (g/cu.cm @ 73°F)	1.40 +/-0.02	1.52 +/-0.02	ASTM D 792
Water Absorption % increase 24 hrs @ 25°C	0.05	0.03	ASTM D 570
Hardness: Rockwell	110 - 120	118	ASTM D 785
Poisson's Ratio @ 73°F	0.410	0.430	---
Hazen-Williams Factor	C = 150	C = 150	---
MECHANICAL			
Tensile Strength, psi @ 73°F	7,450	7,960	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	420,000	373,000	ASTM D 638
Flexural Strength, psi @ 73°F	14,450	13,300	ASTM D 790
Flexural Modulus, psi @ 73°F	360,000	348,000	ASTM D 790
Compressive Strength, psi @ 73°F	9,600	6,000	ASTM D 695
Compressive Modulus, psi @ 73°F	---	12000	ASTM D 695
Izod Impact, notched ft-lb/in @ 73°F	0.75	2.0	ASTM D 256
THERMAL			
Coefficient of Linear Expansion (in/in/°F)	2.9×10^{-5}	3.9×10^{-5}	ASTM D 696
Coefficient of Thermal Conductivity	3.5×10^{-4}	3.27×10^{-4}	ASTM C 177
BTU • inches/hour • Ft. ²	1.02	0.95	---
Watt/m/K	0.147	0.137	---
Heat Deflection Temperature Under Load (264psi - annealed)	170	225	ASTM D 648
ELECTRICAL			
Dielectric Strength, volts/mil	1,413	1,250	ASTM D 149
Dielectric Constant, 60Hz @ 30°F	3.70	2.90	ASTM D 150
Volume Resistivity, ohm/cm @ 95°C	1.2×10^{12}	3.4×10^{12}	ASTM D 257
Power Factor	---	0.012	ASTM D 150
PVC & CPVC Pipe is non-electrolytic			
FIRE PERFORMANCE			
Flammability Rating	V-0	V-0, 5VB, 5VA	UL-94
Flame Spread Index	<10	<10	ASTM E 162
Flame Spread	0-25	5	ULC
Smoke Generation	80-225	<25	ULC
Flash Ignition Temp.	730°F	900°F	---
Average Time of Burning (sec.)	<5	<5	ASTM D 635
Average Extent of Burning (mm)	<10	<10	ASTM D 635
Burning Rate (in/min)	Self Extinguishing	Self Extinguishing	---
Softening Starts (approx.)	250°F	295°F	---
Material Becomes Viscous	350°F	395°F	---
Material Carbonizes	425°F	450°F	---
Limiting Oxygen Index (LOI)	---	55	ASTM D 2863
Clean Room Materials	---	FPI= 1.90	---
Flammability Test	N/A	SDI= 0.03	FM 4910



PVC & CPVC Corrosion Resistant Duct

Materials

PVC

Spears® PVC duct is extruded seamless round or cold-rolled fabricated from dark-gray-colored Type I, Grade I PVC material having a Cell Classification of 12454 per ASTM D 1784 (PVC 1120), and has a maximum service temperature of 140°F. Spears® PVC duct is chemically resistant to most acids, bases, salts, aliphatic solutions, oxidants, and halogens. Unlike metallic materials, vapor phase or liquid-vapor phase corrosion is generally less aggressive with thermoplastics than the liquid phase corrosion. When in question, testing must be conducted under actual use conditions to verify compatibility. Detailed chemical resistance data should be referenced for proper material selection.

CPVC

Spears® CPVC Duct is extruded seamless round or cold-rolled fabricated from a light-gray-colored CPVC material with a Cell Classification of 23437 per ASTM D 1784 and has a maximum service temperature of 200°F for hot fumes. In addition, CPVC duct also has excellent fire performance properties. It has been subjected to large-scale testing having a flame spread rating of <25, and a smoke development rating of <50 making it ideal for use in critical areas (such as air plenums) where fire performance issues are of a concern. Spears® CPVC Duct is chemically resistant to most acids, bases, salts, aliphatic solutions, oxidants, and halogens. Although the chemical resistance of PVC and CPVC are similar they are not the same. Detailed chemical resistance data should be referenced for proper material selection.

Flammability

Spears® duct has excellent flammability properties and will not independently support combustion - it will not burn unless a flame is constantly applied and will stop burning once the flame is removed. Spears® CPVC duct has improved fire performance properties over PVC with low flame-spread and smoke-generation properties. Refer to the Fire Performance section of the PVC & CPVC Duct Physical Properties table.

Dimensions

Spears® seamless round duct is extruded in Iron Pipe Size (IPS) dimensions with large internal flow areas that can easily be adapted to other common IPS fittings, reducing fabrication and installation time.

PVC Extruded Round Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O of R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	WT(lbs.) Per Ft.
6 x 1/8	6.625	+/- .020	+/- .050	0.105	0.122	0.140	1.530
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.275
7	7.375	+/- .020	+/- .050	0.172	0.187	0.202	2.534
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	2.982
9	9.375	+/- .025	+/- .075	0.172	0.187	0.202	3.239
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	3.733
11	11.375	+/- .025	+/- .075	0.172	0.187	0.202	3.944
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.440
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	4.884
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	5.586
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	6.750
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	8.144
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	11.163

O of R = Out of Roundness Factor at time of extrusion *I.D. Sizes

CPVC Extruded Round Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O of R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	WT(lbs.) Per Ft.
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.555
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	3.349
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	4.192
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.986
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	5.485
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	6.273
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	7.580
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	9.146
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	12.536

O of R = Out of Roundness Factor at time of extrusion

Large Diameter Duct

Spears® fabricated round duct (26" & larger diameter) is cold rolled from extruded PVC or CPVC sheet material. The seam is thermal fused utilizing computerized welding. The sheet edges are heated and pressed together pneumatically achieving 100% weld strength using no filler rod. Wall thickness is 3/16" for sizes up to 32" diameter. Above 32" diameter, 1/4" material will be used, unless otherwise specified. Cold rolled duct is produced in 4' lengths. Large duct fittings can be fabricated to order. Contact Spears® with requirements for additional information.

System Components

Fittings fabricated from Spears® duct are available in most configurations. All duct fittings, fume hoods, fume scrubbers, fans, blast gates and other system components should be fabricated from PVC/CPVC sheet or duct of the same wall thickness and from materials that conform to ASTM D 1784.

Storage and Handling

Although Spears® duct is tough and corrosion resistant, it should not be dropped nor have objects dropped on it. Reasonable care and common sense should be used, including during transport and storage to prevent distortion. Duct should not be stored close to heat-producing sources, subjected to external loads (i.e., heavy objects, over strapping, etc.) or over stacked when stored. When stored outdoors, Spears® duct must be covered with an opaque material to reduce the risk of heat absorption and discoloration. Prior to use, inspect duct for scratches, splits or gouges. If found, these sections must be cut out and discarded.



Product Ratings and Capability

Spears® PVC and CPVC duct is excellent for harsh environments and has been used at various negative and positive pressure conditions in diverse laboratory and industrial applications. Product ratings will vary according to size and temperature. The ratings in the following tables are based on a 1.5:1 safety factor.

Negative Pressure Ratings

PVC MAX. Internal Negative Pressure Rating Inches of Water @ Various Temperatures °F

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	115	101	86	71	59	46	36	25
6	415	365	311	257	212	166	129	91
7	301	265	226	187	153	120	93	66
8	188	166	141	117	96	75	58	41
9	146	129	110	91	75	59	45	32
10	97	85	73	6	50	39	30	21
11	82	72	61	51	42	33	25	18
12	58	51	44	36	30	23	18	13
14	44	39	33	27	22	18	14	10
16	29	26	22	18	15	12	9	6
18	21	18	16	13	11	8	6	4
20	24	21	18	15	12	10	7	5
24	21	18	16	13	11	8	6	4

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355 MAX. Internal Positive Pressure Rating

CPVC MAX. Internal Negative Pressure Rating Inches of Water @ Various Temperatures °F

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	426	371	316	263	208	153	98
8	193	168	143	118	93	70	45
10	100	86	73	60	48	35	23
12	60	51	43	36	28	20	13
14	45	38	33	26	21	15	10
16	30	26	21	18	13	10	6
18	26	23	20	16	13	10	6
20	28	25	21	16	13	10	6
24	20	18	15	13	10	6	3

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355

Positive Pressure

PVC and CPVC duct can endure greater levels of positive internal pressure than negative internal pressure. The following tables show the maximum recommended internal positive pressure rating in PSI for PVC and CPVC duct at various temperatures.

Positive Pressure Ratings

PVC MAX. Internal Positive Pressure Rating PSI @ Various Temperatures °F

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	42	37	31	26	21	17	13	9
6	70	62	52	43	35	28	22	15
7	64	56	48	40	32	25	20	14
8	53	47	40	33	27	21	16	12
9	74	65	55	46	38	29	23	16
10	43	39	32	27	22	17	13	9
11	61	53	46	38	31	24	19	13
12	36	32	27	22	18	14	11	8
14	33	29	25	20	17	13	10	7
16	28	25	21	17	14	11	9	6
18	25	22	19	15	13	10	8	5
20	26	23	20	16	13	10	8	6
24	25	22	19	15	13	10	8	5

CPVC MAX. Internal Positive Pressure Rating PSI @ Various Temperatures °F

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	70	56	45	35	26	16	13
8	53	43	33	26	20	13	10
10	43	35	28	21	16	10	8
12	36	30	23	18	15	8	6
14	33	26	21	16	13	8	6
16	28	23	18	13	11	6	5
18	25	20	15	11	10	5	5
20	26	21	16	13	10	6	5
24	25	20	15	11	10	5	5

NOTE: Maximum values stated are for extruded duct pipe only, and incorporate a 1.5:1 safety factor. Consideration should be given to system design, method of fabrication, and joining which may require additional system de-rating. Spears® PVC/CPVC Duct piping are not designed for distribution of compressed air or gases.



Duct System Installation

Joining Techniques

Spears® duct can be easily assembled in the field using standard thermoplastic pipe-joining techniques. The most common methods are solvent-cementing or thermal hot air welding, fusion welding and butt-welding can also be used. Retaining duct and fittings with suitable drilled holes and sheet metal screws may also be used, depending on application requirements.

Solvent Cementing

Typical duct fittings are fabricated from duct and with belled-end sockets that can be joined using solvent-cementing. This is the same basic process used for over 50 years in pressure pipe installation using the application of a primer and solvent cement to join system components. Properly made solvent cement joints are chemically fused together providing a leak-tight seal when cured. A minimum socket depth of 3" (all sizes) is necessary to provide sufficient surface-to-surface contact of the parts being joined. The use of extra-heavy-bodied solvent is recommended to handle the gap-filling required due to larger dimensional tolerances in duct piping. Use extra care when solvent cementing duct diameters 18" and larger to ensure tight fit of mating components. Do not use solvent cement for any type of end-to-end joining. See Installation section for industrial pressure pipe for guidelines on solvent cement welding.

Thermal Welding

Thermal welding requires the use of a hot-air welder and PVC or CPVC welding rod. Clean hot air from the welder preheats the duct material and welding rod while pressure is applied to the weld area as the rod is guided. This results in the surfaces of the parts being thermally fused together at the weld seam. Only welding rod produced from the same material being joined (same Cell Classification) should be used. Due to the significantly different thermal properties of the plastics, hot-air welding of CPVC is generally more difficult than PVC. Only personnel specifically trained in hot-air welding of PVC or CPVC should conduct all welding.

Hangers and Supports

As with all piping systems, proper support spacing is critical to minimize deflection and sagging. Additional support consideration must be given to concentrated loads, additional weight of accumulated solids, and independent support at fans, flexible connections, hoods, scrubbers, tanks, and other system components for potential stresses on the system.

Drains must be installed where accumulation of moisture is expected and at low points in the system (these locations should be specified on system specification drawings). Proper system inspection, cleaning and maintenance should be enforced to prevent the formation of additional weight loads. Refer to the following tables for maximum support spacing of horizontal air-filled duct with an allowable 1/8" deflection at various temperatures.

Hangers and supports shall be securely fastened to the building structure to avoid vibration, and should be installed in such a manner as to prevent conditions of stress on the system (properly aligned). Seismic design and construction practices for hangers and supports shall be followed where applicable.

Hangers selected must have an adequate load-bearing surface free of rough or sharp edges to prevent damage to the duct during use. Use corrosive-resistant material for hangers and hanger hardware that is suitable for the system environment. Hangers must not restrict linear movement due to expansion and contraction. Avoid over tightening to prevent duct deformation and restriction of movement. Refer to the following illustration for examples of typical hangers.

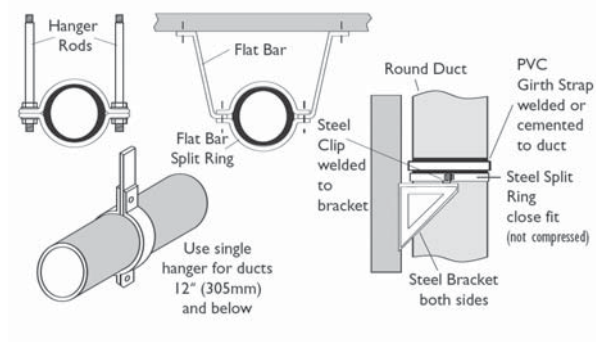
Hanger Support Spacing

PVC Duct Maximum Hanger Support Spacing In Feet

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	9.5	9	9	8.5	8	7.5	7	6.5
6	10	10	9.5	9	8.5	8	7.5	6.5
7	10	10	9.5	9	8.5	8	7.5	7
8	10	10	10	10	9	9	8	7.5
9	10	10	10	10	10	9	8.5	8
10	10	10	10	10	10	10	9	8.5
11	10	10	10	10	10	10	9.5	9
12	12	12	12	12	10	10	10	9.5
14	12	12	12	12	11.5	11.5	11	10
16	12	12	12	12	12	12	11	10
18	12	12	12	12	12	12	11.5	11
20	12	12	12	12	12	12	12	11.5
24	12	12	12	12	12	12	12	12

CPVC Duct Maximum Hanger Support Spacing In Feet

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	10	10	10	10	10	8	8
8	10	10	10	10	10	8	8
10	10	10	10	10	10	10	10
12	10	10	10	10	10	10	10
14	12	12	12	12	10	10	10
16	12	12	12	12	12	10	10
18	12	12	12	12	12	12	12
20	12	12	12	12	12	12	12
24	12	12	12	12	12	12	12



Thermal Expansion and Contraction

The coefficient of linear expansion (y) for Spears® duct can be found in the physical properties table (PVC = 2.9×10^{-5} in/in/°F; CPVC = 3.9×10^{-5} in/in/°F). As with all piping products, thermal expansion and contraction of the system must be considered and properly addressed during the design and installation of the system. The expansion or contraction rate of Spears® duct can be calculated as follows:

Thermal Expansion and Contraction for PVC Duct

$$\Delta L = 12 y L (\Delta T)$$

Where:

ΔL = expansion or contraction of duct in inches

$y = 2.9 \times 10^{-5}$ in/in/°F (PVC duct material Coefficient of thermal expansion)

L = Length of duct run in feet

ΔT = Temperature change °F (T max. - T in.)

T max. = Maximum change in operating temperature (F)

T in. = temperature at time of installation (F)

Thermal Expansion and Contraction for CPVC Duct

$$\Delta L = 12 y L (\Delta T)$$

Where:

ΔL = expansion or contraction of duct in inches

$y = 3.9 \times 10^{-5}$ in/in/°F (CPVC duct material Coefficient of thermal expansion)

L = Length of duct run in feet

ΔT = Temperature change °F (T max. - T in.)

T max. = Maximum change in operating temperature (F)

T in. = temperature at time of installation (F)

In-line expansion joints, either flexible sleeve type or O-ring piston type are the most common means of accommodating thermal expansion and contraction in duct systems. Using expansion loops and offsets where required can also be used, but require significantly more space.



Other Design Considerations

The duct system must not be exposed to conditions that will exceed product limitations regarding temperature, pressure, chemical compatibility and mechanical strength. Care must be taken to ensure that fume hood design, capture velocities, flow velocities, and flow volumes are adequate to properly convey the corrosive fumes being extracted while maintaining safety to personnel and protection of other equipment from corrosive attack. An optimum velocity for most systems is 1,500 feet per minute (FPM), which allows for future expansion of the system by increasing the fan size. With the exception of some heavy metals extraction, velocities exceeding 3,000 FPM are generally not recommended. This is especially true in systems carrying solid particles where excessive static electricity can be generated. Minimum exhaust volume requirements in cubic feet per minute (CFM), must be calculated according to type and concentration of fumes being transported. Sufficient access for inspection and equipment maintenance must be provided. Size transition sections in mains and sub mains should be appropriately tapered for optimum flow conditions. A minimum taper of 5" in length for each 1" change in duct diameter is recommended. Branches should enter the main at the large end at angles no greater than 45° and not directly opposite each other. The designing engineer is responsible for ensuring that the system is in compliance with any applicable pollution control and building codes.



Chemical Resistance

This section is to provide information on the transport of various chemicals using PVC and CPVC thermoplastic piping materials. This information is compiled from commercially available industry sources. These recommendations are guidelines for use and the final decision regarding material suitability must rest with the end-user.

Please note that Spears® CPVC piping products can be classified into two basic applications, pressure systems and corrosive waste drainage systems. The chemical resistance tables in this section are for Pressure Piping. See chemical resistance tables in **LabWaste™** CPVC Corrosive Waste Drainage Systems section of this catalog for chemical resistance of drainage systems. **IMPORTANT:** Corrosive waste drainage system data should not be used for pressure system or dedicated service applications.

PVC and CPVC thermoplastic piping products are resistant to corrosion typically encountered with metal systems and the effects of galvanic and electrochemical corrosion are non-existent since both of these materials are non-conductors.

Types of Chemical Attack on Plastics

In general, chemicals that affect plastics do so in one of two ways. One effect is chemical solvation or permeation; the other is direct chemical attack. In the case of solvation or permeation, physical properties may be affected, but the polymer molecule structure itself is not chemically changed, degraded or destroyed. In solvation or permeation, gas, vapor or liquid molecules pass through the polymer, typically without damaging the plastic material itself. If the chemical can be removed completely, the plastic is generally restored to its original condition. Direct chemical attack occurs when exposure to a chemical causes a chemical alteration of the polymer molecules. Direct chemical attack may cause profound, irreversible changes that cannot be restored by removal of the chemical.

Other Consideration

While the effect of each individual chemical is specific, some chemicals can be grouped into general categories based on similarities in chemical characteristics. PVC and CPVC are inert to most mineral acids, bases, salts and paraffinic hydrocarbons, and compares favorably to other non-metals in these chemical environments.

Generally, the resistance of a particular plastic to a specific chemical decreases with an increase in concentration. Also, the resistance of a particular plastic to a specific chemical generally decreases as temperature increases, generally decreases with increasing applied stress, and generally decreases where temperature or applied stress are varied or cycled. These effects can be greater overall in combination.

In some cases, combinations of chemicals may have a synergistic effect on a thermoplastic material where the individual chemicals do not. It cannot be assumed that an individual chemical's lack of effect would apply for combinations that include several chemicals. When the possible combined effect of several chemicals is unknown, the material should be tested in the complete chemical mixture(s) in question.

Caution Areas

- Chlorinated and aromatic hydrocarbons, esters, or ketones are not recommended for use with PVC or CPVC thermoplastic piping materials. Although the chemical resistance of PVC and CPVC compounds is similar, they are not always the same.
- Chemical compatibility of a piping system must also take into consideration the compatibility of all system components. This includes elastomers (gaskets, O-rings, etc), valves and valve components, as well as thread pastes, lubricants, cleaning and wetting agents (surfactants).
- Applications involving certain oils, surfactants, and greases may result in environmental stress cracking. Environmental stress cracking occurs when system components are subjected to an incompatible chemical in the presence of stress.
- Certain substances called out on the following pages reference chemicals in a gaseous state. These substances are not recommended for pressure service. They are shown to provide the chemical resistance of PVC and CPVC when coming into contact with these substances. (i.e. exposure to or immersion in these substances).
- PVC Clear piping has the same basic chemical resistance as regular PVC. However certain nitrogen-containing organics, bleaches, oxidizing agents and acids will result in discoloration. Testing under actual use conditions is recommended.
- The following chemical resistance data is based primarily on plastic material test specimens that have been immersed in the chemical, and to a lesser degree, on field-experience. In most cases, detailed information on the test conditions (such as exposure time), and on test results (such as change in weight, change in volume, and change in strength) is not available.

While some chemicals may be acceptable with certain temperature limitations, the use of PVC and CPVC piping with liquid hydrocarbons such as gasoline and jet fuels should be limited to short-term exposure such as secondary containment systems. This piping is not recommended for long-term exposure to liquid hydrocarbons.

PVC and CPVC have also been used successfully in contaminated water recovery systems where very low levels (PPM/PPB range) of certain incompatible substances are present. However, since most remediation projects involve low pressure/vacuum type applications for a limited period of time, the use of PVC and CPVC can be used in these types of applications.

DISCLAIMER OF LIABILITY

There are many variables beyond our control in the application of thermoplastic piping in chemical service. All statements made herein are offered in good faith and believed to be accurate at the time of its preparation, but are offered without any warranty, expressed or implied, by information sources or Spears® Manufacturing Company. Compliance with all applicable federal, state and local laws and regulations remains the responsibility of the user.



CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING

R = Recommended NR = Not Recommended

C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Acetaldehyde	NR	NR	NR	NR	NR	NR	NR
Acetamide	NR	NR	NR	NR	NR	NR	NR
Acetic Acid, 10%	R	R	R	R	R	R	R
Acetic Acid, 20%	R	R	R	NR	NR	NR	NR
Acetic Acid, Glacial	R	NR	NR	NR	NR	NR	NR
Acetic Acid, pure	NR	NR	NR	NR	NR	NR	NR
Acetic Anhydride	NR	NR	NR	NR	NR	NR	NR
Acetone, < 5%	?	?	NR	NR	R	R	R
Acetone, > 5%	NR	NR	NR	NR	NR	NR	NR
Acetyl Nitrile	NR	NR	NR	NR	NR	NR	NR
Acetylene	R	R	R	R	C	C	C
Acrylic Acid	NR	NR	NR	NR	NR	NR	NR
Adipic Acid; sat. in water	R	R	R	R	R	R	R
Allyl Alcohol, 96%	R	NR	NR	NR	C	C	C
Allyl Chloride	NR	NR	NR	NR	NR	NR	NR
Alum, all varieties	R	R	R	R	R	R	R
Aluminum Acetate	R	R	R	R	R	R	R
Aluminum Alum	R	R	R	R	R	R	R
Aluminum Chloride	R	R	R	R	R	R	R
Aluminum Fluoride	R	R	R	R	R	R	R
Aluminum HydroxideR		R	R	R	R	R	R
Aluminum Nitrate	R	R	R	R	R	R	R
Aluminum Oxylchloride	R	R	R	R	?	?	?
Aluminum Sulfate	R	R	R	R	R	R	R
Amines	NR	NR	NR	NR	NR	NR	NR
Ammonia (gas;dry)	R	R	R	R	NR	NR	NR
Ammonia (liquid)	NR	NR	NR	NR	NR	NR	NR
Ammonium Acetate	R	R	R	R	R	R	R
Ammonium Alum	R	R	R	R	R	R	R
Ammonium Bisulfate	R	R	?	?	R	R	R
Ammonium Carbonate	R	R	R	R	R	R	R
Ammonium Chloride	R	R	R	R	R	R	R
Ammonium Dichromate	R	?	?	?	R	R	R
Ammonium Fluoride, < 25%	R	NR	NR	NR	R	R	R
Ammonium Fluoride, > 25%	?	NR	NR	NR	R	R	R
Ammonium Hydroxide	R	R	R	R	NR	NR	NR
Ammonium Metaphosphate	R	R	R	R	R	R	R
Ammonium Nitrate	R	R	R	R	R	R	R
Ammonium Persulfate	R	R	R	R	R	?	?
Ammonium Phosphate	R	R	R	R	R	R	C
Ammonium Sulfate	R	R	R	R	R	R	R
Ammonium Sulfide	R	R	R	R	R	R	R
Ammonium Tartrate	R	R	R	R	R	R	R
Ammonium Thiocyanate	R	R	R	R	R	R	R
Amyl Acetate	NR	NR	NR	NR	NR	NR	NR
Amyl Alcohol	R	NR	NR	NR	C	C	NR
Amyl Chloride	NR	NR	NR	NR	NR	NR	NR
Aniline	NR	NR	NR	NR	NR	NR	NR

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Aniline Chlorohydrate	NR	NR	NR	NR	NR	NR	NR
Aniline Hydrochloride	NR	NR	NR	NR	NR	NR	NR
Anthraquinone	?	?	?	?	?	?	?
Anthraquinone Sulfonic Acid	R	R	R	R	?	?	?
Antimony Trichloride	R	R	R	R	R	R	R
Aqua Regia	NR	NR	NR	NR	R	NR	NR
Aromatic Hydrocarbons	NR	NR	NR	NR	NR	NR	NR
Arsenic Acid 80%	R	R	R	R	R	R	R
Arsenic Trioxide (powder)	R	?	?	?	R	NR	NR
Arylsulfonic Acid	R	R	R	NR	?	?	?
Barium Carbonate	R	R	R	R	R	R	R
Barium Chloride	R	R	R	R	R	R	R
Barium Hydroxide 10%	R	R	R	R	R	R	R
Barium Nitrate	R	?	?	?	R	R	R
Barium Sulfate	R	R	R	R	R	R	R
Barium Sulfide	R	R	R	R	R	R	R
Beer	R	R	R	R	R	R	R
Beet Sugar Liquors	R	R	R	R	R	R	R
Benzaldehyde; 10%	R	NR	NR	NR	NR	NR	NR
Benzaldehyde; > 10%	NR	NR	NR	NR	NR	NR	NR
Benzalkonium Chloride	R	?	?	?	NR	NR	NR
Benzene	NR	NR	NR	NR	NR	NR	NR
Benzoic Acid	R	R	R	R	R	C	NR
Benzyl Alcohol	NR	NR	NR	NR	NR	NR	NR
Benzyl Chloride	NR	NR	NR	NR	NR	NR	NR
Bismuth Carbonate	R	R	R	R	R	R	R
Black Liquor	R	R	R	R	R	R	R
Bleach (15% CL)	R	R	R	R	R	R	R
Borax	R	R	R	R	R	R	R
Boric Acid	R	R	R	R	R	R	R
Brine (acid)	R	?	?	?	R	R	R
Bromic Acid	R	R	R	R	R	R	R
Bromine Liquid	NR	NR	NR	NR	NR	NR	NR
Bromine Vapor 25%	R	R	R	R	NR	NR	NR
Bromine Water	R	R	NR	NR	?	?	?
Bromobenzene	NR	NR	NR	NR	NR	NR	NR
Bromotoluene	NR	NR	NR	NR	NR	NR	NR
Butadiene	R	R	NR	NR	C	C	C
Butane	R	R	NR	NR	C	C	C
Butanol: primary	R	R	NR	NR	C	C	C
Butanol: secondary	R	NR	NR	NR	C	C	C
Butyl Acetate	R	NR	NR	NR	NR	NR	NR
Butyl Carbitol	?	?	?	?	NR	NR	NR
Butyl Mercaptan	NR	NR	NR	NR	NR	NR	NR
Butyl Phenol	R	NR	R	NR	NR	NR	NR
Butyl Stearate	R	?	?	?	NR	NR	NR
ButylCellosolve	R	?	?	?	NR	NR	NR
Butyne Diol	R	?	?	?	?	?	?

CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING



R = Recommended NR = Not Recommended

C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Butyric Acid < 1%	R	NR	NR	NR	R	R	R
Butyric Acid > 1%	R	NR	NR	NR	NR	NR	NR
Cadmium Acetate	R	R	?	?	R	R	R
Cadmium Chloride	R	R	?	?	R	R	R
Cadmium Cyanide	R	R	R	R	R	R	R
Cadmium Sulfate	?	?	?	?	R	R	R
Caffeine Citrate	R	?	?	?	R	R	R
Calcium Acetate	R	R	R	R	R	R	R
Calcium Bisulfide	R	R	R	R	R	R	R
Calcium Bisulfite	R	R	R	R	R	R	R
Calcium Bisulfite Bleach Liquor	R	?	?	?	R	R	R
Calcium Carbonate	R	R	R	R	R	R	R
Calcium Chlorate	R	R	?	?	R	R	R
Calcium Chloride	R	R	R	R	R	R	R
Calcium Hydroxide	R	R	R	R	R	R	R
Calcium Hypochlorite	R	R	R	R	R	R	R
Calcium Nitrate	R	R	R	R	R	R	R
Calcium Oxide	R	R	?	?	R	R	R
Calcium Sulfate	R	R	R	R	R	R	R
Camphor (crystals)	R	?	?	?	NR	NR	NR
Cane Sugar Liquors	R	R	R	R	R	R	R
Caprolactam	?	?	?	?	NR	NR	NR
Caprolactone	?	?	?	?	NR	NR	NR
Carbitol	R	?	?	?	NR	NR	NR
Carbon Dioxide	R	R	R	R	R	R	R
Carbon Dioxide (aqueous solution)	R	R	?	?	R	R	R
Carbon Disulfide	NR	NR	NR	NR	NR	NR	NR
Carbon Monoxide	R	R	R	R	R	R	R
Carbon Tetrachloride	R	NR	NR	NR	NR	NR	NR
Carbonic Acid	R	R	R	R	R	R	R
Carene 500	R	?	NR	NR	?	?	?
Castor oil	R	R	R	R	C	C	C
Caustic Potash	R	R	R	R	R	R	R
Caustic Soda	R	R	R	R	R	R	R
Cellosolve	R	NR	R	NR	NR	NR	NR
Cellosolve Acetate	R	?	R	?	NR	NR	NR
Chloral Hydrate	R	R	R	R	NR	NR	NR
Chloramine	R	?	?	?	R	R	R
Chloric Acid up to 20%	R	R	R	R	R	R	R
Chloride Water	R	R	R	R	R	R	R
Chlorinated Solvents	NR	NR	NR	NR	NR	NR	NR
Chlorinated Water (Hypochlorite)	R	R	R	R	R	R	R
Chlorine (dry liquid)	NR	NR	NR	NR	NR	NR	NR
Chlorine (liquid under pressure)	NR	NR	NR	NR	NR	NR	NR
Chlorine Dioxide aqueous (sat'd 0.1%)	?	?	?	?	R	?	?

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Chlorine Gas (dry)	NR	NR	NR	NR	NR	NR	NR
Chlorine Gas (wet)	NR	NR	NR	NR	NR	NR	NR
Chlorine Water (sat'd 0.3%)	R	R	R	R	R	R	R
Chlorine(trace in air)	R	?	R	?	R	R	R
Chloroacetic Acid	R	R	R	NR	NR	NR	NR
Chloroacety Chloride	R	?	R	?	NR	NR	NR
Chlorobenzene	NR	NR	NR	NR	NR	NR	NR
Chloroform	NR	NR	NR	NR	NR	NR	NR
Chloropicrin	NR	NR	NR	NR	NR	NR	NR
Chlorosulfonic Acid	R	NR	R	NR	NR	NR	NR
Chlorox Bleach Solution	R	?	?	?	C	C	C
Chrome Alum	R	R	R	R	R	R	R
Chromic Acid 10%	R	R	R	R	R	R	R
Chromic Acid 40%	?	?	?	?	R	R	R
Chromic Acid 50%	NR	NR	NR	NR	?	?	?
Chromic Acid/Sulfuric Acid/ water-50%/15%/35%	R	NR	?	?	?	?	?
Chromic/Nitric Acid (15%/35%)	R	R	?	?	R	C	NR
ChromiumNitrate	R	?	?	?	R	R	R
Citric Acid	R	R	R	R	R	R	R
Citrus Oils	?	?	?	?	NR	NR	NR
Coconut Oil	R	R	?	?	NR	NR	NR
Copper Acetate	R	R	R	R	R	R	R
Copper Carbonate	R	R	R	R	R	R	R
Copper Chloride	R	R	R	R	R	R	R
Copper Cyanide	R	R	R	R	R	R	R
Copper Fluoride	R	R	R	R	R	R	R
Copper Nitrate	R	R	R	R	R	R	R
Copper Sulfate	R	R	R	R	R	R	R
Corn Oil	R	?	R	?	NR	NR	NR
Corn Syrup	R	R	R	R	R	R	R
Cottonseed Oil	R	R	R	R	NR	NR	NR
Creosote	NR	NR	NR	NR	NR	NR	NR
Cresylic Acid,50%	R	R	R	NR	NR	NR	NR
Crotonaldehyde	NR	NR	NR	NR	NR	NR	NR
Crude Oil	R	R	R	NR	NR	NR	NR
Cumene	?	?	?	?	NR	NR	NR
Cupric Fluoride	R	R	R	R	R	R	R
Cupric Sulfate	R	R	R	R	R	R	R
Cuprous Chloride	R	R	R	R	R	R	R
Cyclanones	R	R	?	?	?	?	?
Cyclohexane	NR	NR	NR	NR	NR	NR	NR
Cyclohexanol	NR	NR	NR	NR	NR	NR	NR
Cyclohexanone	NR	NR	NR	NR	NR	NR	NR
D.D.T. (Xylene Base)	NR	NR	NR	NR	NR	NR	NR
Desocyphephrine Hydrochloride	R	?	R	?	?	?	?
Detergents	R	R	R	R	C	C	C
Dextrin	R	R	R	R	R	R	R



CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING

R = Recommended NR = Not Recommended

C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV - Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Dextrose	R	R	R	R	R	R	R
Diacetone Alcohol	R	?	?	?	C	?	?
Diazo Salts	R	R	R	R	?	?	?
Dibutoxy Ethyl Phthalate	NR	NR	NR	NR	NR	NR	NR
Dibutyl Phthalate	NR	NR	NR	NR	NR	NR	NR
Dibutyl Sebacate	R	NR	?	?	NR	NR	NR
Dichlorobenzene	NR	NR	NR	NR	NR	NR	NR
Dichloroethylene	NR	NR	NR	NR	NR	NR	NR
Diesel Fuels	R	R	R	R	NR	NR	NR
Diethyl Ether	R	?	R	?	NR	NR	NR
Diethylamine	NR	NR	NR	NR	NR	NR	NR
Diglycolic Acid	R	R	R	R	NR	NR	NR
Dill Oil	?	?	?	?	NR	NR	NR
Dimethyl Hydrazine	NR	NR	NR	NR	NR	NR	NR
Dimethylamine	R	R	NR	NR	NR	NR	NR
Dimethylformamide	NR	NR	NR	NR	NR	NR	NR
Diethylphthalate	NR	NR	NR	NR	NR	NR	NR
Dioxane (1, 4)	NR	NR	NR	NR	NR	NR	NR
Disodium Phosphate	R	R	R	R	R	R	R
Distilled Water	R	R	R	R	R	R	R
EDTA Tetrasodium	?	?	?	?	R	R	R
Ethyl Ester (ethyl acrylate)	NR	NR	NR	NR	NR	NR	NR
Epsom Salt	R	?	R	?	R	R	R
Esters	NR	NR	NR	NR	NR	NR	NR
Ethanol > 5%	R	R	R	NR	C	C	C
Ethanol up to 5%	R	R	R	NR	R	R	R
Ethers	NR	NR	NR	NR	NR	NR	NR
Ethyl Acetate	NR	NR	NR	NR	NR	NR	NR
Ethyl Acrylate	NR	NR	NR	NR	NR	NR	NR
Ethyl Alcohol	R	R	R	NR	C	C	C
Ethyl Chloride	NR	NR	NR	NR	NR	NR	NR
Ethyl Chloroacetate	NR	NR	NR	NR	NR	NR	NR
Ethyl Ether	NR	NR	NR	NR	NR	NR	NR
Ethylene Bromide	NR	NR	NR	NR	NR	NR	NR
Ethylene Chlorohydrin	NR	NR	NR	NR	NR	NR	NR
Ethylene Diamine	NR	NR	NR	NR	NR	NR	NR
Ethylene Dichloride	NR	NR	NR	NR	NR	NR	NR
Ethylene Glycol	R	R	R	R	C	C	C
Ethylene Oxide	NR	NR	NR	NR	NR	NR	NR
Fatty Acids	R	R	R	R	C	C	C
Ferric Acetate	R	NR	?	?	R	R	R
Ferric Chloride	R	R	R	R	R	R	R
Ferric Hydroxide	R	R	R	R	R	R	R
Ferric Nitrate	R	R	R	R	R	R	R
Ferric Sulfate	R	R	R	R	R	R	R
Ferrous Chloride	R	R	R	R	R	R	R
Ferrous Hydroxide	R	?	R	?	R	R	R
Ferrous Nitrate	R	?	R	?	R	R	R

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Ferrous Sulfate	R	R	R	R	R	R	R
Fish Solubles	R	R	R	R	?	?	?
Fluorine Gas	R	NR	NR	NR	NR	NR	NR
Fluorine Gas (wet)	R	NR	R	NR	NR	NR	NR
Fluoroboric Acid	R	R	R	R	?	?	?
Fluorosilicic Acid 25%	R	R	R	R	R	C	C
Formaldehyde	R	R	NR	NR	NR	NR	NR
Formic Acid < 25%	R	NR	R	NR	R	R	R
Formic Acid > 25%	?	?	?	?	C	?	NR
Freon 11	R	R	NR	NR	NR	NR	NR
Freon 113	R	?	R	?	NR	NR	NR
Freon 114	R	?	R	?	NR	NR	NR
Freon 12	R	R	R	R	NR	NR	NR
Freon 21	NR	NR	NR	NR	NR	NR	NR
Freon 22	NR	NR	NR	NR	NR	NR	NR
Fructose	R	R	R	R	R	R	R
Fruit juices & pulp	R	R	R	R	R	R	R
Furfural	NR	NR	NR	NR	NR	NR	NR
Gallic Acid	R	R	R	R	?	?	?
Gas (Coke Oven)	NR	NR	NR	NR	?	?	?
Gasoline	NR	NR	NR	NR	NR	NR	NR
Gasoline, HighOctane	NR	NR	NR	NR	NR	NR	NR
Gasoline Jet Fuel	NR	NR	NR	NR	NR	NR	NR
Glucose	R	R	R	R	R	R	R
Glycerine	R	R	R	R	R	R	R
Glycol	R	R	R	R	C	C	C
Glycol Ethers	?	?	?	?	NR	NR	NR
Glycolic Acid	R	R	R	R	?	?	?
Grape Sugar	R	R	R	R	R	R	R
Green Liqueur	R	R	?	?	R	R	R
Halocarbon Oils	?	?	?	?	NR	NR	NR
Heptane	R	R	R	NR	C	?	?
Hercolyn	R	?	?	?	?	?	?
Hexane	R	NR	NR	NR	C	C	C
Hexanol, Tertiary	R	R	R	NR	C	C	C
Hydrazine	NR	NR	NR	NR	NR	NR	NR
Hydrobromic Acid 20%	R	R	R	R	?	?	?
Hydrochloric Acid 10%	R	R	R	R	R	R	R
Hydrochloric Acid 30%	R	R	R	R	R	R	R
Hydrochloric Acid 36%	R	R	R	R	R	R	C
Hydrochloric Acid Concentrated	R	R	R	NR	?	?	?
Hydrochloric Acid pickling	R	R	R	R	R	R	R
Hydrocyanic Acid	R	R	R	R	?	?	?
Hydrofluoric Acid 3%	R	R	R	R	R	?	?
Hydrofluoric Acid 48%	R	NR	R	NR	NR	NR	NR
Hydrofluoric Acid 50%	R	NR	NR	NR	NR	NR	NR
Hydrofluoric Acid 70%	NR	NR	NR	NR	NR	NR	NR
Hydrofluorsilicic Acid 30%	R	R	R	R	R	?	C

CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING



R = Recommended NR = Not Recommended

C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Hydrogen	R	R	R	R	C	C	C
Hydrogen Peroxide 30%	R	R	R	R	R	?	?
Hydrogen Peroxide 90%	R	R	R	R	?	?	?
Hydrogen Phosphide	R	R	NR	NR	?	?	?
Hydrogen Sulfide	R	R	R	R	R	R	R
Hydroquinone	R	R	R	R	R	R	R
Hydroxylamine Sulfate	R	R	R	R	?	?	?
Hypochlorite (Potassium & Sodium)	R	?	R	?	R	R	R
Hypochlorous Acid	R	R	R	R	R	R	R
Iodine	NR	NR	NR	NR	R	R	R
Iodine Solution 10%	NR	NR	NR	NR	?	?	?
Isopropanol	?	?	?	?	C	C	C
Kerosene	R	R	R	R	C	C	C
Ketones	NR	NR	NR	NR	NR	NR	NR
Kraft Liquors	R	R	R	R	R	R	R
Lactic Acid 25%	R	R	R	R	R	R	R
Lactic Acid 80%	R	?	?	?	R	C	C
Lard Oil	R	R	R	R	C	C	C
Lauric Acid	R	R	R	R	C	C	C
Lauryl Chloride	R	?	R	NR	NR	NR	NR
Lead Acetate	R	R	R	R	R	R	R
Lead Chloride	R	R	R	R	R	R	R
Lead Nitrate	R	R	R	R	R	R	R
Lead Sulfate	R	R	R	R	R	R	R
Lemon Oil	?	?	?	?	NR	NR	NR
Limonene	?	?	?	?	NR	NR	NR
Linoleic Acid	R	R	R	R	C	C	C
Linoleic Oil	R	R	R	NR	C	C	C
Linseed Oil	R	R	R	R	NR	NR	NR
Liquors	R	R	?	?	?	?	?
Lithium Bromide	R	R	R	R	R	R	R
Lithium Sulfate	R	R	R	R	R	R	R
Lubricating Oils, ASTM#1	R	R	R	R	?	?	?
Lubricating Oils, ASTM#2	R	R	R	R	?	?	?
Lubricating Oils, ASTM#3	R	R	R	NR	?	?	?
Lux Liquid	R	NR	R	NR	?	?	?
Machine Oil	R	R	R	R	C	C	C
Magnesium Carbonate	R	R	R	R	R	R	R
Magnesium Chloride	R	R	R	R	R	R	R
Magnesium Citrate	R	R	?	?	R	R	R
Magnesium Fluoride R	R	R	R	R	R	R	
Magnesium Hydroxide	R	R	R	R	R	R	R
Magnesium Nitrate	R	R	R	R	R	R	R
Magnesium Oxide	R	R	R	R	R	R	R
Magnesium Salts	R	R	R	R	R	R	R
Magnesium Sulfate	R	R	R	R	R	R	R
Maleic Acid 50%	R	R	R	R	R	R	R
Manganese Chloride	R	R	R	R	R	R	R

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Manganese Sulfate	R	R	R	R	R	R	R
Mercural Ointment Blue 5%	R	?	R	?	?	?	?
Mercuric Chloride	R	R	R	R	R	R	R
Mercuric Cyanide	R	R	R	R	R	R	R
Mercuric Sulfate	R	R	R	R	R	R	R
Mercurous Nitrate	R	R	R	R	R	R	R
Mercury	R	R	R	R	R	R	R
Mercury Ointment Ammoniated	R	?	R	?	?	?	?
Methanol <10%	R	R	R	R	R	R	R
Methanol >10%	R	R	R	R	NR	NR	NR
Methoxyethyl Oleate	R	?	R	?	NR	NR	NR
Methyl Cellosolve	NR	NR	NR	NR	NR	NR	NR
Methyl Chloride	NR	NR	NR	NR	NR	NR	NR
Methyl Ethyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methyl Formate	?	?	?	?	NR	NR	NR
Methyl Iso-Butyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methyl Methacrylate	R	?	R	?	NR	NR	NR
Methyl Salicylate	R	?	R	?	NR	NR	NR
Methyl Sulfate	R	NR	R	NR	?	?	?
Methyl Sulfuric Acid	R	R	R	R	?	?	?
Methylamine	NR	NR	NR	NR	NR	NR	NR
Methylene Bromide	NR	NR	NR	NR	NR	NR	NR
Petroleum Liquifier	R	R	R	R	?	?	?
Petroleum Oils (Sour)	R	NR	R	NR	C	C	C
Phenol	NR	NR	NR	NR	R	R	R
Phenylhydrazine	NR	NR	NR	NR	NR	NR	NR
Phenylhydrazine Hydrochloride	NR	NR	NR	NR	NR	NR	NR
Phosgene, Gas	R	?	R	?	NR	NR	NR
Phosgene, Liquid	NR	NR	NR	NR	NR	NR	NR
Phosphoric Acid, up to 85%	R	R	R	R	R	R	R
Phosphorous Pentoxide	R	NR	R	NR	R	R	R
Phosphorous Trichloride	NR	NR	NR	NR	NR	NR	NR
Phosphorous, (Yellow)	R	NR	R	NR	R	R	R
Photographic Solutions: Dektal Developer	R	R	R	R	?	?	?
Photographic Solutions: DK #3	R	R	R	R	?	?	?
Photographic Solutions: Kodak Fixer	R	R	R	R	?	?	?
Photographic Solutions: Kodak Short Stop	R	R	R	R	?	?	?
Picric Acid	NR	NR	NR	NR	NR	NR	NR
Plating Solutions: Brass	R	R	R	R	R	R	R
Plating Solutions: Cadmium	R	R	R	R	R	R	R
Plating Solutions: Copper	R	R	R	R	R	R	R
Plating Solutions: Gold	R	R	R	R	R	R	R
Plating Solutions: Indium	R	R	R	R	R	R	R
Plating Solutions: Lead	R	R	R	R	R	R	R
Plating Solutions: Nickel	R	R	R	R	R	R	R



CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING

R = Recommended NR = Not Recommended

C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Plating Solutions: Rhodium	R	R	R	R	R	R	R
Plating Solutions: Silver	R	R	R	R	R	R	R
Plating Solutions: Tin	R	R	R	R	R	R	R
Plating Solutions: Zinc	R	R	R	R	R	R	R
Polyethylene Glycol	?	?	?	?	NR	NR	NR
Potash (Sat.Aq.)	R	R	?	?	R	R	R
Potassium Acetate	R	R	R	R	R	R	R
Potassium Alum	R	R	R	R	R	R	R
Potassium Amyl Xanthate	R	NR	NR	NR	?	?	?
Potassium Bicarbonate	R	R	R	R	R	R	R
Potassium Bichromate	R	R	R	R	R	R	R
Potassium Bisulfate	R	R	R	R	R	R	R
Potassium Borate	R	R	R	R	R	R	R
Potassium Bromate	R	R	R	R	R	R	R
Potassium Bromide	R	R	R	R	R	R	R
Potassium Carbonate	R	R	R	R	R	R	R
Potassium Chlorate	R	R	R	R	R	R	R
Potassium Chloride	R	R	R	R	R	R	R
Potassium Chromate	R	R	R	R	R	R	R
Potassium Cyanate	R	R	R	R	R	R	R
Potassium Cyanide	R	R	R	R	R	R	R
Potassium Dichromate	R	R	R	R	R	R	R
Potassium Ethyl Xanthate	R	NR	NR	NR	?	?	?
Potassium Ferricyanide	R	R	R	R	R	R	R
Potassium Ferrocyanide	R	R	R	R	R	R	R
Potassium Fluoride	R	R	R	R	R	R	R
Potassium Hydroxide	R	R	R	R	R	R	R
Potassium Hypochlorite	R	R	R	R	R	R	R
Potassium Iodide	R	R	R	R	R	R	R
Potassium Nitrate	R	R	R	R	R	R	R
Potassium Perborate	R	R	R	R	R	R	R
Potassium Perchlorate	R	R	R	R	R	R	R
Potassium Permanganate 10%	R	R	R	R	R	R	R
Potassium Permanganate 25%	R	NR	R	NR	R	R	C
Potassium Persulfate	R	R	R	R	R	?	?
Potassium Phosphate	R	R	R	R	R	R	R
Potassium Sulfate	R	R	R	R	R	R	R
Potassium Sulfide	R	R	R	R	R	R	R
Potassium Sulfite	R	R	R	R	R	R	R
Potassium Tripolyphosphate	R	R	R	R	R	R	R
Propane	R	R	R	R	C	C	C
Propane Gas	R	R	R	R	C	C	C
Propanol 0.5%	R	R	R	?	R	?	R
Propanol > 0.5%	R	R	R	NR	C	C	C
Propargyl Alcohol	R	R	R	NR	C	C	C
Propionic Acid 2%	?	?	?	?	R	R	R
Propionic Acid > 2%	?	?	?	?	NR	NR	NR
Propylene Dichloride	NR	NR	NR	NR	NR	NR	NR
Propylene Glycol 25%	?	?	?	?	C	C	C

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Propylene Glycol > 25%	?	?	?	?	NR	NR	NR
Propylene Oxide	NR	NR	NR	NR	NR	NR	NR
Pyridine	NR	NR	NR	NR	NR	NR	NR
Pyrogallol Acid	R	NR	R	NR	?	?	?
Rayon Coagulating Bath	R	R	R	R	?	?	?
Refinery Crudes	R	R	?	?	C	C	C
Rochelle Salts	R	R	?	?	R	R	R
Salicylic Acid	R	R	R	R	R	R	R
Santicizer	NR	NR	NR	NR	?	?	?
Sea Water	R	R	R	R	R	R	R
Selenic Acid	R	R	R	?	?	?	?
Sewage	R	R	R	R	R	R	R
Silicic Acid	R	R	R	R	R	?	?
Silicone Oil	?	?	?	?	R	?	?
Silver Chloride	R	R	R	R	R	R	R
Silver Cyanide	R	R	R	R	R	R	R
Silver Nitrate	R	R	R	R	R	R	R
Silver Sulfate	R	R	R	R	R	R	R
Soaps	R	R	R	R	R	R	R
Sodium Acetate	R	R	R	R	R	R	R
Sodium Alum	R	R	R	R	R	R	R
Sodium Arsenate	R	R	R	R	R	?	?
Sodium Benzoate	R	R	R	R	R	R	R
Sodium Bicarbonate	R	R	R	R	R	R	R
Sodium Bichromate	R	R	R	R	R	R	R
Sodium Bisulfate	R	R	R	R	R	R	R
Sodium Bisulfite	R	R	R	R	R	R	R
Sodium Borate	R	R	R	R	R	R	R
Sodium Bromide	R	R	R	R	R	R	R
Sodium Carbonate	R	R	R	R	R	R	R
Sodium Chlorate	R	NR	R	NR	R	R	R
Sodium Chloride	R	R	R	R	R	R	R
Sodium Chlorite	NR	NR	NR	NR	R	R	R
Sodium Chromate	R	R	R	R	R	R	R
Sodium Cyanide	R	R	R	R	R	R	R
Sodium Dichromate	R	R	R	R	R	R	R
Sodium Ferricyanide	R	R	R	R	R	R	R
Sodium Ferrocyanide	R	R	R	R	R	R	R
Sodium Fluoride	R	R	R	R	R	R	R
Sodium Formate	?	?	?	?	R	R	R
Sodium Hydroxide 50%	R	R	R	R	R	R	R
Sodium Hypobromite	R	R	R	R	R	R	R
Sodium Hypochlorite	R	R	R	R	R	R	R
Sodium Iodide	R	R	R	R	R	R	R
Sodium Metaphosphate	R	R	R	R	R	R	R
Sodium Nitrate	R	R	R	R	R	R	R
Sodium Nitrite	R	R	R	R	R	R	R
Sodium Perchlorate	R	R	R	R	R	R	R
Sodium Peroxide	R	R	R	R	R	R	R

CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING



R = Recommended NR = Not Recommended

C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Sodium Silicate	R	NR	R	NR	R	R	R
Sodium Sulfate	R	R	R	R	R	R	R
Sodium Sulfide	R	R	R	R	R	R	R
Sodium Sulfite	R	R	R	R	R	R	R
Sodium Thiosulfate	R	R	R	R	R	R	R
Sodium Tripolyphosphate	?	?	?	?	R	R	R
Sour Crude Oil	R	R	R	R	C	C	C
Soybean Oil	R	R	R	R	NR	NR	NR
Stannic Chloride	R	R	R	R	R	R	R
Stannous Chloride	R	R	R	R	R	R	R
Stannous Sulfate	R	R	R	R	R	R	R
Starch	R	R	R	R	R	R	R
Stearic Acid	R	R	R	R	R	?	?
Stoddards Solvent	NR	NR	NR	NR	C	C	C
Styrene	NR	NR	NR	NR	NR	NR	NR
Succinic Acid	R	R	R	R	R	R	R
Sugar	R	R	R	R	R	R	R
Sulfamic Acid	NR	NR	NR	NR	R	R	R
Sulfite Liquor	R	R	R	R	?	?	?
Sulfur	R	R	R	R	R	?	?
Sulfur Dioxide dry	R	R	R	R	R	R	R
Sulfur Dioxide wet	R	NR	NR	NR	R	R	R
Sulfur Trioxide	R	R	R	R	R	R	R
Sulfuric Acid 70%	R	R	R	R	R	R	R
Sulfuric Acid 80%	R	R	NR	NR	R	R	R
Sulfuric Acid 85%	R	R	NR	NR	R	C	NR
Sulfuric Acid 90%	R	NR	NR	NR	R	C	NR
Sulfuric Acid 98%	?	NR	NR	NR	R	NR	NR
Sulfuric Acid Fuming	NR	NR	NR	NR	NR	NR	NR
Sulfuric Acid Pickling	R	R	?	?	R	R	R
Sulfurous Acid	R	R	R	R	?	?	?
Tall Oil	R	R	R	R	C	C	C
Tan Oil	R	R	R	R	?	?	?
Tannic Acid 30%	R	R	R	R	R	?	?
Tanning Liquors	R	R	R	R	?	?	?
Tartaric Acid	R	R	R	R	R	?	?
Terpenes	?	?	?	?	NR	NR	NR
Terpineol	R	?	R	?	NR	NR	NR
Tetraethyl Lead	R	?	R	NR	?	?	?
Texanol	?	?	?	?	NR	NR	NR
Thionyl Chloride	NR	NR	NR	NR	NR	NR	NR
Thread Cutting Oil	R	?	R	?	C	C	C
Titanium Tetrachloride	R	NR	R	NR	?	?	?
Toluol or Toluene	NR	NR	NR	NR	NR	NR	NR
Transformer Oil	R	R	R	R	C	C	C
Tributyl Citrate	R	?	R	?	NR	NR	NR
Tributyl Phosphate	NR	NR	NR	NR	NR	NR	NR
Trichloroacetic Acid	R	?	R	?	NR	NR	NR
Trichloroethylene	NR	NR	NR	NR	NR	NR	NR

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Triethanolamine	R	NR	R	NR	NR	NR	NR
Trilonex	NR	NR	NR	NR	?	?	?
Trimethyl Propane	R	R	R	NR	?	?	?
Trimethylamine	R	NR	R	NR	?	?	?
Trisodium Phosphate	R	R	R	R	R	R	R
Turpentine	R	R	NR	NR	NR	NR	NR
Urea	R	R	R	R	R	R	R
Urine	R	R	R	R	R	R	R
Vaseline	NR	NR	NR	NR	?	?	?
Vegetable Oils	R	?	R	?	NR	NR	NR
Vinegar	R	R	R	R	R	R	R
Vinyl Acetate	NR	NR	NR	NR	NR	NR	NR
Water: Acid Mine	R	R	R	R	R	R	R
Water: Deionized	R	R	R	R	R	R	R
Water: Demineralized	R	R	R	R	R	R	R
Water: Distilled	R	R	R	R	R	R	R
Water: Fresh & Salt	R	R	R	R	R	R	R
Water: Swimming Pool	R	R	R	R	R	R	R
WD-40	?	?	?	?	C	C	C
Whiskey	R	R	R	R	R	R	R
White Liquor	R	R	R	R	R	R	R
Wines	R	R	R	R	R	R	R
Xylene or Xylol	NR	NR	NR	NR	NR	NR	NR
Zinc Acetate	R	R	R	R	R	R	R
Zinc Carbonate	R	R	R	R	R	R	R
Zinc Chloride	R	R	R	R	R	R	R
Zinc Nitrate	R	R	R	R	R	R	R
Zinc Sulfate	R	R	R	R	R	R	R



INDUSTRY STANDARDS & TEST METHODS

Spears® products are manufactured in strict compliance with applicable industry standards and specifications to ensure strength, durability and safety. Although not inclusive, the following list of internationally recognized standards, specifications, test methods and practices relate to PVC and CPVC thermoplastic piping products and related components.

ASTM STANDARD SPECIFICATIONS

ASTM D 1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D 1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe- Schedules 40- 80 and 120
ASTM D 6263	Standard Specification for Extruded Bars Made From Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC)
ASTM D 2464	Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 80
ASTM D 2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 80
ASTM D 2241	Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series)
ASTM F 441	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe- Schedules 40 and 80
ASTM F 442	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
ASTM D 2672	Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
ASTM D 2846	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
ASTM D 2466	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 40
ASTM D 3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM D 2665	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain-Waste- and Vent Pipe and Fittings
ASTM F 437	Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 80
ASTM F 438	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 40
ASTM F 439	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 80
ASTM F 477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F 480	Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR)- Schedule 40 and Schedule 80
ASTM F 493	Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
ASTM F 656	Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
ASTM F 913	Standard Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM D 1866	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings

ASTM STANDARD TEST METHODS

ASTM D 1598	Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
ASTM D 1599	Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe & Fittings
ASTM D 2837	Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM D 2412	Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D 2444	Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
ASTM D 2564	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
ASTM D 2152	Standard Test Method for Adequacy of Fusion by Acetone Immersion
ASTM D 2122	Standard Test Method for Determining Dimensions of Thermoplastic Pipe & Fittings
ASTM F 610	Standard Test Method for Evaluating the Quality of Molded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique

ASTM STANDARD PRACTICES

ASTM D 2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
ASTM D 2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
ASTM D 2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM F 402	Standard Practice for Safe Handling of Solvent Cements- Primers- and Cleaners Used for Joining Thermoplastics Pipe and Fittings
ASTM F 690	Standard Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation System
ASTM F 1057	Standard Practice for Evaluating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique
ASTM F 645	Standard Guide for Selection- Design- and Installation of Thermoplastic Water Pressure Systems



CSA STANDARD

CSA B137.3-99	Rigid Polyvinyl Chloride (PVC) Pipe for Pressure Applications
---------------	---

FIRE PERFORMANCE

ULC-S102.2-M88	Standard Method of Test for Surface Burning Characteristics of Flooring- Floor Covering- and Miscellaneous Materials and Assemblies
UL 723	Test for Surface Burning Characteristics of Building Materials
UL1821	Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service
UL 1887	Standard for Safety for Fire Test of Plastic Sprinkler Pipe for Flame and Smoke Characteristics
UL 94	Test for Flammability of Plastic Materials for Parts in Devices and Appliances
FM1635	Plastic Pipe & Fittings for Automatic Sprinkler Systems
FM4910	Clean Room Materials Flammability Test Protocol
ASTM E 84	Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM D 635	Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Manufacturing in a Horizontal Position
ASTM E 162	Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source
ASTM D 2863	Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Manufacturing (Oxygen Index)

TOXICOLOGY

NSF® Standard 61	Drinking Water System Components - Health Effects
NSF® Standard 14	Manufacturing Piping System Components and Related Materials
United States FDA Code of Federal Regulations	Title 21



INDUSTRY PIPING FORMULAS

Pressure Rating

$$P = \frac{2St}{D-t} \quad S = \frac{P(D-t)}{2t}$$

P is the pressure rating in psi.

S is the Hydrostatic Design Basis (usually 4000 psi) divided by the safety factor (which is 2 for the three standards).

DR is the Dimension Ratio for D2241 and C905 but is OD/t for D1785

Where:

P = pressure, psi

S = circumferential stress, psi

D = outside diameter of pipe, inches

d = inside diameter of pipe, inches (average based on mean wall)

t = average wall thickness, inches

Volume capacity-gallons per ft. length = VG = V x 0.004329

Volume capacity-cubic inches per ft. length = V = 0.7854 x d² x 12

Outside pipe surface, sq. ft per ft. length = AO = $\frac{D^2 \pi}{12}$

Inside pipe surface, sq. ft. per ft. length = A_i = $\frac{d \pi}{12}$

Cross-sectional plastic area, sq. in. = A = $\frac{(D^2 - d^2) \pi}{4}$

Cross sectional flow area, sq. in. = A_F = $\frac{d^2 \pi}{4}$

Weight of PVC pipe, lb. per ft. length = W_{PVC} = .632 x A

Weight of CPVC pipe, lb. per ft. length = W_{CPVC} = .705 x A

Weight of water in pipe, lb. per ft. length = W_w = 0.433 A_F

Weight of water filled pipe, lb. per ft. length = W_{WFP} = W_{PVC} (or W_{CPVC}) + W_w

Radius of gyration, inches = r_g = $\sqrt{\frac{D^2 + d^2}{4}}$

Moment of inertia, inches fourth = I = Ar_g² .0491 (D⁴ - d⁴)

Section modulus, inches cube = Z = $\frac{2I}{D} = 0.0982 \times \frac{(D^4 - d^4)}{D}$

Thermal Expansion and Contraction

$$\Delta L = 12 yL (\Delta T)$$

Where:

Δ L = expansion or contraction of pipe in inches

y = Coefficient of thermal expansion

(see PVC or CPVC material Thermal properties)

L = Length of pipe run in feet

Δ T = Temperature change °F (Maximum temperature – Temperature @ Installation or maximum system temperature – lowest system temperature, whichever is greater)



Friction Loss (Hazen-Williams equations)

$$f = .2083 \times (100/C)^{1.852} \times \frac{G^{1.852}}{d^{4.8655}}$$

Where:

f = friction head of feet of water per 100' for the specific pipe size and I.D.

C = a constant for internal pipe roughness (=150 for thermoplastic pipe)

G = flow rate of U.S. gallons per minute

d = inside diameter of pipe in inches

Water Velocities

$$V = .3208 \times \frac{G}{A}$$

Where:

V = velocity in feet per second

G = gallons per minute

A = inside cross sectional area in square inches

Gallons Per Minute Through Pipe

$$\text{GPM} = 0.0408 \times \text{Pipe Diameter Inches}^2 \times \text{Feet Per Minute Velocity}$$

Pressure Drop in Valves

$$P = \frac{G^2 \times S_g}{C V^2}$$

Where:

P = Pressure drop in PSI; feet of water = PSI/.4332

G = Gallons per minute

S_g = Specific gravity of liquid

C_v = Gallons per minute per 1 PSI pressure drop (see Valve product C_v from manufacturer)

Water Conversions

1 foot of head = 0.434 PSI

1 gallon = 231 cubic inch = 8.333 pounds

1 pound water = 27.7 cubic inches

1 cubic foot water = 7.5 gallon = 62.5

pounds (salt water = 64.3 pounds)

1 miner's inch = 9 to 12 gallons per minute

$$\text{Horsepower to Raise Water} = \frac{\text{Gallons Per Minute} \times \text{Total Head in Feet}}{3960}$$



BASIC CONVERSIONS

VOLUME

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Acre-feet	Cu feet	43560
	Cu meters	1233.482
	Cu yards	1613.33
Cu Centimeters	Gallons (US)	3.259×10^5
	Cu feet	3.5315×10^{-5}
	Cu inches	0.06102
	Cu meters	1×10^{-6}
	Cu yards	1.308×10^{-6}
	Gallons (US liq)	0.00026
	Liters	0.00099
	Ounces (US liq)	0.03381
Cu Feet	Pints (US liq)	0.00211
	Quarts (US liq)	0.00106
	Acre-feet	2.296×10^{-5}
	Cu centimeters	28316.8
	Cu inches	1728.0
	Cu meters	0.02832
	Cu yards	0.03704
	Gallons (US liq)	7.48052
	Liters	28.316
	Ounces (US liq)	957.506
Cu Inches	Pints (US liq)	59.8442
	Quarts (US liq)	29.922
	Acre-feet	1.329×10^{-8}
	Cu centimeters	16.3871
	Cu feet	0.000579
	Cu meters	1.639×10^{-5}
	Cu yards	2.143×10^{-5}
	Gallons (US liq)	0.00433
	Liters	0.01639
	Ounces (US liq)	0.55411
Cu Meters	Pints (US liq)	0.03463
	Quarts (US liq)	0.01732
	Acre-feet	0.00081
	Cu centimeters	1×10^6
	Cu feet	35.147
	Cu inches	61023.7
	Cu yards	1.30795
	Gallons (US liq)	264.172
	Liters	999.97
	Pints (US liq)	2113.38
Cu Yards	Quarts (US liq)	1056.69
	Acre-feet	6.198×10^{-4}
	Cu centimeters	764554.9
	Cu feet	27
	Cu inches	46656
	Cu meters	0.76455
	Gallons (US liq)	201.974
	Liters	764.553
	Quarts (US liq)	807.896

VOLUME - continued

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Gallons (US liq)	Acre-feet	3.068×10^{-6}
	Cu centimeters	3785.41
	Cu feet	0.13368
	Cu inches	231
	Cu meters	0.00378
	Cu yards	0.00495
	Liters	3.7853
	Ounces (US liq)	128
	Pints (US liq)	8
	Quarts (US liq)	4
Liters	Acre-feet	8.106×10^{-7}
	Cu centimeters	1.000.03
	Cu feet	0.03532
	Cu inches	61.002
	Cu meters	0.00100003
	Cu yards	0.00131
	Gallons (US liq)	0.26148
	Ounces (US liq)	33.81497
	Pints (US liq)	2.1134
	Quarts (US liq)	1.0567
Ounces (US liq)	Cu Centimeters	29.5737
	Cu inches	1.80469
	Cu meters	2.957×10^{-5}
	Gallons (US liq)	0.00781
	Liters	0.02957
	Pints (US liq)	0.0625
	Quarts (US liq)	0.0312
	Cu Centimeters	473.176
	Cu feet	0.01671
	Cu inches	28.875
Pints (US liq)	Cu yards	0.000619
	Gallons (US liq)	0.125
	Liters	0.47316
	Quarts (US liq)	0.5

PRESSURE

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Atmospheres	BAR	1.01325
	Ft H ₂ O @ 68°F	33.96
	Grams/sq cm	1033.23
	In Hg @ 32°F	29.9213
	In H ₂ O @ 68°F	407.5
	Kg/sq cm	1.03322
	Kg/sq meter	10332
	kilo Pascals	101.3
	mm Hg @ 32°F	760
	Pounds/sq ft	2116
	Pounds/sq in	14.6960

BASIC CONVERSIONS



PRESSURE - continued

Convert From	Into	Multiply By
BAR	Atmospheres	0.98692
	Ft H ₂ O @ 68°F	33.51
	Grams/sq cm	1019.72
	In Hg @ 32°F	29.530
	In H ₂ O @ 68°F	407.5
	Kg/sq cm	1.01972
	Kg/sq meter	10197
	kilo Pascals	100
	mm Hg @ 32°F	0.1333
	Pounds/sq ft	2089.0
Ft H ₂ O @ 68°F	Pounds/sq in	14.5038
	Atmospheres	0.98692
	BAR	2.984 X 10 ⁻²
	In Hg @ 32°F	0.8812
	In H ₂ O @ 68°F	12
	Kg/sq cm	3.043 X 10 ⁻²
	Kg/sq meter	304.3
	kilo Pascals	2.984
	mm Hg @ 32°F	22.38
	Pounds/sq ft	62.32
Grams/sq cm	Pounds/sq in	0.4328
	Atmospheres	0.00097
	BAR	0.00098
	In Hg @ 32°F	0.02896
	Kg/sq cm	1.01972
	Kg/sq meter	1000
	kilo Pascals	100
	mm Hg @ 32°F	0.73556
	Pounds/sq ft	2.0481
	Pounds/sq in	0.01422
In Hg @32°F	Atmospheres	0.03342
	BAR	0.03386
	Ft H ₂ O @ 68°F	1.135
	Grams/sq cm	34.532
	In H ₂ O @ 68°F	13.62
	Kg/sq cm	3.453 X 10 ⁻²
	Kg/sq meter	345.3
	kilo Pascals	3.386
	mm Hg @ 32°F	25.4
	Pounds/sq ft	70.73
In H ₂ O @ 68°F	Pounds/sq in	0.4912
	Atmospheres	2.454 X 10 ⁻³
	BAR	2.49 X 10 ⁻³
	Ft H ₂ O @ 68°F	8.333 X 10 ⁻²
	In Hg @ 32°F	7.343 X 10 ⁻²
	Kg/sq cm	2.53 X 10 ⁻³
	Kg/sq meter	25.38
	kilo Pascals	0.249
	mm Hg @ 32°F	1.865
	Pounds/sq ft	5.197
	Pounds/sq in	3.609 X 10 ⁻²

PRESSURE - continued

Convert From	Into	Multiply By
Kg/sq cm	Atmospheres	0.9678
	BAR	0.98066
	Ft H ₂ O@68°F	32.87
	In Hg @32°F	28.959
	In H ₂ O @ 68°F	394.4
	Kg/sq meter	1 X 10 ⁴
	kilo Pascals	98.07
	mm Hg @32°F	735.6
	Pounds/sq ft	2048
	Pounds/sq in	14.22
Kg/sq meter	Atmospheres	9.678 X 10 ⁻⁵
	BAR	9.807 X 10 ⁻⁵
	Ft H ₂ O@68°F	3.287 X 10 ⁻³
	Grams/sq cm	0.1
	In Hg @32°F	0.0029
	In H ₂ O @ 68°F	3.944 X 10 ⁻²
	Kg/sq cm	0.001
	kilo Pascals	9.807 X 10 ⁻³
	mm Hg @32°F	0.07356
	Pounds/sq ft	0.20482
kilo Pascals	Pounds/sq in	1.422 X 10 ⁻³
	Atmospheres	9.869 X 10 ⁻³
	BAR	0.01
	Ft H ₂ O@68°F	0.3351
	In Hg @32°F	0.2953
	In H ₂ O @ 68°F	4.022
	Kg/sq cm	1.02 X 10 ⁻²
	Kg/sq meter	102
	mm Hg @32°F	7.501
	Pounds/sq ft	20.89
mm Hg @32°F	Pounds/sq in	0.145
	Atmospheres	1.316 X 10 ⁻³
	BAR	1.333 X 10 ⁻³
	Ft H ₂ O@68°F	4.468 X 10 ⁻²
	Grams/sq cm	1.3595
	In Hg @32°F	3.937 X 10 ⁻²
	In H ₂ O @ 68°F	0.5362
	Kg/sq cm	1.36 X 10 ⁻³
	Kg/sq meter	13.595
	kilo Pascals	0.1333
Pounds/sq ft	Pounds/sq ft	2.7845
	Pounds/sq in	0.0193
	Atmospheres	4.73 X 10 ⁻⁴
	BAR	4.79 X 10 ⁻⁴
	Ft H ₂ O@68°F	1.605 X 10 ⁻²
	Grams/sq cm	0.48824
	In Hg @32°F	2.036
	In H ₂ O @ 68°F	0.1926
	Kg/sq cm	4.88 X 10 ⁻⁴
	Kg/sq meter	4.882
	kilo Pascals	4.79 X 10 ⁻²
	mm Hg @32°F	0.3591
	Pounds/sq in	6.945 X 10 ⁻³



BASIC CONVERSIONS

PRESSURE - continued

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Pounds/sq in	Atmospheres	6.805×10^{-2}
	BAR	6.895×10^{-2}
	Ft H ₂ O @ 68°F	1.605×10^{-2}
	Grams/sq cm	70.307
	In Hg @ 32°F	2.036
	In H ₂ O @ 68°F	27.73
	Kg/sq cm	7.031×10^{-2}
	Kg/sq meter	703.1
	kilo Pascals	6.895
	mm Hg @ 32°F	51.72
	Pounds/sq ft	144

VELOCITY (Distance-time)

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Feet/day	Feet/ second	1.157×10^{-5}
	Kilometers/hour	1.27×10^{-5}
	Meters/second	3.528×10^{-6}
	Miles/hour	7.891×10^{-6}
Feet/ second	Feet/ day	8.64×10^4
	Kilometers/hour	1.097
	Meters/second	0.3048
Kilometers/hour	Miles/hour	0.6818
	Feet/day	7.874×10^4
	Feet/ second	0.9113
	Meters/second	0.2778
Meters/second	Miles/hour	0.6214
	Feet/day	2.835×10^5
	Feet/ second	3.281
Miles/hour	Kilometers/hour	3.6
	Miles/hour	2.237
	Feet/day	1.267×10^5
	Feet/ second	1.467
	Kilometers/hour	1.609
	Meters/second	0.447

DISCHARGE RATES (Volume-time)

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Acre-feet/day	Cu feet/second	0.5042
	Cu meters/day	1234
	Gallons/minute	226.3
	Liters/second	14.28
Cu feet/second	Acre-feet/day	1.983
	Cu meters/day	2447
	Gallons/minute	448.8
	Liters/second	28.32
Cu meters/day	Acre-feet/day	6.051×10^6
	Cu feet/second	3.051×10^6
	Gallons/minute	1.369×10^9
	Liters/second	8.64×10^7
Gallons/minute	Acre-feet/day	4.419×10^{-3}
	Cu feet/second	2.228×10^{-3}
	Cu meters/day	5.45
	Liters/second	6.309×10^{-2}

DISCHARGE RATES - continued

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Liters/second	Acre-feet/day	7.005×10^{-2}
	Cu feet/second	3.531×10^{-2}
	Cu meters/day	86.4
	Gallons/minute	15.85

TORQUE

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Foot-pounds	Inch-pounds	12
	KF force-meters	1382.552×10^{-4}
Inch-pounds	Newton-meters	1.356
	Foot-pounds	0.8333
	KF force-meters	11547.344×10^{-6}
	Newton-meters	11559.357×10^{-5}
KF force-meters	Foot-pounds	7.233
	Inch-pounds	86.8
	Newton-meters	9.807
Newton-meters	Foot-pounds	7374.631×10^{-4}
	Inch-pounds	8.651
	KF force-meters	10196.798×10^{-5}

DENSITY

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
Pounds/Cu inch	Pounds/Cu feet	1728
	Pounds/gallon	231
	Grams/Cu cm	27.68
	Grams/liter	2.768×10^4
Pounds/Cu feet	Pounds/Cu inch	5.787×10^{-4}
	Pounds/gallon	0.1337
	Grams/Cu cm	1.6×10^{-2}
	Grams/liter	16.02
Pounds/gallon	Pounds/Cu inch	4.33×10^{-3}
	Pounds/Cu feet	7.481
	Grams/Cu cm	0.1198
	Grams/liter	119.8
Grams/Cu cm	Pounds/Cu inch	3.61×10^{-2}
	Pounds/Cu feet	62.43
	Pounds/gallon	8.345
	Grams/liter	1000
Grams/liter	Pounds/Cu inch	3.61×10^{-5}
	Pounds/Cu feet	6.24×10^{-2}
	Pounds/gallon	8.35×10^{-3}
	Grams/Cu cm	0.001

ENERGY

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>
British Thermal Unit (BTU)	Foot-pound	777.9
	Horsepower-hr	3.929×10^{-4}
	Joules	1055
	Calorie	252
	Kilowatt-hr	2.93×10^{-4}

BASIC CONVERSIONS



ENERGY - continued

Convert From	Into	Multiply By
Foot-pound	BTU	1.285×10^{-3}
	Horsepower-hr	5.051×10^{-7}
	Joules	1.356
	Calorie	0.3239
	Kilowatt-hr	3.766×10^{-7}
Horsepower-hr	BTU	2545
	Foot-pound	1.98×10^6
	Joules	2.685×10^6
	Calorie	6.414×10^5
	Kilowatt-hr	0.7457
Joules	BTU	9.481×10^{-4}
	Foot-pound	0.7376
	Horsepower-hr	3.725×10^{-7}
	Calorie	0.2389
	Kilowatt-hr	2.778×10^{-7}
Calorie	BTU	3.968×10^{-3}
	Foot-pound	3.087
	Horsepower-hr	1.559×10^{-6}
	Joules	4.186
	Kilowatt-hour	1.163×10^{-6}
Kilowatt-hr	BTU	3413
	Foot-pound	2.655×10^6
	Horsepower-hr	1.341
	Joules	3.6×10^6
	Calorie	8.601×10^5

MASS

Convert From	Into	Multiply By
Ounce	Pound	0.0625
	Kilogram	0.02834952
	Short ton	3.125×10^{-5}
	Long ton	2.79×10^{-5}
	Metric ton	2.835×10^{-5}
Pound	Ounce	16
	Kilogram	0.4536
	Short ton	0.0005
	Long ton	0.0004464
	Metric ton	0.0004536
Kilogram	Ounce	35.27396
	Pound	2.20462
	Short ton	0.001102
	Long ton	0.00098
	Metric ton	0.091
Short ton	Ounce	32000
	Pound	2000
	Kilogram	907.18
	Long ton	0.89266
	Metric ton	0.90718
Long ton	Ounce	35840
	Pound	2240
	Kilogram	1016.05
	Short ton	1.12
	Metric ton	1.10605

MASS - continued

Convert From	Into	Multiply By
Metric ton	Ounce	35273.98
	Pound	2204.62
	Kilogram	1000
	Short ton	1.1023
	Long ton	0.98421



Words, Terms, & Phrases Used in the Plastic Industry

ABRASION RESISTANCE: Ability to withstand the effects of repeated wearing, rubbing, scraping, etc.

ACCEPTANCE TESTING: Testing performed on a product to determine whether or not an individual lot of the product conforms with specified requirements.

ACIDS: One of a class of substances compounded of hydrogen and one or more other elements, capable of uniting with a base to form a salt, and in aqueous solution, turning blue litmus paper red.

ACRYLATE RESINS: A class of thermoplastic resins produced by polymerization of acrylic acid derivatives.

ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PIPE AND FITTING PLASTICS: Plastics containing polymers or blends of polymers containing butadiene, acrylonitrile, and styrene or substituted styrene plus lubricants, stabilizers, and colorants.

ADHESIVE: A substance capable of holding materials together by surface attachment.

AGING: The effect of time on plastics exposed indoors at ordinary conditions of temperature and relatively clean air.

ALKALIES: Compounds capable of neutralizing acids and usually characterized by an acrid taste. Can be mild like baking soda or highly caustic like lye.

ALIPHATIC: Derived from or related to fats and other derivatives of the paraffin hydrocarbons, including unsaturated compounds of the ethylene and acetylene series.

ALKYD RESINS: A class of resins produced by condensation of a polybasic acid or anhydride and a polyhydric alcohol.

ALLYL RESINS: A class of resins produced from an ester or other derivative of allyl alcohol by polymerization.

ANIONS: Atoms or group of atoms carrying a negative charge. The charge results because there are more electrons than protons in the anion. Anions can be a source of micro contamination in high purity water applications.

ANNEAL: To prevent the formation of or remove stresses in plastics parts by controlled cooling from a suitable temperature.

APPARENT DENSITY: The weight per unit volume of a material including voids inherent in the material as tested.

AROMATIC: A large class of cyclic organic compounds derived from, or characterized by the presence of the benzene ring and its homologs.

AUTHORITY HAVING JURISDICTION (AHJ): the individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision, created by law to administer and enforce specified requirements.

BACKFILL: All material used to fill the trench from bedding to finished surface.

BACKFILL, FINAL: Material used to fill the trench from initial backfill to finished surface.

BACKFILL, INITIAL: Material used to fill the trench from top of bedding to a designated height over the pipe.

BACKFILL, UNCONSOLIDATED: Non-compacted material in place in trench.

BEAM LOADING: The application of a load to a pipe between two points of support, usually expressed in newtons (or pounds force) and the distance between the centers of the supports.

BEDDING, n: Materials placed in the bottom of the trench on top of the foundation soil which provides stable bottom support for buried pipe including the trench bottom groove support angle or select material placed around the pipe, and envelope or filter materials where used during insulation.

BEDDING, v: Placement of support materials for buried pipe.

BELL END: The enlarged portion of a pipe that resembles the socket portion of a fitting and that is intended to be used to make a joint.

BEVELED PIPE: A pipe with an end chamfered to assist in assembly into a socket connection.

BLISTER: Undesirable rounded elevation of the surface of a plastic, whose boundaries may be either more or less sharply defined, somewhat resembling in shape a blister on the human skin. A blister may burst and become flattened.

BOND: To attach by means of an adhesive.

BRITTLE FAILURE: A pipe failure mode which exhibits no visible (to the naked eye) permanent material deformation (stretching, elongation, or necking down) in the area of the break.

BUILDING SANITARY SEWER: That part of the horizontal piping of a sanitary drainage system which extends from the building sanitary drain, receives the discharge of the building sanitary drain, and conveys it to a public sewer, private sewer, individual sewage disposal system, or other point of disposal.

BUILDING STORM SEWER: That part of the horizontal piping of a storm drainage system which extends from the building storm drain, receives the discharge of the building storm drain, and conveys it to a public storm sewer, private storm sewer, or other point of disposal.

BURNED: Showing evidence of thermal decomposition through some discoloration, distortion, or destruction of the surface of the plastic.

CALENDERING: A process by which a heated rubber plastic product is squeezed between heavy rollers into a thin sheet or film. The film may be frictioned into the interstices of cloth, or it may be coated onto cloth or paper.

CAST RESIN: A resinous product prepared by pouring liquid resins into a mold and heat treating the mass to harden it.

CATALYSIS: The acceleration (or retardation) of the speed of a chemical reaction by the presence of a comparatively small amount of a foreign substance called a catalyst.

CATIONS: Atoms or group of atoms carrying a positive charge. The charge results because there are more protons than electrons in the cation. Cations can be a source of micro contamination in high purity water applications.



CELLULOSE: Inert substance, chemically a carbohydrate, which is the chief component of the solid structure of plants, wood, cotton, linen, etc.

CELLULOSE ACETATE: A class of resins made from a cellulose base, either cotton linters or purified wood pulp, by the action of acetic anhydride and acetic acid.

CEMENT: A dispersion of "solution" of unvulcanized rubber or a plastic in a volatile solvent. This meaning is peculiar to the plastics and rubber industries and may or may not be an adhesive composition (See also Solvent Cement).

CHLORINATED POLY VINYL CHLORIDE PLASTICS (CPVC): Plastics based on chlorinated poly (vinyl chloride) in which the chlorinated poly (vinyl chloride) is in the greatest amount by weight.

COALESCENCE: The union or fusing together of fluid globules or particles to form larger drops or a continuous mass.

COEXTRUSION: A process whereby two or more heated or unheated plastic material streams forced through one or more shaping orifice(s) become one continuously formed piece.

COLD FLOW: Change in dimensions or shape of some materials when subjected to external weight or pressure at room temperature.

COMPACTION, SOIL: Act of packing soil with mechanical force to increase its density.

COMPOSITE PIPE: Pipe consisting of two or more different materials arranged with specific functional purpose to serve as pipe.

COMPOUND: A combination of ingredients before being processed or made into a finished product. Sometimes used as a synonym for material, formulation.

CONDENSATION: A chemical reaction in which two or more molecules combine, usually with the separation of water or some other simple substance.

CONDUCTIVITY: Inverse of resistivity, used to assess ionic concentration by measuring conductance of flow of electric current.

CONDUIT: A tubular raceway for carrying electric wires, cables, or other conductors.

COPOLYMER: The product of simultaneous polymerization of two or more polymerizable chemicals, commonly known as monomers.

CRAZING: Fine cracks at or under the surface of a plastic.

CREEP: The unit elongation of a particular dimension under load for a specific time following the initial elastic elongation caused by load application. It is expressed usually in inches per inch per unit of time.

CROSS LINKING: The formation of a three dimensional polymer by means of interchain reactions resulting in changes in physical properties.

CURE TIME (Solvent Cement): The necessary waiting period before pressurizing newly assembled joints in which the solvents in the cement must evaporate to produce joint strength.

DEGRADATION: A deleterious change in the chemical structure of a plastic.

DEIONIZED RESINS (DI RESINS): Electrically charged synthetic resin beads (typically produced from polystyrene resins) used to remove ionic contaminants as a means of purifying water through the ion exchange process.

DEIONIZED WATER (DI WATER): Water that has been purified by removing dissolved solids through an ion exchange process where ionic contaminants are removed.

DELAMINATION: The separation of the layers of material in a laminate.

DETECTION LIMIT (DL): With regard to micro contaminant analysis, it is the lowest measurable quantity of a particular element that is detectable by the analytical detection method used.

DETERIORATION: A permanent change in the physical properties of a plastic evidenced by impairment of these properties.

DIELECTRIC CONSTANT: Specific inductive capacity. The dielectric constant of a material is the ratio of the capacitance of a condenser having that material as dielectric to the capacity of the same condenser having a vacuum as dielectric.

DIELECTRIC STRENGTH: This is the force required to drive an electric current through a definite thickness of the material; the voltage required to break down a specified thickness of insulation.

DIFFUSION: The migration or wandering of the particles or molecules of a body of fluid matter away from the main body through a medium or into another medium.

DIMENSIONAL STABILITY: Ability of a plastic part to maintain its original proportions under conditions of use.

DIMENSION RATIO (DR): The average specified diameter of a pipe or tubing divided by the minimum specified wall thickness. The DR values shall be rounded to the nearest 0.5 unless otherwise specified (See also Standard Dimensional Ratio).

DUCTILE FAILURE: A pipe failure mode which exhibits material deformation (stretching, elongation, or necking down) in the area of the break.

DUROMETER: Trade name of the Shore Instrument Company for an instrument that measures hardness. The rubber or plastics durometer determines the "hardness" of rubber or plastics by measuring the depth of penetration (without puncturing) of blunt needle compressed on the surface for a short period of time.

DYNAMIC LEACH ANALYSIS: Relates to analytical testing of piping materials that are tested during exposure to UPW under flowing conditions. Under flowing conditions (dynamic), grab samples of high purity water are periodically pulled from the water flowing through the pipe and are subjected to leach analysis to quantify TOC, anions, cations & trace metals and other leachable contaminants that may be present under flowing conditions. Dynamic leach analysis also enables "on-line" testing of other potential contamination by continually monitoring resistivity, particles, and TOC overtime.



GLOSSARY OF TERMS

ELASTIC LIMIT: The load at which a material will no longer return to its original form when the load is released.

ELASTOMER: The name applied to substances having rubber like properties.

ELECTRICAL PROPERTIES: Primarily the resistance of a plastic to the passage of electricity, e.g. dielectric strength.

ELONGATION: The capacity to take deformation before failure in tension and is expressed as a percentage of the original length.

EMBEDMENT: The placement of materials completely around the pipe to provide support.

EMULSION: A dispersion of one liquid in another possible only when they are mutually insoluble.

ENVIRONMENTAL STRESS CRACKING (ESC): The development of cracks in a material that is subjected to stress or strain in the presence of specific chemicals.

ESTER: A compound formed by the elimination of water during the reaction between an alcohol and an acid; many esters are liquids. They are frequently used as plasticizers in rubber and plastic compounds.

ETHYL CELLULOSE: A thermoplastic material prepared by the ethylation of cellulose by diethyl sulfate or ethyl halides and alkali.

EXTRUSION: A process in which heated or unheated plastic is forced through a shaping orifice (a die) in one continuously formed shape as film, sheet, rod, or tubing.

EXTENDER: A material added to a plastic composition to reduce its cost.

FABRICATE: Method of forming a plastic into a finished article by machining, drawing, and similar operations.

FILLER: A material added to a plastic composition to impart certain qualities in the finished article.

FITTING: A piping component used to join or terminate sections of pipe or to provide changes of direction or branching in a pipe system.

FLEXURAL STRENGTH: The outer fiber stress, which must be attained in order to produce a given deformation under a beam load.

FORMULATION: A combination of ingredients before being processed or made into a finished product. Sometimes used as a synonym for material, compound.

FUSE: To join two plastic parts by softening the material by heat or solvents.

GATE: In an injection mold, a constriction in the flow channel between the runner and the mold cavity.

GENERIC: Common names for types of plastic materials. They may be either chemical terms or coined names. They contrast with trademarks, which are the property of one company.

GRAVITY FLOW: Liquefied medium conveyance that is induced by a positive elevation head such as a downward pipeline slope or a higher elevation reservoir.

GRAY WATER: The waste water of a system that may be a combination of the liquid and water-carried wastes except human wastes.

HARDNESS: A comparative gauge of resistance to indentation, not of surface hardness or abrasion resistance.

HEAT RESISTANCE: The ability to withstand the effects of exposure to high temperature. Care must be exercised in defining precisely what is meant when this term is used. Descriptions pertaining to heat resistance properties include: boilable, washable, cigarette proof, sterilizable, etc.

HIGH-DENSITY POLYETHYLENE PLASTICS (HDPE): *n*—those linear polyethylene plastics, g.v., having a standard density of 0.941 g/cm³ or greater.

HOOP STRESS: The circumferential stress imposed on a cylindrical wall by internal pressure loading.

IONIC CONTAMINATION: Electrically charged atoms or groups of atoms that can be a source of micro contamination in high purity water applications. Ionic contaminants are typically removed by the ion exchange (deionization) process (i.e. deionized water).

IMPACT STRENGTH: Resistance or mechanical energy absorbed by a plastic part to such shocks as dropping and hard blows.

IMPERMEABILITY: Permitting no passage into or through a material.

INJECTION MOLDING: Method of forming a plastic to the desired shape by forcing heat softened plastic into a relatively cool cavity where it rapidly solidifies.

KETONES: Compounds containing the carbonyl group (CO) to which is attached two alkyl groups. Ketones, such as methyl ethyl Ketone, are commonly used as solvents for resins and plastics.

LIGHT STABILITY: Ability of a plastic to retain its original color and physical properties upon exposure to sun or artificial light.

LIGHT TRANSMISSION: The amount of light that a plastic will pass.

LONGITUDINAL STRESS: The stress imposed on the long axis of any shape. It can be either a compressive or tensile stress.

LOW-DENSITY POLYETHYLENE PLASTICS (LDPE): *n*—those branched polyethylene plastics, q.v., having a standard density of 0.910 to 0.925 g/cm³.

LUBRICANT: A substance used to decrease the friction between solid faces, and sometimes used to improve processing characteristics of plastic compositions.

MODULUS: The load in pounds per square inch or kilos per square centimeter of initial cross sectional area necessary to produce a stated percentage elongation which is used in the physical testing of plastics.

MOISTURE RESISTANCE: Ability to resist absorption of water.



MONOMER: The simplest repeating structural unit of a polymer; for addition polymers this represents the original unpolymerized compound.

NON FLAMMABLE: Will not support combustion.

NON-PRESSURE RATED PIPE (NPR): Pipe designed for gravity-conveyed medium which must resist only intermittent static pressures and does not have a pressure rating.

NONRIGID PLASTIC: A plastic which has a stiffness or apparent modulus of elasticity of not over 10,000 psi at 23°C which is determined in accordance with the Standard Method of Test for Stiffness in Flexure of Plastics.

NON TOXIC: Non poisonous.

ORANGE PEEL: Uneven surface somewhat resembling an orange peel.

ORGANIC CHEMICAL: Originally applied to chemicals derived from living organisms, as distinguished from “inorganic” chemicals found in minerals and inanimate substances; modern chemists define organic chemicals more exactly as those, which contain the element carbon.

PHENOLIC RESINS: Resins made by reaction of a phenol compound or tar acid with an aldehyde; more commonly applied to thermosetting resins made from pure phenol.

PLASTIC: A material that contains as an essential ingredient an organic substance of large molecular weight, is solid in its finished state, and, at some stage in its manufacture or in its processing into finished articles, can be shaped by flow.

PLASTICITY: A property of plastics and resins which allows the material to be deformed continuously and permanently without rupture upon the application of a force that exceeds the yield value of the material.

PLASTICIZER: A liquid or solid incorporated in natural and synthetic resins and related substances to develop such properties as resiliency, elasticity, and flexibility.

POLYETHYLENES: A class of resins formed by polymerizing ethylene, a gas obtained from petroleum hydrocarbons.

POLYMER: A product resulting from a chemical change involving the successive addition of a large number of relatively small molecules (monomer) to form the polymer, and whose molecular weight is usually a multiple of that of the original substance.

POLYMERIZATION: Chemical change resulting in the formation of a new compound whose molecular weight is usually a multiple of that of the original substance.

POLYPROPYLENE (PP): *n*—a polymer prepared by the polymerization of propylene as the sole monomer.

POLYVINYL CHLORIDE (PVC): Polymerized vinyl chloride, a synthetic resin, which when plasticized or softened with other chemicals has some rubber like properties. It is derived from acetylene and anhydrous hydrochloric acid.

POROSITY: Presence of numerous visible voids.

POWER FACTOR: The ratio of the power in watts delivered in an alternating current circuit (real power) to the volt-ampere input (apparent power). The power factor of

insulation indicates the amount of the power input, which is consumed as a result of the impressed voltage forcing a small leakage current through the material.

PRESSURE RATING (PR): The estimated maximum water pressure the pipe is capable of withstanding continuously with a high degree of certainty that failure of the pipe will not occur.

PRIMER: An organic solvent or a blend of solvents, which enhances adhesion, applied to plastic pipe and fittings prior to application of a solvent cement.

QUICK BURST TEST: An internal pressure test designed to produce failure of a piping component over a relatively short period of time, usually measured in seconds. Quick Burst tests are typically specified as a 60 to 70 second test in applicable ASTM Standards for pipe and fittings.

RECYCLED PLASTIC: A thermoplastic material recovered from usually melt processed scrap of varying sources, sometimes completely different in form from their original state.

RESILIENCE: Usually regarded as another name for elasticity. While both terms are fundamentally related, there is a distinction in meaning. Elasticity is a general term used to describe the property of recovering original shape after a deformation. Resilience refers more to the energy of recovery; that is, a body may be elastic but not highly resilient.

RESIN: An organic substance, generally synthetic, which is used as a base material for the manufacture of some plastics.

RESISTIVITY: As related to high purity water systems, it is used to assess ionic contaminant concentrations by measuring opposition to the flow of electric current in the water, and is typically measured in meg-ohms (expressed as meg-ohm resistivity of the water) to quantify the water purity.

REWORK PLASTIC: A thermoplastic plastic from a manufacturer's own production that has been reground or pelletized for reuse by that same manufacturer.

RO WATER (REVERSE OSMOSIS): Water that has been stripped of contaminants (purified) through the reverse osmosis purification process. Reverse osmosis is a filtration process whereby pressurized feed water flows across a membrane. The filtered water is known as permeate because it has penetrated the membrane. The RO process removes most organic compounds, up to 99% of all ions, and is more efficient than many alternate water purification methods.

RIGID PLASTIC: A plastic which has a stiffness or apparent modulus of elasticity greater than 100,000 psi at 23°C when determined in accordance with the Standard Method of Test for Stiffness in Flexure of Plastics.

SIMULATED WEATHERING: The exposure of plastics to cyclic laboratory conditions of high and low temperatures, high and low relative humidities, and ultraviolet radiant energy in an attempt to produce changes in their properties similar to those observed on long time continuous exposure outdoors. The laboratory exposure conditions are usually intensified beyond those encountered in actual outdoor exposure in an attempt to achieve an accelerated effect.



GLOSSARY OF TERMS

SIMULATED AGING: The exposure of plastics to cyclic laboratory conditions of high and low temperatures, and high and low relative humidities in an attempt to produce changes in their properties similar to those observed on long time continuous exposure to conditions of temperature and relative humidity commonly encountered indoors or to obtain an acceleration of the effects of ordinary indoor exposure. The laboratory exposure conditions are usually intensified beyond those actually encountered in an attempt to achieve an accelerated effect.

SOLVENT: The medium within which a substance is dissolved; most commonly applied to liquids used to bring particular solids into solution, e.g., acetone is a solvent for PVC.

SOLVENT CEMENT: Dissolved plastic resin or compound in a suitable solvent or mixture of solvents. The solvent cement dissolves the surfaces of the pipe and fittings to form a bond (weld) between the mating surfaces provided the proper cement is used for the particular materials and proper techniques are followed.

SOLVENT CLEANER: An organic solvent used to remove foreign matter from the surface of plastic pipe and fittings.

SPECIFIC GRAVITY: Ratio of the mass of a body to the mass of an equal volume of water at 4°C, or some other specified temperature.

SPECIFIC HEAT: Ratio of the thermal capacity of a substance to that of water at 15°C.

STABILIZER: A chemical substance, which is frequently added to plastic compounds to inhibit undesirable changes in the material, such as discoloration due to heat or light.

STANDARD DIMENSION RATIOS (SDR): A specific ratio of the average specified outside diameter to the minimum specified wall thickness (D0/t) for outside diameter-controlled plastic pipe.

STATIC LEACH ANALYSIS: Relates to analytical testing of materials that are tested during exposure to UPW (or other test medium) under static or non-flowing conditions (soak). Test method is used to quantify the degree of micro contaminants that are extracted or “leached” from the material being immersed. Various test methods are utilized to quantify any leachates detected.

STRAIN: The change per unit of length in a linear dimension of a body, that accompanies a stress. Strain is a dimensionless quantity which may be measured conveniently in percent, in inches per inch, in millimeters per millimeter, etc.

STRENGTH: The mechanical properties of a plastic, such as a load or weight carrying ability, and ability to withstand sharp blows. Strength properties include tensile, flexural, and tear strength, toughness, flexibility, etc.

STRESS CRACK: External or internal cracks in a plastic caused by tensile stresses less than that of its short time mechanical strength.

STYRENE PLASTICS: Plastics based on polymers of styrene or copolymers of styrene with other monomers, the styrene being the greatest amount by mass.

SUSTAINED PRESSURE TEST: A constant internal pressure test for an extended period of time. One thousand hours is a commonly used period of time in pipe and fitting tests.

TEAR STRENGTH: Resistance of a material to tearing (strength).

TENSILE STRENGTH: The capacity of a material to resist a force tending to stretch it. Ordinarily the term is used to denote the force required to stretch a material to rupture, and is known variously as “breaking load”, “breaking stress”, “ultimate tensile strength”, and sometimes erroneously as “breaking strain”. In plastics testing, it is the load in pounds per square inch or kilos per square centimeter of original cross-sectional area, supported at the moment of rupture by a piece of test sample on being elongated.

THERMAL CONDUCTIVITY: Capacity of a plastic material to conduct heat.

THERMAL EXPANSION: The increase in length of a dimension under the influence of a change in temperature.

THERMOPLASTIC MATERIALS: Plastic materials that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion.

THERMOSET MATERIALS: Plastic materials, which undergo a chemical change and harden permanently when heated in processing. Further heating will not soften these materials.

TOTAL ORGANIC CARBON (TOC): A measurement of total organic carbon (synonymous with total oxidizable carbon and total organic chemicals) that is used to quantify organic contamination present in water. Organic matter plays a major role in water systems, as it affects biogeochemical processes, nutrient cycling, biological availability, chemical transport and interactions. It also has direct implications in the planning of water treatment and equipment. Organic matter content is typically measured as total organic carbon and dissolved organic carbon. Organic matter in water consists of thousands of components, including macroscopic particles, colloids, dissolved macromolecules, and specific compounds. As a result, the concentration of TOC's present within the water can be of a concern in high purity water as it is a form of micro contamination.

TRANSLUCENT: Permitting the passage of light, but diffusing it so that objects beyond cannot be clearly distinguished.

VINYL CHLORIDE PLASTICS: Plastics based on resins made by the polymerization of vinyl chloride or co polymerization of vinyl chloride with minor amounts (not over 50 per cent) of other unsaturated compounds.



ULTRAPURE WATER (UPW): Water that has been purified by various methods and/or combination of methods (i.e. Reverse Osmosis, deionization etc.). The produced water is extremely pure and contains no to very low concentration of salts, organic/pyrogene components, oxygen, suspended solids and bacteria. Water quality standards are used to define the purity requirements of the UPW based on the intended application. Ultrapure water is a very aggressive cleaning agent and is used in a variety of industries (semiconductor, pharmaceutical, health care, electronics etc.) where maintaining high purity is a requirement.

VINYL PLASTICS: Plastics based on resins made from vinyl monomers, except those specifically covered by other classifications, such as acrylic and styrene plastics. Typical vinyl plastics are polyvinyl chloride, polyvinyl acetate, polyvinyl alcohol, and polyvinyl butyral, and copolymers of vinyl monomers with unsaturated compounds.

VIRGIN PLASTIC: A plastic material in the form of pellets, granules, powder, or liquid that has not been subjected to use or processing other than that required for its initial manufacture.

VISCOSITY: The property of resistance to flow exhibited within the body of a material.

VOLATILE: Property of liquids to pass away by evaporation.

VOLUME RESISTIVITY: The electrical resistance of a 1 centimeter cube of the material expressed in ohm centimeters.

WATER ABSORPTION: The percentages by weight of water absorbed by a sample immersed in water. Dependent upon area exposed.

WATER VAPOR TRANSMISSION: The penetration of a plastic by moisture in the air.

WEATHER RESISTANCE: The ability of a plastic to retain its original physical properties and appearance under prolonged exposure to outdoor weather.

WELDING: The joining of two or more pieces of plastic by fusion of the material in the pieces at adjoining or nearby areas either with or without the addition of plastic from another source.

YIELD POINT: The point at which a material will continue to elongate at no substantial increase in load during a short test period.

YIELD STRESS: The force, which must be applied to a plastic to initiate flow.



FlameGuard®

CPVC FIRE SPRINKLER PIPING PRODUCTS



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS



Visit our web site
www.spearsmfg.com

Complete System of Pipe, Fittings & Solvent Cement *Corrosion Resistant • Superior Flow • Ease of Installation*



based on proven products that have been in continuous service for over 40 years. Spears® **FlameGuard®** products are approved by UL®, FM® Global, LPCB and Certified by NSF International for potable water use. Check local codes for restrictions and limitations.

Spears® **FlameGuard®** CPVC Fire Sprinkler Products provide a cost effective alternative to metal systems with advantages of high corrosion resistance, improved system hydraulics, ease of installation and quick assembly with readily available tools. CPVC Fire Sprinkler Systems are



Corrosion Resistant CPVC Material Does Not Sustain Biological Growth

Unlike metal systems, **FlameGuard®** CPVC products never rust, scale or pit and do not sustain biological growth - a cause of Microbiologically Influenced Corrosion (MIC) which can destroy metal fire sprinkler systems from the inside out.

Superior Flow Characteristics for Lower Friction Losses

The smooth-wall interior surfaces of **FlameGuard®** CPVC systems result in reduced friction loss over metal systems. The design flow characteristics remain constant throughout the life of the product because there is no interior corrosion in the system due to microbiological activity.

Pressure Rated to 175 psi (1200kpa) @ 150°F (65°C)

FlameGuard® CPVC Products are produced in combinations of Schedule 40 and Schedule 80 Fitting configurations conforming to ASTM F 438 or F 439 standards and **FlameGuard®** SDR 13.5 CPVC Fire Sprinkler Pipe conforming to ASTM F 442 standards. UL® Rated working pressure is 175 psi (1200kpa) @ 150°F (65°C) (LPCB rated to 120°F) (49°C).

Easy Installation for Lower Costs

FlameGuard® CPVC system installations significantly reduce costs over conventional metal piping by virtually eliminating prefabrication. Systems can be fully installed on site using solvent cement joining methods.

UL® Listed for U.S. and Canada in NFPA 13, 13R & 13D Systems

FlameGuard® CPVC Fire Sprinkler Products are UL® listed for U.S. and Canada applications for Light Hazard occupancies as defined in NFPA 13, Residential occupancies up to and including 4-stories as defined in NFPA 13R, and Residential occupancies for one and two family dwellings and manufactured homes as defined in NFPA 13D. Consult Spears® **FlameGuard®** CPVC Fire Sprinkler Products Installation Instructions and NFPA Standards for additional applications including air plenum, system risers, concealed, exposed, underground, combustible attic, garage, basement and low pressure dry piping installations.

Full Limited Lifetime Warranty

FlameGuard® CPVC Fire Sprinkler Products carry a limited lifetime warranty against defects in material or workmanship. Consult Spears® warranty for additional details.



FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

Spears® FlameGuard® . . . The Leader in Innovative CPVC Fire Sprinkler System Products

Pioneer in Molded-in Metal Insert Head Adapters

Spears® pioneered the development of the **FlameGuard®** molded-in-place metal thread insert for connection of sprinkler heads to CPVC fire sprinkler systems, plus Metal FIPT threaded female adapters for metal-to-plastic transitions.



Developed the Special Reinforced (SR) Head Adapters

Spears® **FlameGuard®** continuous improvement program developed the technology to produce a superior patented plastic threaded fitting - the Special Reinforced (SR) Design. This unique design incorporates a patented thermoplastic compression process that equalizes stresses generated by tapered thread joint make-up. All CPVC plastic body and threads provide a more uniform construction and improved corrosion resistance.



Now, the Revolutionary TorqueSafe™ Gasket Sealed Head Adapter

- Requires NO Thread Sealants • Eliminates Stress
- Prevents Over Tightening • Provides Easy Frame Alignment

Spears® revolutionary design features a special molded-in-place Brass Thread Insert fitted with an elastomer gasket seal at the base of the threads.

The gasket seal allows a modified thread design that eliminates radial stress and associated problems typical with tapered thread joint make up. The insert is designed to rotate for easy sprinkler frame alignment without over tightening. Patent Pending.



Full Assortment of Specialty Products & Fitting Configurations

Spears® **FlameGuard®** provides the specialty fittings needed in today's fire sprinkler systems. Like the adjustable drop nipple for fine-tuning to finished ceiling height, and ringed head adapter for ease of locating during installation. Plus, Spears® **FlameGuard®** line offers a full assortment of CPVC fire sprinkler fitting configurations including Tees, Elbows, Flanges, Couplings, Caps, Male Adapters, Grooved Coupling Adapters and Unions, sizes 3/4" through 3"; with new 3/4" and 1" Repair Couplings.

Complete Size Range of CPVC Pipe

Spears® **FlameGuard®** CPVC Fire Sprinkler Pipe is available in sizes 3/4" to 3". Conforms to ASTM F 442 standard for SDR 13.5 CPVC pipe.



Spears® Solvent Cements & Thread Sealant

FlameGuard® products should be installed using Spears® FS-5 One-Step Solvent Cement. For threaded joints, use Spears® **BLUE 75™** Thread Sealant that has been tested for compatibility with **FlameGuard®** CPVC Fire Sprinkler Products. Spears® **TorqueSafe™** Gasket Sealed Adapter requires no sealant. Consult sprinkler head manufacturer prior to use.



The information contained in this section is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611—East Coast: (678) 985-1263].

General Information

RECOMMENDATIONS FOR INSTALLERS AND USERS:

Plastic piping systems should be ENGINEERED, INSTALLED and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. All Installation and maintenance personnel should be trained in the proper handling and installation requirements and precautions of plastic piping systems. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

Installation must be made in accordance with Spears® Manufacturing Company
FlameGuard® CPVC Fire Sprinkler Piping Products Installation Instructions - FG-3

NOTE — Individual or group instruction in correct solvent welding procedures is available by contacting your local distributor or your servicing Spears® Regional Distribution Center.

SOLVENT CEMENT CONNECTIONS — Spears® Manufacturing Company recommends the use of Spears® FS-5 One Step solvent cement for joining Spears® products. Use of solvent cementing products not approved for CPVC fire sprinkler systems, or failure to follow installation instructions will automatically void the warranty.

THREADED CONNECTION — Spears® Manufacturing Company recommends the use of Spears® BLUE 75™ Thread Sealant. This product has been tested by Spears® and the sealant manufacturer for compatibility with the Spears® CPVC fire sprinkler products. Consult the sprinkler head manufacturer before using this product. **WARNING: OTHER PIPE JOINT COMPOUNDS OR PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THE CPVC OR OTHER FITTING COMPONENTS.** Care must be taken to avoid over torquing - generally 1 to 2 turns beyond finger tight is all that is required to make up a threaded connection. Factory testing has indicated 10-25 ft. lbs. of torque is adequate to obtain a leak free seal.

GASKET SEALED THREAD CONNECTIONS — This type of connection can only be made with Spears® TorqueSafe™ style Gasket Sealed Female Sprinkler Adapters. DO NOT USE ANY TYPE OF THREAD SEALANT WHEN INSTALLING THIS TYPE OF ADAPTER. Tape or paste may impair proper sealing and function. Testing has shown that hand tight until snug is all that is needed to seal this special connection.

Installation Training Available - Contact Spears® Technical Services for Details

FlameGuard® Products must be installed in accordance with Spears® CPVC Fire Sprinkler Piping Products Installation Instructions, National Fire Protection Association Standards 13, 13R, 13D, and in accordance with local codes. Code requirements and field conditions may differ. It is the responsibility of the installing contractor to insure that the product is suitable to meet these requirements.

Dimension Reference

G = (LAYING LENGTH) Intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

Q = Width of flats; ±1/16 inch.

W = Height of cap; ± 1/16 inch.

CPVC FIRE SPRINKLER PIPE SDR 13.5 (ASTM F 442)

Part Number	Nominal Size		Average O.D.		Average I.D.		Approx. Weight Lbs./Ft.
	Inches	(mm)	Inches	(mm)	Inches	(mm)	
CP-007	3/4	(19.1)	1.050	(26.7)	.874	(22.5)	.181
CP-010	1	(25.4)	1.315	(33.4)	1.101	(28.2)	.280
CP-012	1-1/4	(31.8)	1.660	(42.2)	1.394	(35.6)	.418
CP-015	1-1/2	(38.1)	1.900	(48.3)	1.598	(40.7)	.550
CP-020	2	(50.8)	2.375	(60.3)	2.003	(50.9)	.872
CP-025	2-1/2	(63.5)	2.875	(73.0)	2.423	(61.5)	1.260
CP-030	3	(76.2)	3.500	(88.9)	2.950	(75.0)	1.900

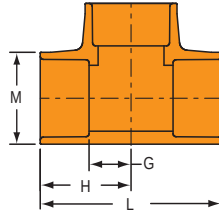
"Lead Free" low lead certification – unless other wise specified, all Spears® FlameGuard® fittings specified here-in are certified by NSF International to ANSI/ NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content ≤0.25%. Spears® PVC and CPVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.



FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

TEE

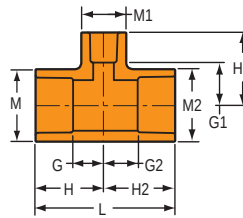
Socket x Socket x Socket



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
4201-007	3/4	9/16	1-1/2	2-31/32	1-5/16	.11
4201-010	1	13/16	1-13/16	3-5/8	1-5/8	.20
4201-012	1-1/4	15/32	2-3/32	4-7/32	2	.29
4201-015	1-1/2	1-5/32	2-9/16	5-3/32	2-11/32	.54
4201-020	2	1-13/32	2-15/16	5-7/8	2-7/8	.86
4201-025	2-1/2	1-23/32	3-1/2	7	3-15/32	1.62
4201-030	3	2-1/16	3-15/16	7-7/8	4-3/16	3.02

REDUCING TEE

Socket x Socket x Socket

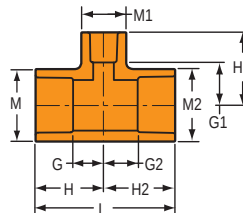


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4201-102	3/4x3/4x1	3/4	25/32	3/4	1-11/16	1-13/16	1-11/16	3-3/8	1-5/16	1-21/32	1-5/16	.13
4201-125	1x3/4x3/4	3/4	7/8	21/32	1-25/32	1-25/32	1-21/32	3-13/32	1-19/32	1-5/16	1-5/16	.16
4201-126	1x3/4x1	3/4	1-7/8	1-3/32	1-27/32	2-31/32	1-31/32	3-13/16	1-23/32	1-23/32	1-13/32	.26
4201-131	1x1x3/4	21/32	13/16	21/32	1-25/32	1-13/16	1-25/32	3-9/16	1-5/8	1-5/16	1-5/8	.16
4201-157	1-1/4x1x3/4	11/16	1-1/32	11/16	1-15/16	2-1/32	1-13/16	3-25/32	2-3/32	1-13/32	1-23/32	.32
4201-158	1-1/4x1x1	27/32	29/32	25/32	2-1/16	2-1/32	1-29/32	3-15/16	1-31/32	1-5/8	1-5/8	.24
4201-159	1-1/4x1x1-1/4	31/32	31/32	31/32	2-7/32	2-7/32	2-3/32	4-11/32	2-3/32	2-3/32	1-23/32	.35
4201-167	1-1/4x1-1/4x3/4	21/32	1	21/32	1-29/32	2	1-29/32	3-13/16	2	1-5/16	2	.22
4201-168	1-1/4x1-1/4x1	13/16	31/32	13/16	2-1/16	2-3/32	2-1/16	4-1/8	1-31/32	1-21/32	2	.24
4201-169	1-1/4x1-1/4x1-1/2	1-1/8	15/16	1-1/8	2-3/8	2-11/32	2-3/8	4-3/4	2-3/32	2-11/32	2-3/32	.51
4201-201	1-1/2x1-1/4x3/4	11/16	1	1/4	2-1/16	2	1-15/16	4	2-5/16	1-3/8	2-1/16	.41
4201-202	1-1/2x1-1/4x1	27/32	1-1/32	1	2-7/32	2-5/32	2-1/4	4-15/32	2-5/16	1-11/16	2-1/16	.42
4201-210	1-1/2x1-1/2x3/4	23/32	1-1/16	23/32	2-3/32	2-1/32	2-3/32	4-3/16	2-5/16	1-3/8	2-5/16	.37
4201-211	1-1/2x1-1/2x1	13/16	1-3/16	13/16	2-3/16	2-1/4	2-3/16	4-3/8	2-11/32	1-23/32	2-11/32	.41
4201-212	1-1/2x1-1/2x1-1/4	1	1-1/8	1	2-3/8	2-11/32	2-3/8	4-13/16	2-11/32	2-3/32	2-11/32	.48
4201-213	1-1/2x1-1/2x2	1-5/16	1-1/8	1-5/16	2-11/16	2-21/32	2-11/16	5-3/8	2-11/32	2-27/32	2-11/32	.72
4201-248	2x2x3/4	11/16	1-13/32	11/16	2-7/32	2-7/16	2-7/32	4-7/16	2-27/32	1-3/8	2-27/32	.52
4201-249	2x2x1	27/32	1-7/16	27/32	2-11/32	2-9/16	2-11/32	4-23/32	2-7/8	1-3/4	2-7/8	.57
4201-250	2x2x1-1/4	1	1-11/32	1	2-17/32	2-19/32	2-17/32	5-3/32	2-27/32	2-3/32	2-27/32	.63
4201-251	2x2x1-1/2	1-7/32	1-13/32	1-7/32	2-11/16	2-25/32	2-11/16	5-3/8	2-27/32	2-11/32	2-27/32	.85
4201-289	2-1/2x2-1/2x1	29/32	25/32	29/32	2-21/32	1-29/32	2-21/32	5-5/16	3-1/2	1-23/32	3-1/2	1.03
4201-290	2-1/2x2-1/2x1-1/4	1-3/32	1-23/32	1-3/32	2-27/32	2-31/32	2-27/32	5-21/32	3-17/32	2-3/32	3-17/32	1.13

REDUCING TEE

Socket x Socket x Socket

(continued)



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4201-291	2-1/2x2-1/2x1-1/2	1-3/16	1/2	1-3/16	2-15/16	1-7/8	2-15/16	5-7/8	3-15/32	2-11/32	3-15/32	1.26
4201-292	2-1/2x2-1/2x2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-11/32	3-1/2	3-7/8	3-1/2	1.34
4201-335	3x3x1	7/8	1-15/16	7/8	2-3/4	3-1/16	2-3/4	5-15/32	4-3/16	1-23/32	4-3/16	1.26
4201-336*	3x3x1-1/4	1-3/8	1-3/4	1-3/8	3-5/16	3-1/2	3-5/16	6-5/8	4-1/8	2-7/8	4-1/8	1.94
4201-337	3x3x1-1/2	1-5/32	2-1/16	1-5/32	3-1/32	3-7/16	3-1/32	6-3/32	4-3/16	2-3/8	4-3/16	1.46
4201-338	3x3x2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-19/32	4-3/16	2-7/8	4-3/16	1.69
4201-339	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-23/32	3-5/8	7-1/4	4-3/16	3-17/32	4-3/16	2.11

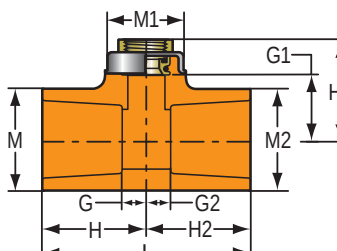
* Branch Outlet Sized with Bushing

TorqueSafe™ SPRINKLER HEAD TEE

Gasket Sealed Brass
Thread Insert Style

Socket x Socket x Gasket FIPT

With Elastomer Seal - Use NO Thread Sealant



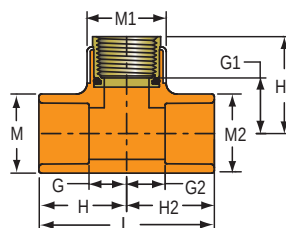
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101 G	3/4x3/4x1/2	7/16	1-3/16	7/16	1-7/16	1-7/16	1-17/32	2-29/32	1-3/8	1-3/8	1-3/8	.22
4202-124 G	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130 G	1x1x1/2	7/16	1-11/32	7/16	1-9/16	1-11/16	1-9/16	3-1/8	1-23/32	1-3/8	1-23/32	.28
4202-166 G	1-1/4x1-1/4x1/2	7/16	1-5/8	7/16	1-11/16	1-15/16	1-11/16	3-3/8	2-1/16	1-3/8	2-1/16	.34
4202-209 G	1-1/2x1-1/2x1/2	1/2	1-13/16	1/2	1-7/8	2-3/32	1-7/8	3-3/4	2-11/32	1-3/8	2-11/32	.41
4202-247 G	2x2x1/2	1/2	2-1/16	1/2	2	2-11/32	2	4-1/32	2-27/32	1-3/8	2-27/32	.54

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE

Brass Thread Insert Style

Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-010	1x1x1	21/31	1-3/16	21/31	1-25/32	1-29/32	1-25/32	3-19/32	1-23/32	1-23/32	1-23/32	.37

Not intended to convey or dispense water for human consumption through drinking or cooking

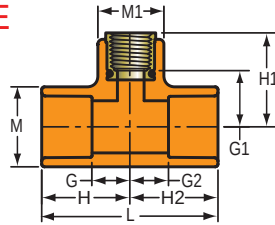


FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

SPRINKLER REDUCING HEAD TEE

Brass Thread Insert Style

Socket x Socket x Fipt



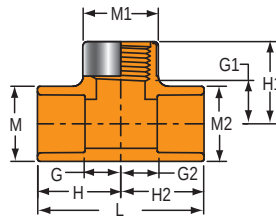
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101	3/4x3/4x1/2	7/16	1-5/32	7/16	1-7/16	1-17/32	1-7/16	2-29/32	1-3/8	1-7/32	1-3/8	.27
4202-124	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130	1x1x1/2	7/16	1-7/32	7/16	1-9/16	1-25/32	1-9/16	3-1/8	1-3/4	1-3/16	1-3/4	.26
4202-156	1-1/4x1x1/2	7/16	1-15/32	9/16	1-11/16	2-1/32	1-11/16	3-3/8	2-3/32	1-7/32	1-3/4	.30
4202-166	1-1/4x1-1/4x1/2	7/16	1-1/2	7/16	1-11/16	2-1/16	1-11/16	3-13/32	2-3/32	1-3/16	2-3/32	.32
4202-199	1-1/2x1-1/4x1/2	1/2	1-5/8	9/16	1-7/8	2-3/16	1-13/16	3-11/16	2-5/16	1-7/32	2-1/16	.37
4202-209	1-1/2x1-1/2x1/2	1/2	1-23/32	1/2	1-7/8	2-3/32	1-7/8	3-3/4	2-5/16	1-17/32	2-5/16	.45
4202-237	2x1-1/2x1/2	1/2	1-7/8	17/32	2	2-7/16	1-29/32	3-15/16	2-27/32	1-7/32	2-5/16	.48
4202-247	2x2x1/2	1/2	1-31/32	1/2	2	2-3/8	2	4-1/32	2-27/32	1-17/32	2-27/32	.58

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE

Special Reinforced Plastic Thread Style

Socket x Socket x SR Fipt

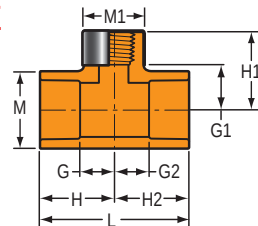


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-010SR	1x1x1	21/32	3/4	21/32	1-25/32	1-5/8	1-25/32	3-19/32	1-23/32	1-11/16	1-23/32	.26

SPRINKLER REDUCING HEAD TEE

Special Reinforced Plastic Thread Style

Socket x Socket x SR Fipt

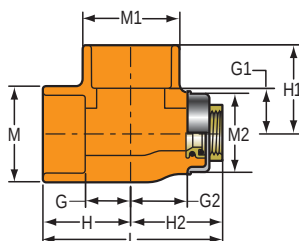


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101SR	3/4x3/4x1/2	19/32	3/4	19/32	1-19/32	1-7/16	1-19/32	3-7/32	1-13/32	1-3/16	1-13/32	.16
4202-124SR	1x3/4x1/2	7/16	29/32	9/16	1-19/32	1-5/8	1-9/16	3-5/32	1-23/32	1-3/16	1-17/32	.19
4202-130SR	1x1x1/2	7/16	29/32	7/16	1-9/16	1-5/8	1-9/16	3-1/8	1-23/32	1-3/16	1-23/32	.20
4202-156SR	1-1/4x1x1/2	15/32	1-5/32	19/32	1-23/32	1-7/8	1-23/32	3-13/32	2-3/32	1-3/16	1-23/32	.26
4202-166SR	1-1/4x1-1/4x1/2	7/16	1-1/8	7/16	1-11/16	1-27/32	1-11/16	3-3/8	2-3/32	1-3/16	2-3/32	.26
4202-168SR	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	1-29/32	2-3/32	4-7/32	2-3/32	1-11/16	2-3/32	.34
4202-199SR	1-1/2x1-1/4x1/2	9/16	1-9/32	17/32	1-15/16	2	1-25/32	3-23/32	2-11/32	1-3/16	2-3/32	.33
4202-209SR	1-1/2x1-1/2x1/2	1/2	1-1/4	1/2	1-7/8	1-31/32	1-7/8	3-3/4	2-11/32	1-3/16	2-11/32	.35
4202-211SR	1-1/2x1-1/2x1	27/32	1-7/32	27/32	2-7/32	2-1/8	2-7/32	4-15/32	2-11/32	1-23/32	2-11/32	.44
4202-237SR	2x1-1/2x1/2	23/32	1-9/16	3/8	2-7/32	2-9/32	1-3/4	3-31/32	2-7/8	1-3/16	2-11/32	.45
4202-247SR	2x2x1/2	1/2	31/32	1/2	2	1-11/16	19/32	4	2-7/8	1-3/16	2-7/8	.48
4202-287SR	2-1/2x2-1/2x1/2	17/32	1-3/4	17/32	2-9/32	2-1/2	2-9/32	4-19/32	3-1/2	1-7/32	3-1/2	.78

TORQUESAFE™ SPRINKLER HEAD TEE Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT x Socket

With Elastomer Seal - Use NO Thread Sealant

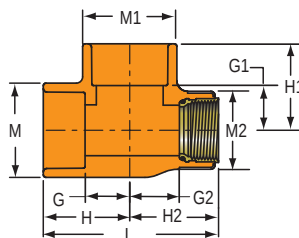


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122 G	1x1/2x1	19/32	13/16	1-13/32	1-19/32	1-27/32	1-3/4	3-11/32	1-5/8	1-5/8	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE Brass Thread Insert Style

Socket x Fipt x Socket

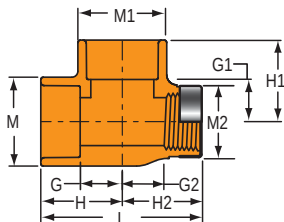


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122	1x1/2x1	23/32	3/4	1-1/4	1-5/8	1-5/8	1-15/16	3-1/2	1-23/32	1-23/32	1-3/16	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE Special Reinforced Plastic Thread Style

Socket x SR Fipt x Socket



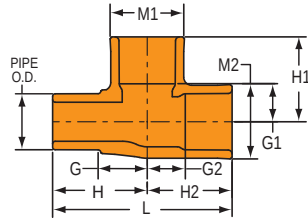
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122SR	1x1/2x1	27/32	23/32	1-3/32	1-23/32	1-5/8	1-25/32	3-13/32	1-3/4	1-3/4	1-3/16	.21



FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

STREET TEE

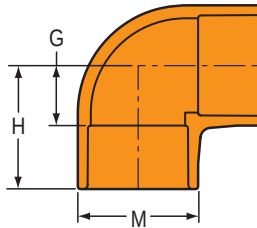
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
4244-007	3/4	13/16	27/32	27/32	1-13/16	1-7/8	1-7/8	3-5/8	1-13/32	1-13/32	.16
4244-010	1	1-5/32	1-1/32	1-1/32	2-1/8	1-29/32	1-29/32	4-3/16	1-3/4	1-3/4	.27
4244-012	1-1/4	1-1/4	1	1	2-7/16	2-9/32	2-9/32	4-27/32	2-3/32	2-3/32	.42
4244-015	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-11/32	2-11/32	2-11/32	.56
4244-020	2	1-23/32	1-7/16	1-13/32	3-1/4	2-15/16	2-15/16	6-5/32	2-7/8	2-7/8	.84

90° ELBOW

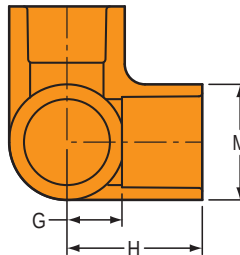
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4206-007	3/4	9/16	1-1/2	1-5/16	.07
4206-010	1	3/4	1-5/8	1-5/8	.11
4206-012	1-1/4	7/8	2-5/32	2	.21
4206-015	1-1/2	1-5/32	2-17/32	2-3/8	.41
4206-020	2	1-13/32	2-29/32	2-7/8	.45
4206-025	2-1/2	1-5/8	3-7/16	3-7/16	1.17
4206-030	3	1-29/32	3-23/32	4-3/16	1.80

SIDE OUTLET ELBOW

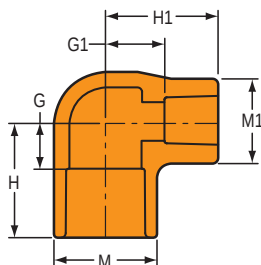
Socket x Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4213-007	3/4	27/32	1-19/32	1-5/16	.09
4213-010	1	13/16	1-7/8	1-5/8	.18

REDUCING 90° ELBOW

Socket x Socket



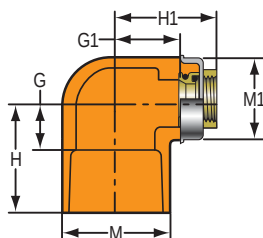
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4206-131	1x3/4	25/32	11/16	1-25/32	1-25/32	1-19/32	1-5/16	.11

TorqueSafe™ 90° SPRINKLER HEAD ELBOW

Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT

With Elastomer Seal - Use NO Thread Sealant



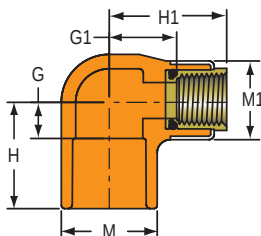
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101 G	3/4x1/2	9/16	1-7/32	1-13/32	1-17/32	1-13/32	1-3/8	.19
4207-130 G	1x1/2	15/32	1-13/32	1-9/16	1-11/16	1-23/32	1-3/8	.23
4207-166 G	1-1/4x1/2	15/32	1-19/32	1-15/16	1-11/16	2-3/32	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD 90° ELBOW

Brass Thread Insert Style

Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101	3/4x1/2	1/2	1-3/32	1-1/2	1-5/8	1-13/32	1-3/16	.17
4207-130	1x1/2	15/32	1-19/32	1-1/4	1-25/32	1-23/32	1-3/16	.20
4207-131	1x3/4	17/32	1-11/32	1-21/32	1-31/32	1-23/32	1-3/8	.25
4207-166	1-1/4x1/2	15/32	1-17/32	1-11/16	1-15/16	2-3/32	1-17/32	.33

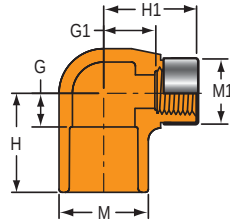
Not intended to convey or dispense water for human consumption through drinking or cooking



FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

SPRINKLER HEAD 90° ELBOW Special Reinforced Plastic Thread Style

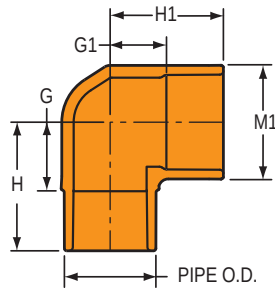
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101SR	3/4x1/2	11/32	13/16	1-15/32	1-1/2	1-13/32	1-3/16	.14
4207-130SR	1x1/2	7/16	7/8	1-9/16	1-5/8	1-23/32	1-3/8	.20
4207-131SR	1x3/4	1/2	7/8	1-5/8	1-9/16	1-23/32	1-3/8	.16
4207-166SR	1-1/4x1/2	13/32	1-1/32	1-21/32	1-23/32	2-3/32	1-7/32	.19

90° STREET ELBOW

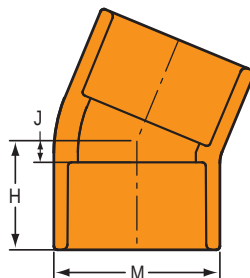
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
4209-007	3/4	29/32	19/32	1-15/16	1-11/16	1-13/32	.12
4209-010	1	1-9/32	23/32	2-13/32	1-27/32	1-3/4	.21
4209-012	1-1/4	1-9/16	27/32	2-13/16	2-3/32	2-3/32	.32
4209-015	1-1/2	1-15/32	1-3/16	2-27/32	2-9/16	2-11/32	.42
4209-020	2	1-23/32	1-3/8	3-7/32	2-15/16	2-27/32	.65

22-1/2° ELBOW

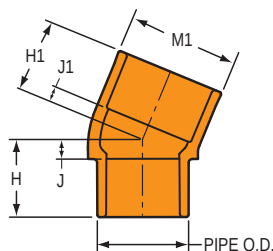
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4216-007	3/4	1-3/16	7/32	1-13/32	.09
4216-010	1	1-3/8	9/32	1-25/32	.14
4216-012	1-1/4	1-1/2	5/16	2-3/32	.20
4216-015	1-1/2	1-7/16	13/32	1-3/8	.19
4216-020	2	1-7/8	3/8	2-27/32	.43
4216-030	3	2-3/8	1/2	4-5/32	1.00

22-1/2° STREET ELBOW

Spigot x Socket



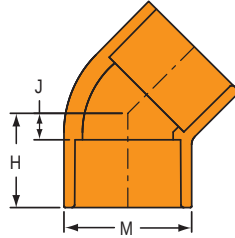
Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
4242-007	3/4	1-1/4	1-1/2	1/4	1/2	1-3/8	.08
4242-010	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.14
4242-012	1-1/4	1-9/16	1-25/32	17/32	11/16	2-1/16	.21
4242-015	1-1/2	1-13/32	1-23/32	1/2	11/32	2-11/32	.28
4242-020	2	1-29/32	2-1/8	7/32	5/8	2-7/8	.42
4242-025	2-1/2	2-1/8	2-1/4	13/32	1/2	3-1/2	.68
4242-030	3	2-13/32	2-13/32	9/16	17/32	4-5/32	.99



FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

45° ELBOW

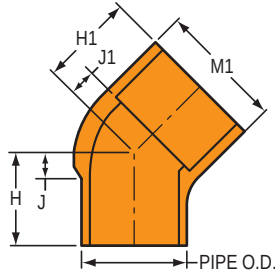
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4217-007	3/4	1-11/32	13/32	1-5/16	.07
4217-010	1	1-13/32	3/8	1-5/8	.11
4217-012	1-1/4	1-11/16	13/32	2-5/32	.24
4217-015	1-1/2	1-27/32	15/32	2-11/32	.32
4217-020	2	2-1/8	21/32	2-7/8	.48
4217-025	2-1/2	2-17/32	3/4	3-1/2	.88
4217-030	3	2-29/32	29/32	4-5/32	1.16

45° STREET ELBOW

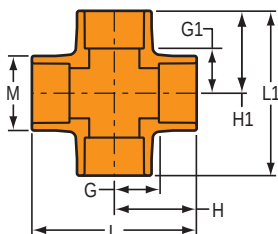
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
4227-010	1	1-1/2	1-5/16	1/2	1/4	1-5/8	.10
4227-012	1-1/4	1-25/32	1-9/16	9/16	11/32	1-31/32	.15
4227-015	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.29
4227-020	2	2-5/16	1-15/16	25/32	13/32	2-7/8	.44

CROSS

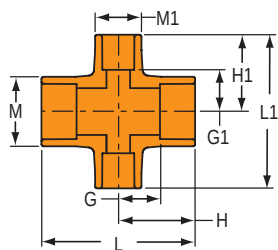
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
4220-007	3/4	5/8	5/8	1-21/32	1-21/32	3-5/16	3-5/16	1-13/32	.22
4220-010	1	3/4	3/4	1-5/8	1-5/8	3-1/4	3-1/4	1-23/32	.20
4220-012	1-1/4	1-1/8	1-1/8	2-3/8	2-3/8	4-3/4	4-3/4	2-3/32	.63
4220-015	1-1/2	1-7/32	1-7/32	2-5/8	2-5/8	5-7/32	5-7/32	2-3/8	.80
4220-020	2	1-1/2	1-1/2	3	3	6	6	3	1.36
4220-025	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	6-7/8	3-17/32	2.16
4220-030	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-7/16	3.37

REDUCING CROSS

Socket x Socket x Socket x Socket



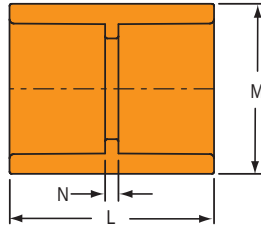
Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
4220-131	1x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.31
4220-167	1-1/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.35
4220-210	1-1/2x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.42
4220-248	2x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.56
4220-289	2-1/2x1	29/32	1-3/4	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.98



FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

COUPLING

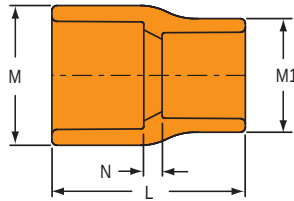
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4229-007	3/4	2-1/8	1-5/16	3/16	.05
4229-010	1	2-3/16	1-5/8	3/32	.08
4229-012	1-1/4	2-19/32	2	3/32	.13
4229-015	1-1/2	2-7/8	2-11/32	3/32	.22
4229-020	2	3-1/8	2-7/8	1/8	.33
4229-025	2-1/2	3-11/16	3-15/32	3/16	.48
4229-030	3	4	4-3/16	1/4	.89

REDUCER COUPLING

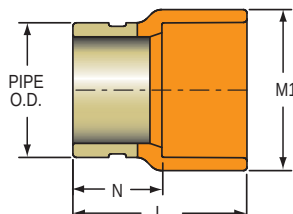
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4229-131	1x3/4	2-3/8	1-23/32	1-13/32	7/32	.10
4229-167	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17
4229-168	1-1/4x1	2-11/16	2-3/32	1-23/32	5/16	.18
4229-210	1-1/2x3/4	2-13/16	2-11/32	1-13/32	15/32	.19
4229-211	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.24
4229-212	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.23
4229-248	2x3/4	3-3/16	2-7/8	1-7/16	23/32	.32
4229-249	2x1	3-1/8	2-7/8	1-23/32	1/2	.31
4229-250	2x1-1/4	3-3/16	2-7/8	2-1/8	17/32	.33
4229-251	2x1-1/2	3-3/16	2-27/32	2-11/32	9/32	.31
4229-291	2-1/2x1-1/2	3-23/32	3-15/32	2-11/32	21/32	.51
4229-292	2-1/2x2	3-21/32	3-1/2	2-7/8	13/32	.52
4229-339	3x2-1/2	3-27/32	4-3/16	3-1/2	3/16	.80

GROOVED COUPLING ADAPTER

Groove x Socket



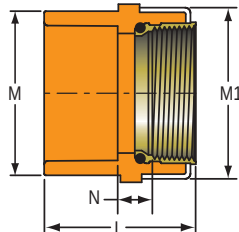
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4233-012	1-1/4	3-5/8	2-3/32	2-11/32	.72
4233-015	1-1/2	3-3/4	2-11/32	2-11/32	.83
4233-020	2	3-27/32	2-27/32	2-11/32	1.27
4233-025	2-1/2	4-3/16	3-15/32	2-7/16	2.02
4233-030	3	4-5/32	4-1/8	2-7/16	2.79

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE ADAPTER

Brass Thread Insert Style

Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-007	3/4	2	1-13/32	1-3/8	5/16	.23
4235-010	1	2-3/16	1-3/4	1-11/16	11/32	.25
4235-012	1-1/4	2-3/8	2-3/32	2-1/16	11/32	.36
4235-015	1-1/2	2-9/16	2-3/8	2-7/16	11/32	.47
4235-020	2	2-25/32	2-27/32	3-3/16	7/16	1.05

Not intended to convey or dispense water for human consumption through drinking or cooking

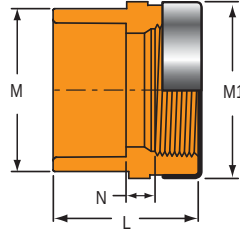


FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

FEMALE ADAPTER

Special Reinforced Plastic Thread Style

Socket x SR Fipt

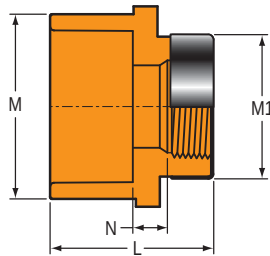


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
4235-010SR	1	2-5/32	1-23/32	1-7/8	3/32	.22
4235-012SR	1-1/4	2-5/16	2-1/8	2-1/16	3/16	.20

FEMALE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

Socket x SR Fipt



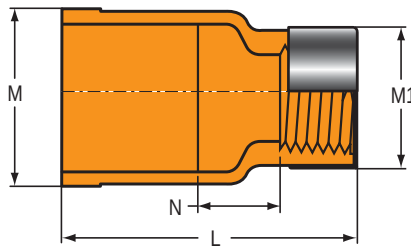
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101SR	3/4x1/2	1-29/32	1-13/32	1-3/16	1/8	.08
4235-130SR	1x1/2	1-15/16	1-23/32	1-3/8	3/32	.16
4235-131SR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.13

FEMALE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style with Socket Wrench Flats

Socket x SR Fipt

M = Flat-to-Flat Dimension

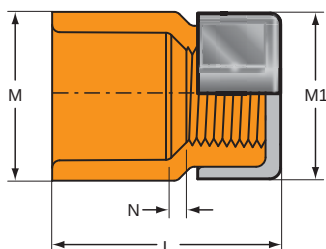


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
W4235-101SR	3/4x1/2	2-9/32	1-13/32	1-3/16	17/32	.09
W4235-130SR	1x1/2	2-9/32	1-3/4	1-3/16	13/32	.12

FEMALE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread w/Metal Thread Start

Socket x SR Fipt

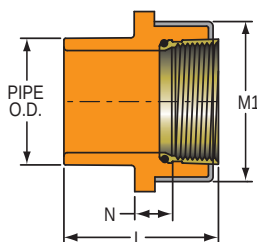


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
Z4235-101SR	3/4x1/2	1-7/8	1-3/8	1-7/16	3/16	.08

SPIGOT FEMALE ADAPTER

Brass Thread Insert Style

Spigot x Fipt



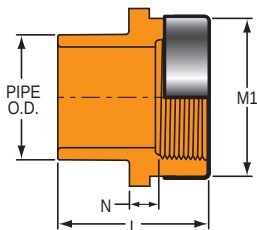
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4278-007	3/4	2-5/32	1-3/8	17/32	.15
4278-010	1	2-9/32	1-11/16	7/16	.22

Not intended to convey or dispense water for human consumption through drinking or cooking

SPIGOT FEMALE ADAPTER

Special Reinforced Plastic Thread Style

Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4278-007SR	3/4	1-15/16	1-3/8	11/32	.08
4278-010SR	1	2-1/4	1-23/32	13/32	.13

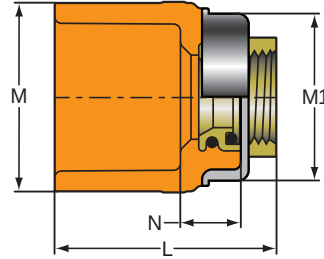


FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

TorqueSafe™ FEMALE SPRINKLER HEAD ADAPTER Gasket Sealed Brass Thread Insert Style

Socket x Gasket Fipt

With Elastomer Seal - Use NO Thread Sealant

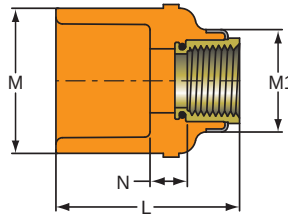


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101 G	3/4x1/2	1-7/8	1-13/32	1-3/8	9/16	.15
4235-130GS	1x1/2	2-1/32	1-11/16	1-3/8	17/32	.17
4235-131 G	1x3/4	2	1-11/16	1-9/16	9/16	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER Brass Thread Insert Style

Socket x Fipt

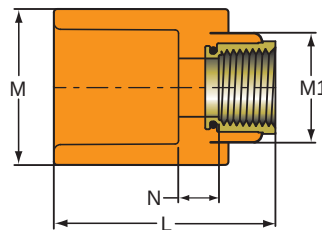


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101	3/4x1/2	1-7/8	1-13/32	1-17/32	15/32	.19
4235-130	1x1/2	2-11/32	1-11/16	1-3/16	5/8	.16
4235-131	1x3/4	2-5/16	1-11/16	1-3/8	17/32	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER Brass Thread Insert Style with Long Body

Socket x Fipt



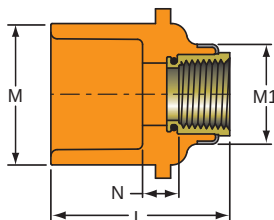
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
L4235-130	1x1/2	2-3/16	1-23/32	1-7/32	1/2	.19

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER

Brass Thread Insert Style with Positioning Ring

Socket x Fipt



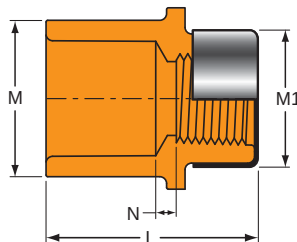
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
R4235-101	3/4x1/2	2-1/32	1-7/16	1-3/16	15/32	.15

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style with Positioning Ring

Socket x SR Fipt



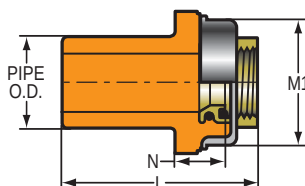
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
R4235-101SR	3/4x1/2	1-15/16	1-7/16	1-7/32	7/32	.09

TorqueSafe™ FEMALE SPIGOT SPRINKLER HEAD ADAPTER

Gasket Sealed Brass Thread Insert Style

Spigot x Gasket Fipt

With Elastomer Seal - Use NO Thread Sealant



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4238-101 G	3/4x1/2	1-15/16	1-3/8	21/32	.14
4238-130 G	1x1/2	2-1/16	1-3/8	19/32	.15

Not intended to convey or dispense water for human consumption through drinking or cooking

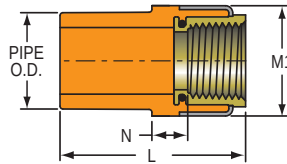


FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

SPIGOT FEMALE SPRINKLER HEAD ADAPTER

Brass Thread Insert Style

Spigot x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101	3/4x1/2	2-5/32	1-7/32	19/32	.12
4238-130	1x1/2	2-1/4	1-3/16	11/32	.19

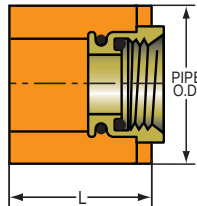
Not intended to convey or dispense water for human consumption through drinking or cooking

TORQUESAFE™ BUSHING - GASKET SEALED

Brass Thread Insert Style

Spigot x Gasket FIPT

With Elastomer Seal - Use NO Thread Sealant

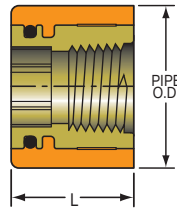


Part Number	Size	L	Approx. Wt. (Lbs.)
4238-130BR G	1x1/2	1-7/32	.10

Not intended to convey or dispense water for human consumption through drinking or cooking

BUSHING with BRASS THREAD INSERT

Spigot x Fipt



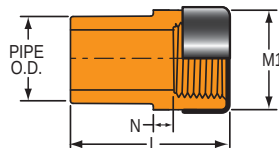
Part Number	Size	L	Approx. Wt. (Lbs.)
4238-130BR	1x1/2	1	.13

Not intended to convey or dispense water for human consumption through drinking or cooking

SPIGOT FEMALE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

Spigot x SR Fipt

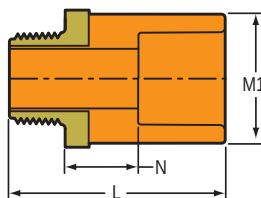


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101SR	3/4x1/2	1-29/32	1-7/32	1/8	.07
4238-130SR	1x1/2	2-1/32	1-7/32	7/32	.09

MALE ADAPTER

With CPVC Lined Thread Brass Insert

Mipt x Socket

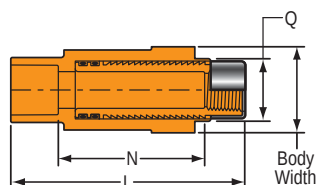


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4236-007	3/4	2-17/32	1-13/32	13/16	.26
4236-010	1	2-15/16	1-23/32	29/32	.43
4236-012	1-1/4	3-1/8	2-3/32	31/32	.66
4236-015	1-1/2	3-9/32	2-11/32	31/32	.80
4236-020	2	3-7/16	2-27/32	31/32	1.00

ADJUSTABLE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

Socket x SR Fipt

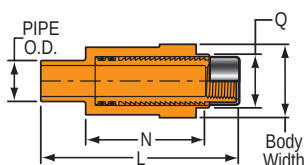


Part Number	Size	L		N		Q	Body Width	Approx. Wt. (Lbs.)
		Min	Max	Min	Max			
42001SR	3/4x1/2	6-9/32	8	4-7/16	6-1/4	1-7/16	2-3/16	.66
42011SR	1x1/2	6-13/32	8	4-1/2	6-1/8	1-7/16	2-1/8	.68

ADJUSTABLE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

Spigot x SR Fipt



Part Number	Size	L		N		Q	Body Width	Approx. Wt. (Lbs.)
		Min	Max	Min	Max			
42004SR	3/4x1/2	5-1/32	6-5/16	3-3/16	4-15/32	1-5/16	2-1/8	.36
42014SR	1x1/2	6-7/16	8-1/8	4-7/16	6-1/4	1-7/16	2-3/16	.67

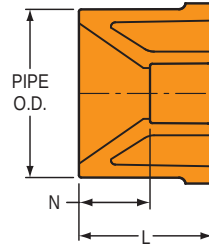


FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

REDUCER BUSHING

Flush Style

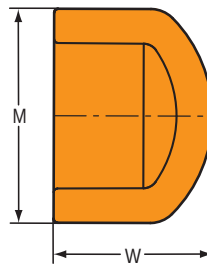
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
4237-131	1x3/4	1-1/4	1/4	.04
4237-167	1-1/4x3/4	1-7/16	7/16	.10
4237-168	1-1/4x1	1-13/32	9/32	.06
4237-210	1-1/2x3/4	1-5/8	5/8	.19
4237-211	1-1/2x1	1-17/32	13/32	.13
4237-212	1-1/2x1-1/4	1-9/16	5/16	.07
4237-248	2x3/4	1-29/32	29/32	.28
4237-249	2x1	1-23/32	9/16	.23
4237-250	2x1-1/4	1-11/16	7/16	.21
4237-251	2x1-1/2	1-11/16	5/16	.15
4237-290	2-1/2x1-1/4	2-5/32	7/8	.41
4237-291	2-1/2x1-1/2	2-13/32	1	.43
4237-292	2-1/2x2	2-9/32	3/4	.28
4237-338	3x2	2-1/4	3/4	.63
4237-339	3x2-1/2	2-5/16	1/4	.42

CAP

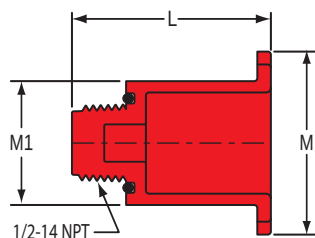
Socket



Part Number	Size	M	W	Approx. Wt. (Lbs.)
4247-007	3/4	1-3/8	1-13/32	.05
4247-010	1	1-5/8	1-9/16	.06
4247-012	1-1/4	2-3/32	1-27/32	.13
4247-015	1-1/2	2-11/32	2	.17
4247-020	2	2-27/32	2-9/32	.39
4247-025	2-1/2	3-17/32	2-5/8	.50
4247-030	3	4-3/8	3	.92

TEST PLUG - O-ring Sealed

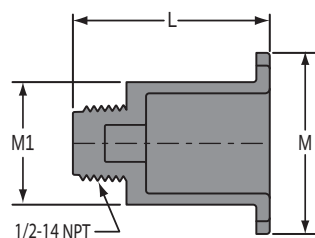
Mipt - For Pressure Testing Only,
Not For use with Z4235 Series Adapters



Part Number	Size	L	M	M1	Approx. Wt. (Lbs.)
FTP-005	1/2	1-27/32	1-15/16	1-7/32	.03

TEST PLUG for TorqueSafe™ Gasket Sealed Head Adapters

Mipt - For Pressure Testing Only.
Use ONLY with Gasket Sealed Head Adapters

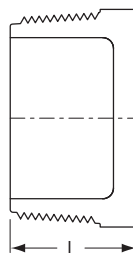


Part Number	Size	L	M	M1	Approx. Wt. (Lbs.)
FTP-005GS	1/2	1-25/32	2-1/32	1-1/4	.05

TEST PLUG

(PVC White) Not UL Listed

Mipt - For Pressure Testing Only



Part Number	Size	L	Approx. Wt. (Lbs.)
4250-005	1/2	27/32	.02

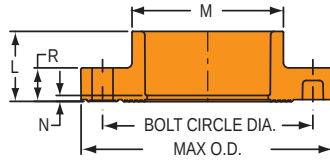


FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

FLANGE - ONE PIECE

4 Bolt Holes, 175 psi

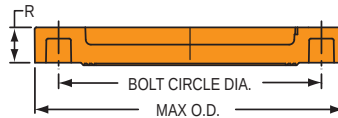
Socket



Part Number	Size	L	M	N	R	No. of Bolt Holes	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4251-007	3/4	1-5/32	1-1/2	1/8	17/32	4	2-3/4	1/2	2	3-29/32	.31
4251-010	1	1-5/16	1-13/16	1/8	11/16	4	3-1/8	1/2	2-1/4	4-9/32	.35
4251-012	1-1/4	1-13/32	2-7/32	5/32	11/16	4	3-1/2	1/2	2-1/4	4-5/8	.44
4251-015	1-1/2	1-19/32	2-1/2	3/16	23/32	4	3-27/32	1/2	2-1/2	5-1/16	.61
4251-020	2	1-27/32	3	5/16	27/32	4	4-3/4	5/8	3	5-31/32	.95
4251-025	2-1/2	2-7/32	3-1/2	7/16	1-1/32	4	5-1/2	5/8	3-1/4	7	1.50

BLIND FLANGE

4 Bolt Holes, 175 psi

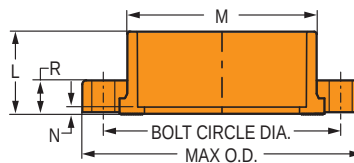


Part Number	Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4253-007	3/4	17/32	2-3/4	4	1/2	2	3-27/32	.30
4253-010	1	23/32	3-1/8	4	1/2	2-1/4	4-1/4	.35
4253-012	1-1/4	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.40
4253-015	1-1/2	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.52
4253-020	2	27/32	4-3/4	4	5/8	3	5-31/32	.86
4253-025	2-1/2	1-1/32	5-1/2	4	5/8	3-1/4	6-15/16	1.70
4253-030	3	1-5/16	6	4	5/8	3-1/4	7-5/8	1.72

FLANGE - TWO PIECE

Van Stone Style, 4 Bolt Holes, 175 psi

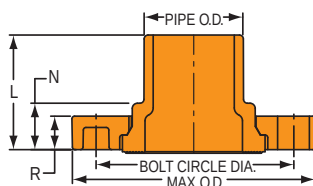
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4254-030	3	2-1/8	4-1/4	9/32	1-1/32	6	4	5/8	3-1/4	7-15/32	1.75

FLANGE - TWO PIECE

Van Stone Style, 4 Bolt Holes, 175 psi
Spigot

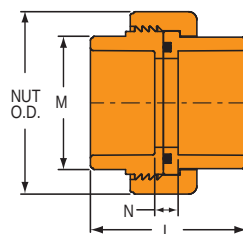


Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4256-007	3/4	1-15/16	13/16	17/32	2-3/4	4	1/2	2	3-27/32	.30
4256-010	1	2-7/32	1-1/32	11/16	3-1/8	4	1/2	2-1/4	4-1/4	.41
4256-012	1-1/4	2-3/8	1	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.50
4256-015	1-1/2	2-7/16	1-3/32	23/32	3-7/8	4	1/2	2-1/2	4-31/32	.65
4256-020	2	2-3/4	1-5/32	25/32	4-3/4	4	5/8	3	5-15/16	1.00
4256-025	2-1/2	3-1/16	1-9/32	1-1/32	5-1/2	4	5/8	3-1/4	6-15/16	1.62
4256-030	3	3-3/8	1-13/32	1-1/32	6	4	5/8	3-1/4	7-9/16	1.76

UNION

Socket x Socket

175 psi



Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4257-007	3/4	2-3/8	1-17/32	3/8	2-1/2	.38
4257-010	1	2-9/16	1-27/32	3/8	2-7/8	.41
4257-012	1-1/4	2-27/32	2-7/32	11/32	3-5/16	.52
4257-015	1-1/2	3-1/8	2-1/2	3/8	3-17/32	.63
4257-020	2	3-5/8	3-1/32	9/16	4-3/16	1.09

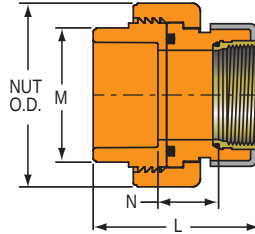


FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

TRANSITION UNION Brass Thread Insert Style

Socket x Fipt

175 psi



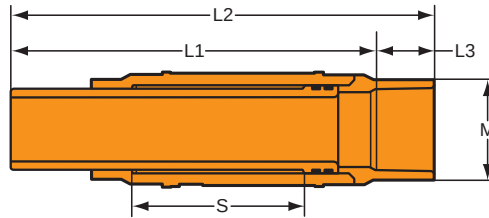
Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4259-010BR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52
4259-012BR	1-1/4	3	2-3/16	1-1/8	3-9/32	.98
4259-015BR	1-1/2	3-3/4	2-1/2	1-9/16	3-17/32	.93
4259-020BR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.64

Not intended to convey or dispense water for human consumption through drinking or cooking

SHORT REPAIR COUPLING

Spigot x Socket

175 psi



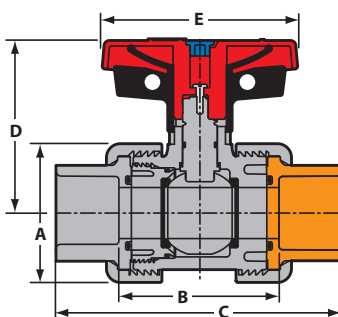
Part Number	Size	L1	L2	L3	M	S	Approx. Wt. (Lbs.)
SH118-07CO	3/4	4-13/16	5-17/32	3/4	1-3/4	2-3/16	.31
SH118-10CO	1	4-3/4	5-5/8	31/32	2-1/16	2-5/32	.40

FlameGuard® CPVC Drain & Swing Check Valves for NFPA 13D Applications Only

Application: FlameGuard® CPVC Orange Swing Check Valves and PVC/CPVC True Union Drain Valves are for use in configuring CPVC Fire Sprinkler System connection to water supply (riser/drain assembly) in NFPA 13D installations only. These valves are not UL Listed and NOT for use in any other locations within the fire sprinkler system.

TRUE UNION INDUSTRIAL DRAIN VALVES CPVC Gray Valve with CPVC Orange End Connector

Socket x Socket

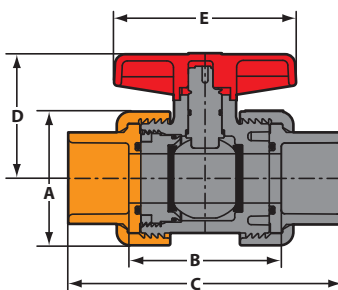


Part Number	Size	A	B	C	D	E
1822-007CFG	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8
1822-010CFG	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16
1822-012CFG	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8
1822-015CFG	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16
1822-020CFG	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8

Not UL Listed

TRUE UNION DRAIN VALVES PVC Valve with CPVC End Connector

Socket x Socket



Part Number	Size	A	B	C	D	E
3622-007FG	3/4	2-1/4	2-3/4	4-3/4	2	3
3622-010FG	1	2-1/2	2-7/8	5-1/8	2-5/16	3-7/16

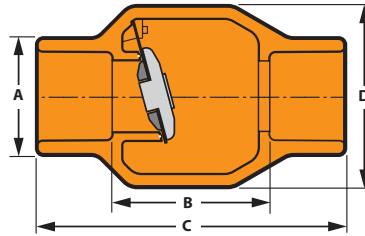
Not UL Listed



FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

CPVC SWING CHECK VALVES

Socket x Socket

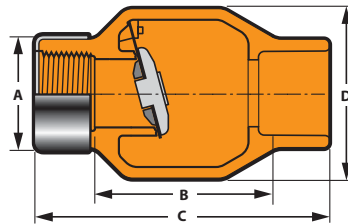


Part Number	Size	A	B	C	D	Approx. Wt. (Lbs)
S1520-10CO	1	1-11/16	2-5/16	4-9/16	2-5/8	.33
S1520-12CO	1-1/4	2-1/16	2-15/16	5-1/2	3-3/8	.42
S1520-15CO	1-1/2	2-7/16	3	5-5/8	3-3/8	.89

Not UL Listed

CPVC SPECIAL REINFORCED THREAD INLET SWING CHECK VALVES

SR Fipt x Socket



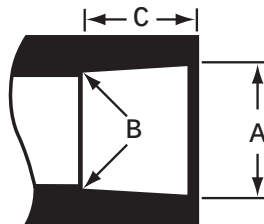
Part Number	Size	A	B	C	D	Approx. Wt. (Lbs)
S1520-10FSRSCO	1	1-11/16	2-15/16	4-9/16	2-5/8	.33
S1520-12FSRSCO	1-1/4	2-1/16	3-5/8	5-1/2	3-3/8	.42
S1520-15FSRSCO	1-1/2	2-7/16	3-11/16	5-5/8	3-3/8	.89

Not UL Listed

SOCKET DIMENSIONS

SCH 40 - ASTM F438

SCH 80 - ASTM F439



Size	Socket Entrance A	Socket Bottom B	Tolerance	SCH 40 Minimum Socket Length C	SCH 80 Minimum Socket Length C
3/4	1.058	1.046	± .004	.719	1.000
1	1.325	1.130	± .005	.875	1.125
1-1/4	1.670	1.655	± .005	.938	1.250
1-1/2	1.912	1.894	± .006	1.094	1.375
2	2.387	2.369	± .005	1.156	1.500
2-1/2	2.889	2.868	± .007	1.750	1.750
3	3.516	3.492	± .008	1.875	1.875

Appendix A - Basic Abbreviations Used in this Catalog



Standard Abbreviations

CI	=	Cast Iron Pipe Size
CTS	=	Copper Tube Size
DWV	=	Drain, Waste & Vent
Fipt		
FPT	=	Female Iron Pipe Thread
GSK		
Gasket	=	Elastomer Gasket Sealed Connection
Grv		
Groove	=	Grooved End for Mechanical Coupling
IPS	=	Iron Pipe Size
INS		
Insert	=	Barbed Insert End
Mipt,		
MPT	=	Male Iron Pipe Thread
NPT	=	National Pipe Thread (alternate to above)
PIP	=	Plastic Irrigation Pipe
PSI	=	Pounds Per Square Inch
PSM	=	Plastic Sewer Main
SDR	=	Standard Dimension Ratio (pipe)
Soc		
Socket	=	Solvent Weld Socket
SPG		
Spig		
Spigot	=	Spigot End (pipe O.D. size)
SR Fipt	=	Special Reinforced Plastic Female Iron Pipe Thread

DWV Specific Abbreviations

H		
HUB	=	Solvent Weld Socket
SPG	=	Spigot End (pipe O.D. size)
S&D	=	Sewer & Drain Pipe Size
SLIP	=	Trap End for Receiving Drain Tail Piece

Metric Specific Abbreviations

BAR	=	4.5 psi
BSP	=	British Standard Pipe
Class 10	=	Pressure Rating 10 BAR at 23°C (145 psi at 73°F)
Class 12	=	Pressure Rating 12 BAR at 23°C (174 psi at 73°F)
d	=	Pipe O.D. in millimeters
DN	=	Diameter Nominal for Metric Fittings
Din	=	Deutsche Industrial Norm (German Standards)
JIS	=	Japanese Industrial Standard
MIPT	=	Male Iron Pipe Thread
NPR	=	Not Pressure Rated
PN7	=	Pressure Rating 7 BAR at 23°C (100 psi at 73°F)
PN16	=	Pressure Rating 16 BAR at 23°C (232 psi at 73°F)
SRBSP	=	Special Reinforced BSP Thread
FBSP	=	Female BSP Thread
MBSP	=	Male BSP Thread
mm	=	millimeter

Packaging Codes

MC (or Mstr Ctn)	=	Master Carton (standard master quantity)
SP (or Std Pk)	=	Standard Pack (standard box quantity)



Appendix B - Applicable Industry Standards & Test Methods

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured. Although not inclusive, the following list of internationally recognized standards, specifications, test methods and practices relate to PVC and CPVC thermoplastic piping products and related components.

ASTM STANDARD SPECIFICATIONS

ASTM D1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120
ASTM D2241	Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series)
ASTM D2466	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
ASTM D2464	Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2665	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM D2672	Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
ASTM D2846	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
ASTM D3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM D3311	Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns
ASTM F438	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
ASTM F439	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
ASTM F441	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
ASTM F442	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
ASTM F437	Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F493	Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
ASTM F656	Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
ASTM F913	Standard Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F1498	Standard Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings
ASTM F1866	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
ASTM F2618	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems

ASTM STANDARD TEST METHODS

ASTM D1598	Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
ASTM D1599	Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe & Fittings
ASTM D2122	Standard Test Method for Determining Dimensions of Thermoplastic Pipe & Fittings
ASTM D2152	Standard Test Method for Adequacy of Fusion by Acetone Immersion
ASTM D2412	Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D2444	Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup
ASTM D2564	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
ASTM D2837	Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM F610	Standard Test Method for Evaluating the Quality of Molded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique

ASTM STANDARD PRACTICES

ASTM D2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
ASTM D2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
ASTM F402	Standard Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastics Pipe and Fittings
ASTM F645	Standard Guide for Selection, Design, and Installation of Thermoplastic Water Pressure Systems
ASTM F690	Standard Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation Systems
ASTM F1057	Standard Practice for Evaluating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique

Appendix C - Product Approvals & Certifications



<u>NSF International</u>	NSF® is an internationally recognized independent third party product testing laboratory and certification organization. NSF® provides a variety of product certifications. Although not inclusive, the following list those most applicable to Spears® products (see listings at www.nsf.org).
NSF®/ANSI Standard 14	Plastics Piping System Components and Related Materials. NSF®-14 is a consensus standard that enables comprehensive assessment of plumbing system products, materials, and ingredients. The assessment is for health effects, quality control, quality assurance, marking, material property requirements, long-term strength evaluation, and short-term product performance evaluation to various standards such as ASME, ASTM, ASSE, etc. NSF®-14 Certified products have designated end use.
End Use Certification Marks	The following are typical certification marks applicable to various Spears® products:
NSF®-pw	The product is manufactured for potable water application. It meets all applicable performance standards for a pressure rated application as required in NSF®/ANSI Standard 14, and complies with NSF®/ANSI Standard 61 for health effects.
NSF®-dww	The product complies with the applicable performance standards as required by NSF®/ANSI Standard 14 for drain, waste, and vent applications. No health effects evaluation is required.
NSF®-cw	The product meets the applicable performance standard as required by NSF®/ANSI Standard 14 for corrosive waste applications. No health effects evaluation is required.
NSF®-61	Products certified to NSF®/ANSI Standard 61. They are evaluated for health effects only. They are not evaluated for the performance requirements of NSF®/ANSI Standard 14.
NSF®-(end use) SE	Certified Special Engineered (SE) products shall bear a Mark which indicates the end use application. The SE Mark is used for products for which there is not a recognized national performance standard.
Canadian Certification Mark	cNSF Mark demonstrates compliance to a Canadian Standard, while the cNSFus Mark indicates compliance to both Canadian and U.S. requirements. Inspectors and safety code officials in Canada look for product certification by an SCC-accredited certifier.
Uniform Plumbing Code Certification	NSF® U.P.Code Mark demonstrates product compliance with the Uniform Plumbing Code. While the U.P.Code Mark is not mandatory to demonstrate product code compliance, the code marking is more readily identifiable by inspectors in the field.
NSF®/ANSI Standard 61	Drinking Water System Components – Health Effects. NSF®-61 is a consensus standard promulgated by NSF International. This standard enables in-depth assessment of a variety of drinking water system products and materials for health effects. This standard is used to evaluate a product for health effect concerns only. NSF®/ANSI Standard 61 is narrow in its scope when compared to NSF®/ANSI Standard 14 in respect to quality and performance. NSF® conducts its own testing, review, and facility inspections when certifying products like PE and PEX. NSF®/ANSI Standard 14 addresses health and performance, NSF®/ANSI Standard 61 only addresses health effect concerns.
NSF®-61 Annex G	Weighted Average Lead Content Evaluation Procedure to a 0.25% Lead Requirement. Certified product meets various states' low lead requirement, such as California's Health & Safety Code (Section 116875) commonly known as AB1953.
<u>ICC-ES-PMG</u>	The ICC-ES Plumbing, Mechanical and Fuel Gas (PMG) Listing Program provides independent third party approval where there is a nationally recognized standard for the product, but the codes do not cover in enough detail permitted uses of the product. Currently Spears® LabWaste™ CPVC Corrosive Waste Drainage System pipe and fittings are certified by ICC-ES-PMG for conformance to both the International Plumbing Code and the Uniform Plumbing Code under PMG-1018 (see listing at www.icc-es-pmg.org).
<u>Underwriters Laboratories (UL)</u>	is a global independent third party product testing and certification organization. Currently, UL certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to both UL 1821 for US markets and to ULC/ORD-C199P for Canadian markets, under the c-UL-us mark. UL is an NFPA recognized certification listing organization for CPVC Fire Sprinkler Products (see certifications at www.ul.com).
<u>FM Global</u>	FM Approvals (formerly Factory Mutual Research) offers worldwide certification and testing services of industrial and commercial loss prevention products as an independent third party product testing and certification organization. Currently, FM certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to FM 1635, Plastic Pipe & Fittings for Automatic Sprinkler Systems. FM is an NFPA recognized certification listing organization for CPVC Fire Sprinkler Products (see Approval Guide at www.fmglobal.com).
<u>Loss Prevention Certification Board (LPCB)</u>	is an independent, third-party approvals division of the BRE Global organization, that assesses and certifies fire and security systems and services against standards, such as BS, EN and LPS, developed in cooperation with manufacturers and insurers. Currently, LPCB certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to LPS 1260, Plastic Pipe and Fittings for Use in Automatic Sprinkler Systems. LPCB is also the UKAS Certified Registrar of Spears® ISO 9001 Quality Management System. Approved manufacturers are listed in the LPCB Red Book (see www.redbooklive.com).
<u>American Bureau of Shipping (ABS)</u>	is a member of the International Association of Classification Societies (IACS) responsible for verifying that marine vessels and offshore structures comply with Rules that the society has established for design, construction and periodic survey. Classification and product use are specified under a Type Approval. Currently Spears® CPVC pipe, fittings and LabWaste™ pipe and fittings are specified under ABS Type Approval Certificate No. 10-HS539421-1-PDA (see Type Approval at www.eagle.org)



Appendix D - Recommendations for Installers & Users

Plastic piping systems should be ENGINEERED, INSTALLED, and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

SOLVENT WELD CONNECTIONS - Use a quality grade of primer and solvent cement formulated for the type of connection, with the CORRECT SIZE APPLICATOR. Read and follow all of the solvent cement MANUFACTURER'S APPLICATION AND CURE TIME INSTRUCTIONS THOROUGHLY.

BEFORE APPLYING PRIMER AND CEMENT, appropriate safety precautions should be taken. Primer and Cement should be stored in the shade between 40°F and 110°F. Eliminate all ignition sources. Avoid breathing of vapors. Use only with adequate ventilation; explosion-proof general mechanical ventilation or local exhaust is recommended to maintain vapor concentrations below recommended exposure limits. In confined or partially enclosed areas, a NIOSH-approved organic vapor cartridge respirator with full face-piece is recommended. Containers should be kept tightly closed when not in use, and covered as much as possible when in use. Avoid frequent contact with skin; wearing PVA coated protective gloves and impervious apron are recommended. Avoid any contact with eyes; splash proof chemical goggles are recommended.

THREADED CONNECTIONS - Use a quality grade thread sealant. **WARNING:** SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing Company recommends the use of Spears® BLUE 75™ Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVER TIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

NOTE: DO NOT use any thread sealants on Spears® Gasket Sealed Threaded connections.

IMPORTANT

WATER HAMMER - Spears® Manufacturing Company recommends that all PVC and CPVC plastic piping systems be designed and constructed to AVOID EXCESSIVE WATER HAMMER. Water hammer can cause damage, and failure to pipe, valves, and fittings within the piping system. PLEASE NOTE - When temperatures rise above 73°F, the tensile strength of thermoplastics decreases, thereby derating the pipe or fitting Maximum Internal Pressure. When temperatures fall below 73°F, the tensile strength of thermoplastics increases, however, the impact strength decreases. Maximum operating temperatures for PVC piping systems should not exceed 140°F. Maximum operating temperatures for CPVC pressure piping systems should not exceed 200°F. Special drainage systems such as Spears® LabWaste™ CPVC Corrosive Waste Drainage System may be used intermittently to 230° F for intermittent non-pressure laboratory drainage application - see LabWaste™ technical information. Spears® Manufacturing Company will not accept responsibility for damage or impairment of its products, or other consequential or incidental damages caused by misapplication, incorrect assembly, and/or exposure to harmful substances or conditions.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GASES

WARNING: DO NOT USE ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, FOR DISTRIBUTION OR STORAGE OF COMPRESSED AIR OR GASES. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING AND COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY. PVC and CPVC products MAY be used in certain low pressure (i.e. 3-5 psi) air handling applications of oil-free, compatible clean air. Contact Spears® Technical Services with application specifics for additional information.

Not all of the products listed in this price schedule are carried in Spears® Regional Distribution Center inventories. When ordering, please check with your servicing Regional Distribution Center for availability. ALL ORDERS FOR NON-STOCKED products are NON-CANCELABLE and NON-RETURNABLE.

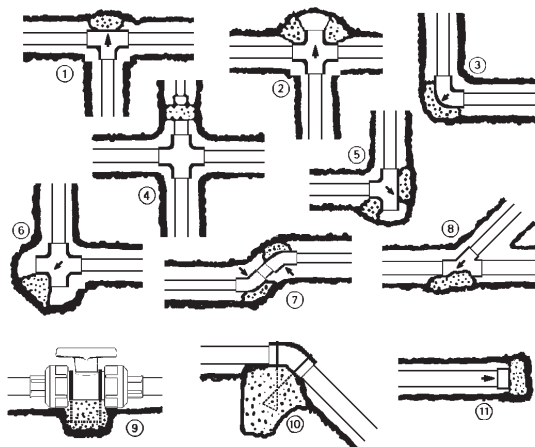
PRODUCTS IN THIS CATALOG ARE ONLY TO BE USED FOR THEIR INTENDED PURPOSE.

THRUST BLOCKING — Water under pressure exerts thrust forces in piping systems. Thrust blocking should be provided, as necessary, to prevent movement of pipe or appurtenances in response to thrust.

Types Of Thrust Blocking:

If thrusts due to high pressure are expected, anchor valves as below. At vertical bends anchor to resist outward thrusts.

1. Thru line connection, tee
2. Thru line connection, cross used as tee
3. Direction change, elbow
4. Change line size, reducer
5. Direction change, tee used as elbow
6. Direction change, cross used as elbow
7. Direction change
8. Thru line connection, wye
9. Valve anchor
10. Direction change vertical, bend anchor
11. End Caps (above or below ground)



Thrust Blocking Is Required Wherever The Pipeline:

- * Changes direction (e.g., tees, bends, elbows and crosses)
- * Changes size at its reducers
- * Stops, as at dead ends
- * Valves and hydrants, at which thrust develops when closed.

Size And Type Of Thrust Blocking Depends On:

- * Maximum system pressure
- * Pipe size
- * Type and size of fittings or appurtenance
- * Line profile (horizontal or vertical bends)
- * Soil type



Appendix E - Special Information on Fabricated Fittings

Except for fittings produced to ASTM F1866, Spears® Fabricated Fittings conform to Spears® Manufacturing Company Special Engineering Specifications.

Not all of the Fabricated Fittings listed in this price schedule are carried in Spears® Distribution Center inventories. When ordering Fabricated Fittings, please check your servicing Distribution Center for availability. ALL ORDERS FOR NON-STOCKED Fabricated Fittings are NON-CANCELABLE and NON-RETURNABLE.

18" and larger Fabricated Fittings are available upon request. Please contact your servicing Spears® Regional Distribution Center for pricing and availability.

All 15" Fabricated Fittings shown as Class 63 are PIP O.D. Reducing fittings are 15" PIP O.D. x specified IPS size. Plastic Irrigation Pipe (PIP) and Iron Pipe Size (IPS) are not the same.

Pipe Dimension Reference Chart

Pipe Type O.D. Size SDR	LH PIP 91	80 PIP 51	100 PIP 41	125 PIP 32.5	CL 63 IPS 64	CL 100 IPS 41	SEWER PSM 35	CL 125 IPS 32.5	CL 160 IPS 26	CL 200 IPS 21	40 DWV IPS —	80 DWV IPS —	SCH 40 IPS —	SCH 80 IPS —	C-900 CI DR 18
4"	O.D. 4.130 I.D. 4.000 Wall .065 PSI 43	4.130 3.968 .081 80	4.130 3.928 .101 100	4.130 3.876 .127 125	4.500 4.360 .140 63	4.500 4.280 .110 100	4.215 3.89 0.125 117.5	4.500 4.224 .138 125	4.500 4.154 .173 160	4.500 4.072 .214 200	4.500 3.998 .237 100	4.500 3.786 .337 100	4.500 3.998 .237 220	4.500 3.786 .337 320	4.800 4.22 .267 150
6"	O.D. 6.140 I.D. 6.000 Wall .070 PSI 43	6.140 5.898 .121 80	6.140 5.840 .150 100	6.140 5.762 .189 125	6.625 6.417 .104 63	6.625 6.301 .162 100	6.275 5.742 0.18 117.5	6.625 6.217 .204 125	6.625 6.115 .255 160	6.625 5.993 .316 200	6.625 6.031 .280 100	6.625 5.709 .432 100	6.625 6.031 .280 180	6.625 5.709 .432 280	6.900 6.08 .383 150
8"	O.D. 8.160 I.D. 7.984 Wall .088 PSI 43	8.160 7.840 .160 80	8.160 7.762 .199 100	8.160 7.658 .251 125	8.625 8.355 .135 63	8.625 8.205 .210 100	8.4 7.665 .024 117.5	8.625 8.095 .265 125	8.625 7.961 .332 160	8.625 7.805 .410 200	8.625 7.943 .322 100	8.625 7.565 .500 100	8.625 7.943 .322 160	8.625 7.565 .500 250	9.050 7.97 .503 150
10"	O.D. 10.200 I.D. 9.980 Wall .110 PSI 43	10.200 9.800 .200 80	10.200 9.702 .249 100	10.200 9.572 .314 125	10.750 10.414 .168 63	10.750 10.226 .262 100	10.5 9.563 0.3 117.5	10.750 10.088 .331 125	10.750 9.924 .413 160	10.750 9.748 .511 200	10.750 9.976 .365 100	10.750 9.492 .593 100	10.750 9.976 .365 140	10.750 9.492 .593 230	11.100 9.78 .617 150
12"	O.D. 12.240 I.D. 11.975 Wall .132 PSI 43	12.240 11.760 .240 80	12.240 11.642 .299 100	12.240 11.486 .377 125	12.750 12.352 .199 63	12.750 12.128 .311 100	12.5 11.361 0.36 117.5	12.750 11.966 .392 125	12.750 11.770 .490 160	12.750 11.538 .606 200	12.750 11.890 .406 100	12.750 11.294 .687 100	12.750 11.890 .406 130	12.750 11.294 .687 230	13.200 11.63 .733 150
14"	O.D. 14.280 I.D. 14.000 Wall .140 PSI 43	14.280 13.720 .280 80	14.280 13.584 .348 100	14.280 13.402 .439 125	*	*	*	*	14 12.86 0.538 160	*	14.000 13.072 .438 100	14.000 12.410 .750 100	14.000 13.072 .438 130	14.000 12.410 .750 220	15.3 13.48 0.85 235
15"	O.D. 15.300 I.D. 14.970 Wall .165 PSI 43	15.300 14.700 .300 80	15.300 14.550 .375 100	15.300 14.358 .471 125	*	*	15.3 13.898 0.44 117.5	*	*	*	*	*	*	*	*
16"	O.D. 16.000 I.D. 15.696 Wall .160 PSI 43	*	*	*	*	*	*	*	16 14.696 0.615 160	*	16.000 14.940 .500 100	16.000 14.214 .843 100	16.000 14.940 .500 130	16.000 14.214 .843 220	17.4 15.33 0.967 235
18"	O.D. 18.360 I.D. 17.964 Wall .198 PSI 43	18.701 17.967 .367 80	18.701 17.789 .456 100	18.701 17.551 .575 125	*	18.000 17.122 .439 100	18.701 17.629 0.536 117.5	*	18.000 16.616 .692 160	*	18 16.808 0.562 100	18.000 16.014 .937 100	18 16.808 0.582 120	18.000 16.014 .937 220	19.5 17.83 1.083 235
20"	O.D. 20.400 I.D. 19.962 Wall .219 PSI 43	*	*	*	*	20.000 19.026 .487 100	*	*	20.000 18.462 .769 160	*	20 18.863 0.533 100	20 17.814 1.031 100	20 18.863 0.533 120	20 17.614 1.031 220	21.6 19.03 1.2 235
21"	O.D. 21.000 I.D. 20.783 Wall .217 PSI 43	22.047 21.183 .432 80	22.047 20.971 .538 100	22.047 20.691 .678 125	*	*	22.047 20.783 0.632 117.5	*	*	*	*	*	*	*	*
24"	O.D. 24.000 I.D. 23.486 Wall .514 PSI 43	24.803 23.831 .605 80	24.803 23.593 .605 100	24.803 23.277 .763 125	*	24.000 22.748 .585 100	24.8 23.381 0.711 117.5	*	24 22.043 0.923 160	*	24 22.54 0.687 100	24 21.418 1.218 100	24 22.54 0.687 120	24 21.418 1.218 210	25.800 23.73 1.200 235

* Information Not Available

GASKET INSTALLATION PROCEDURES

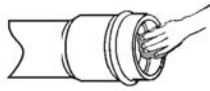


Figure 1



Figure 2



Figure 3

1. Gasket area and pipe or spigot end should be clean and free of dirt and debris. DO NOT attempt to remove the formed-in gasket — *Figure 1*.
2. Lubricate the entire sealing surface of the gasket and the pipe or spigot end with a light coating of a suitable lubricant. Make sure the pipe or spigot end has a proper bevel to insure ease of installation — *Figure 2*.
3. Push the pipe or spigot end into the gasket bell while maintaining a straight alignment. The proper insertion depth is equal to the total gasket bell length minus one-half inch ($1/2''$) — *Figure 3*.



Appendix F - Sustainable Solutions for Total Piping System Needs

The GREEN Choice



Certified Clean, Safe & Reliable!

Did you know PVC & CPVC Piping has a lower Carbon Footprint than any alternative piping material? This makes Spears® PVC & CPVC Pipe & Fittings one of the most sustainable, versatile and cost effective materials available!

- ✓ **LOW ENERGY COST** – Costs Less To Produce Than Metals and Least of All Plastics
- ✓ **NO WASTE PROCESS** – Leftover Materials Reused In Process
- ✓ **CLEAN MANUFACTURING** – Energy Efficient & Safe Process
- ✓ **LONG LIFE** – Outlasts Copper, Steel or Cast Iron
- ✓ **SAVES FUEL** – Light Weight Requiring Less Energy For Distribution
- ✓ **CONSERVES ENERGY** – Lower Thermal Loss For Conservation
- ✓ **PROTECTS HEALTH** – Preserves Potable Water, Prevents Outside Contaminants
- ✓ **ECONOMICAL** – Lower Installed Cost
- ✓ **EASILY RECYCLED & Safe in Landfills**

The Code Compliant Choice



Certified Performance & Compliance!

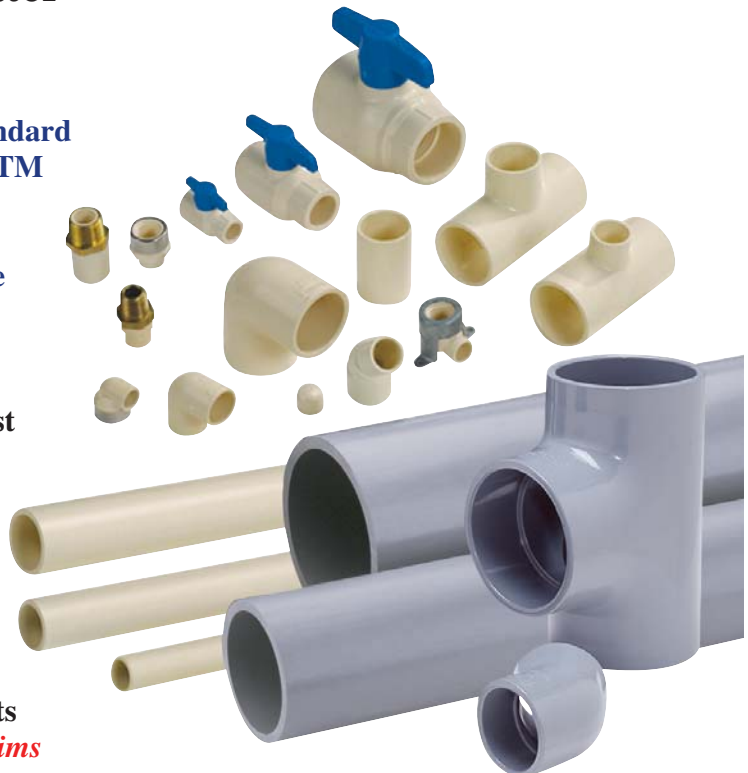
Spears® PVC & CPVC Pipe & Fitting systems components are independently certified for applicable performance and code compliance from one service . . .

- ✓ NSF®-PW Performance Testing to Applicable ASTM Standards
- ✓ NSF® Standard 61 certified for Drinking Water
- ✓ NSF®-U.P.Code Certified Products to the Uniform Plumbing Code

Meet Your Plumbing Needs With Certified CTS & Schedule 80 CPVC Hot & Cold Water Distribution System Pipe & Fittings . . .

Certified to NSF®-U.P.Code, NSF® Standard 61 for use with Drinking Water, to ASTM D 2846 for CPVC Hot & Cold Water Distribution Systems and to ASTM Standards for Schedule 80 CPVC Pipe & Fittings

- **Broadest Configuration Selection Available**
- **Accepted By All Model Codes & Most States** – Check Local Jurisdictions
- **ASTM E 84 Tested Water-Filled Pipe & Fittings For Return Air Plenums** – Meets 25/50 Flame & Smoke Limits
- **Fully Interchangeable & Warranted With All Certified Brands of CPVC System Components**
– *Beware of Misleading Warranty Claims and Exclusions by Other Producers*





Protect Life & Property With **NSF** Certified **FlameGuard®** CPVC Fire Sprinkler Piping Products . . .

Certified to NSF® Standard 61 for use with Drinking Water systems and to applicable ASTM Standards for pipe and fittings. Approved by UL, FM & LPCB for use in NFPA 13, 13R and 13D Installations

- Best Selection
- Can Be Intermixed With Other Approved CPVC Pipe & Fittings
- UL Approved For Use in Return Air Plenums
- Eliminates Microbiologically Influenced Corrosion (MIC) – Destroyer of Metal Systems
- **Innovative Gasket Sealed Head Adapter – Replaces Thread Sealants Containing Paste & Oils With Clean EPDM Gasket Seal For Lower Environmental Impact**



Handle Your Waste Disposal With **NSF** Certified PVC Drainage Waste & Vent Systems.

Certified to NSF®-U.P.Code, to ASTM D 2665 for PVC Drainage Waste & Vent Systems and to ASTM F 1866, for PVC Schedule 40 Fabricated Drainage Waste & Vent Systems.

- Largest Selection of DWV Fittings & Sizes Available
- Molded To 12"
- Fabricated To Any Size
- Can Be Intermixed With Other Approved DWV Pipe & Fittings





For over 40 years Spears® commitment to environmentally responsible products provides One Source Pipe & Fitting System Component benefits surpassed by none!

- ✓ Made In the U.S.A. From Domestic PVC & CPVC Resins Selected For Best Processing, Blended & Compounded in the U.S.A.
- ✓ Environmentally Friendly Processing – Recycled Cooling Water, Proprietary Process Reduces Energy By Over 50% Compared to Typical Manufacturers
- ✓ Continual Reclamation & Use Of Leftover Materials *Practiced For Over 40 years*
- ✓ Best Regional Distribution For Availability & Lower Transportation Energy
- ✓ Broadest Product Selection Available!

Preservation of our earth's resources, reduction of waste and maximizing energy efficiency has been an integral part of Spears® Manufacturing Company's basic operations and commitment to the environment for the past 40 years. As a result of these endeavors, Spears® has developed a true no-waste manufacturing process, not only in terms of raw material utilization but also in energy management. The result has been unparalleled conservation in both equipment operation and product distribution.

From development of conservation oriented processing to the continual introduction of innovative thermoplastic valve and pipe fitting products, Spears® has provided some of the most durable, corrosion resistant, long life, and economical plumbing products available. These are the foundation of greater sustainability in today's green building construction.

Today, Spears® continues to discover new ways to reduce waste, reuse resources, and conserve energy in order to further demonstrate this fundamental commitment to a green environment.

Think Green, Think Spears®!

Appendix G - Discount Codes



Description	Discount Code		Description	Discount Code	
PVC & CPVC Miscellaneous Specialty Valves	004		PVC Gray Schedule 80 Molded Fittings 10" & Larger	081	
PVC Schedule 40 Black Fittings	011		PVC Gray Schedule 80 Fabricated Pressure Fittings	083	
PVC Schedule 40 White Pool & Spa Specialty	015		PVC Schedule 80 Fabricated Pressure Custom Fittings	084	
Isolation Joint Specialties	016		PVC & CPVC Expansion Joints	085	
Flange Gasket/Bolt Kits	017		PVC Gray Schedule 80 Molded Reinforced Fittings	086	
Irrigation Manifolds	019		CPVC Gray Schedule 80 Molded Fittings thru 8"	090	
Irrigation Specialty Products	020		CPVC Gray Schedule 80 Molded Fittings 10" and Larger	091	
Dri-Splice Sealant	022		CPVC Gray Schedule 80 Molded Reinforced Fittings	096	
Compression Couplings 1/2" - 6"	024		CPVC Schedule 80 Fabricated Fittings	097	
Expansion-Repair Couplings 1/2" - 4"	025		CPVC Schedule 80 Fabricated Custom Fittings	098	
PVC Utility Swing & Spring Check Valves thru 8"	026		CPVC Sch 80 Non Pressure Rated	099	
PVC Schedule 40 Tank Adapters 1/2" thru 2-1/2"	029		PVC Gray Tank Adapters	100	
Swing Joint Riser Assemblies – Accessories	030		CPVC Gray Tank Adapters	101	
PVC EverTUFF® TURF™ Fittings Class 315	031		PVC Gray Y-Strainers 1/2" - 4"	102	
CPVC EverTUFF® TURF™ Fittings Class 315	032		PVC Clear Y-Strainers 1/2" - 4"	103	
CPVC CTS Hot/Cold Water Pipe 1/2" - 2"	034		CPVC Gray Y-Strainers 1/2" - 4"	104	
CPVC CTS Tan Fittings 1/2" - 2"	035		PVC Swing Check Valves 3/4" - 2"	108	
PVC Schedule 40 & 80 Clear Pipe	038		CPVC Swing Check Valves 3/4" - 2"	109	
PVC Schedule 40 & 80 Clear Molded Fittings	039		PVC Swing Check Valves 2-1/2" and Larger	110	
PVC Schedule 40 White Molded Fittings thru 8"	040		CPVC Swing Check Valves 2-1/2" and Larger	111	
PVC Schedule 40 White Molded Fittings 10" & Larger	041		PP Swing Check Valves 2-1/2" and Larger	112	
UVR Tan Schedule 40 Molded Fittings	042		PP Swing Check Valves 3/4" - 2"	113	
PVC Gray Schedule 40 Molded Fittings Thru 8"	043		PE Schedule 80 & Poly Cut-Off Nipples	120	
PVC Gray Schedule 40 Fittings 10" & Larger	044		CPVC Gray Schedule 80 Nipples	121	
PVC Gray Schedule 40 Fabricated Fittings	045		PE Four-In-One Cut-Off Nipples	123	
PVC White Schedule 40 Molded Reinforced Fittings	046		PVC Gray Molded Insert Fittings 3/8" - 4"	140	
PVC White Schedule 40 Fabricated Fittings	047		PVC Gray Reinforced Insert Fittings 1/2" - 1"	142	
PVC Hot-Tap Saddles thru 1" - 6"	049		CPVC Molded Insert Fittings 3/4" - 2"	143	
CPVC Hot-Tap Saddles thru 1" - 6"	050		LabWaste™ CPVC Pipe 8" - 12"	157	
PVC DWV Schedule 40 Molded thru 8"	051		LabWaste™ Pipe 14" & Larger	158	
PVC DWV Schedule 40 Molded 10" & Larger	052		LabWaste™ Fittings 8" & Larger	159	
Backwater Valve PVC 2" - 6"	055		LabWaste™ CPVC Fittings thru 6"	160	
PP Natural Schedule 80 SR Threaded Fittings thru 2"	060		LabWaste™ Pipe CPVC 1-1/2" - 6"	161	
PP Black Schedule 80 SR Threaded Fittings thru 2"	061		LabWaste™ CPVC Drain & Accessories	169	
Low-Extractable Solvent Cement	063		LabWaste™ Tools	170	
Schedule 80 Low-Extractable Pipe 1/2" - 6"	064		LabWaste™ Mechanical Couplings	171	
Schedule 80 Low-Extractable Fittings 1/2" - 6"	065		PVC Metric Molded Standard Fittings	190	
Low-Extractable Clear Valves 1/2" - 4"	066		PVC Metric Molded 280mm & Larger	191	
FlameGuard® CPVC Fittings 3/4" - 3"	070		CPVC Metric Molded Standard Fittings	192	
FlameGuard® CPVC Pipe 3/4" - 3"	071		PVC Imperial (BSP) Molded Fittings - White	195	
FlameGuard® Solvent Accessories General Products	073		PVC Imperial (BSP) Molded Fittings - Gray	196	
FlameGuard® CPVC Molded w/Brass Inserts	076		PVC Gray Transition Unions	197	
FlameGuard® CPVC Custom Fittings	079		PVC Gate Valves thru 2"	200	
PVC Gray Schedule 80 Molded Fittings thru 8"	080		PVC Gate Valves 2-1/2" & Larger	201	



Appendix G - Discount Codes

Description	Discount Code		Description	Discount Code	
CPVC Gate Valves thru 2"	202		PVC Metric Diaphragm Valves thru 63mm	274	
CPVC Gate Valves 2-1/2" & Larger	203		CPVC Metric Diaphragm Valves thru 63mm	276	
PVC Ball Valves Thru 2"	204		PP Diaphragm Valves thru 2"	280	
PVC Ball Valves 2-1/2" & Larger	205		PP Diaphragm Valves 2-1/2" and Larger	281	
PVC Metric Gate Valves thru 63mm	208		PVC Air Admittance Valve	285	
CPVC Metric Gate Valves thru 63mm	209		CPVC Air Admittance Valve	286	
PVC Compact Ball Valves thru 2"	210		PVC Butterfly Check Valves 2" and Larger	289	
PVC Compact Ball Valves 3" - 6"	211		CPVC Butterfly Check Valves 2" and Larger	290	
CPVC Compact Ball Valves thru 2"	212		PVC Tee Filters & Basket Strainers	295	
CPVC Compact Ball Valves 3" - 6"	213		CPVC Tee Filters	296	
PVC Utility Ball Valves 2-1/2" - 6"	214		CPVC Basket Strainers	297	
PVC Utility Ball Valves thru 2"	215		Actuation, Accessories, Components	298	
CPVC Utility Ball Valves thru 2"	216		Valves, Accessories, Repair Kits, Components	299	
CPVC CTS Valves 1/2" - 2"	217		Low Head (SDR91) Fabricated Fittings	300	
PVC Lab & Needle Valves 1/4" - 1/2"	218		Low Head Fabricated Risers & Accessories	301	
CPVC & PP Lab & Needle Valves 1/4" - 1/2"	219		PVC Low Head (SDR91) Custom Fittings	309	
PVC Compact Ball Valves thru 4"	220		80# PIP (SDR51) Fabricated Fittings	310	
PVC Compact Ball Valves 6" (Venturied)	221		PVC 80# PIP (SDR51) Fabricated Custom Fittings	319	
CPVC Compact Ball Valves thru 4"	222		100# PIP (SDR41) Fabricated Fittings	320	
CPVC Compact Ball Valves 6" (Venturied)	223		PVC 100# PIP (SDR41) Fabricated Custom Fittings	329	
PVC Metric True Union Ball Check Valves thru 110mm	228		125# PIP x PIP (SDR 32.5) Fabricated Fittings	330	
CPVC Metric True Union Ball Check Valves thru 110mm	229		PVC 125# PIP x PIP (SDR32.5) Fabricated Fittings	339	
PVC True Union Ball Valves thru 4"	230		Class 63 IPS (SDR64) Fabricated Fittings	340	
PVC True Union Ball Valves thru 6" (Venturied)	231		Class 100 IPS (SDR41) Fabricated Fittings	350	
CPVC True Union Ball Valves thru 4"	232		Class 125 IPS (SD432.5) Fabricated Fittings	360	
CPVC True Union Ball Valves thru 6" (Venturied)	233		PVC Class 125 Molded Fittings 10" & Larger	361	
PVC Metric True Union Ball Valves thru 110mm	238		PVC Class 125 IPS (SDR32.5) Fabricated Custom Fittings	369	
CPVC Metric True Union Ball Valves 110mm	239		Class 160 IPS (SDR26) Fabricated Fittings	370	
PVC Single Entry Ball Valves thru 4"	240		Class 200 IPS (SDR26) Fabricated Fittings	380	
PVC Butterfly Valves thru 12"	250		Schedule 40 DWV/Low Pressure Fabricated Fittings	390	
PVC Butterfly Valves 14" & Larger	251		PVC Schedule 40 Fabricated Pipe Extenders	392	
CPVC Butterfly Valves thru 12"	252		PVC Schedule 80 Fabricated Pipe Extenders	394	
CPVC Butterfly Valves 14" & Larger	253		PVC Schedule 40 DWV/Low Pressure Custom Fittings	399	
High Purity Butterfly Valves	254		Schedule 80 DWV/Low Pressure Fabricated Fittings	400	
PP Butterfly Valves thru 12"	256		PVC Fabricated Duct Fittings	430	
PP Butterfly Valves 14" and Larger	257		CPVC Fabricated Duct Fittings	432	
PVC Butterfly Pool Valves thru 8" Manual	260		PVC Fabricated Duct Cold Rolled Pipe	434	
PVC Butterfly Pool Valves thru 12" Gear Operated	261		CPVC Fabricated Cold Rolled Pipe	435	
PVC Tee Valves	263		Double Containment Pressure	470	
CPVC Tee Valves	264		Electro Actuated Compact 2000 Ball Valves PVC thru 2"	496	
PVC Diaphragm Valves thru 2"	270		Electro Actuated Compact 2000 Ball Valves CPVC thru 2"	498	
PVC Diaphragm Valves 2-1/2" and Larger	271		Electro Actuated True Union 2000 Standard & Industrial Ball Valves PVC thru 6"	500	
CPVC Diaphragm Valves thru 2"	272		Electro Actuated True Union 2000 Standard & Industrial Ball Valves CPVC thru 6"	502	
CPVC Diaphragm Valves 2-1/2" and Larger	273		Premium Actuated Standard Butterfly Valve - Electric PVC thru 12"	510	

Appendix G - Discount Codes



Description	Discount Code		Description	Discount Code	
Premium Actuated Standard Butterfly Valve - Electric CPVC thru 12"	512		CPVC Horizontal & Vertical 3-Way Diverter Ball Valves 1/2" - 4"	617	
Premium Actuated Standard Butterfly Valve - Electric PP thru 24"	514		PVC Globe Standard & Wye Valves 1/2" - 4"	620	
Premium Actuated Diaphragm Valves - Electric PVC thru 8"	520		PVC Clear Globe Wye Valves 1/2" - 4"	621	
Premium Actuated Diaphragm Valves - Electric CPVC thru 4"	522		CPVC Globe Standard & Wye Valves 1/2" - 4"	622	
Premium Actuated Diaphragm Valves - Electric PP thru 4"	524		Low-Extractable Gauge Guards	623	
Premium Actuated True Union 2000 Industrial Ball Valves - Pneumatic PVC thru 6"	530		PVC Gauge Guards	624	
Premium Actuated True Union 2000 Industrial Ball Valves - Pneumatic CPVC thru 6"	532		CPVC Gauge Guards	625	
Premium Actuated Standard Butterfly Valves - Pneumatic PVC thru 12"	540		PP Gauge Guards	626	
Premium Actuated Standard Butterfly Valves - Pneumatic CPVC thru 12"	542		PVC Wye Check Valves 1/2" - 4"	627	
Premium Actuated Standard Butterfly Valves - Pneumatic PP thru 24"	544		PVC Clear Wye Check Valves 1/2" - 4"	628	
Premium Actuated Diaphragm Valves - Pneumatic PVC thru 8"	550		CPVC Wye Check Valves 1/2" - 4"	629	
Premium Actuated Diaphragm Valves - Pneumatic CPVC thru 4"	552		CTS Cement	701	
Premium Actuated Diaphragm Valves - Pneumatic PP thru 4"	554		Low-Extractable Cement	702	
PVC True Union 2000 Industrial Ball Check Valves 6"	558		Fire Sprinkler Cement	703	
CPVC True Union 2000 Industrial Ball Check Valves 6"	559		LabWaste™ Cement	704	
PVC True Union 2000 Industrial Ball Valves 1/2" thru 2"	600		PVC Regular/Medium Cement	705	
PVC True Union 2000 Industrial Ball Valves 2-1/2" thru 4"	601		PVC Heavy/X-Heavy Cement	706	
CPVC True Union 2000 Industrial Ball Valves 1/2" thru 2"	602		Gray/CPVC Cement	707	
CPVC True Union 2000 Industrial Ball Valves 2-1/2" thru 4"	603		ABS Cement	708	
PVC True Union 2000 Industrial Ball Check Valves 1/2" thru 2"	604		Primers & Cleaners	709	
PVC True Union 2000 Industrial Ball Check Valves 2-1/2" thru 4"	605		Cements & Primers Accessories	710	
CPVC True Union 2000 Industrial Ball Check Valves 1/2" thru 2"	606		PVC Clear Pipe Distribution – Sales	742	
CPVC True Union 2000 Industrial Ball Check Valves 2-1/2" thru 4"	607		PVC Pipe Distribution – Sales	744	
PVC True Union 2000 Standard Ball Valves 1-1/2" thru 2"	608		CPVC Pipe Distribution – Sales	745	
PVC True Union 2000 Standard Ball Valves 2-1/2" thru 4"	609		PVC Duct Pipe Distribution – Sales	748	
CPVC True Union 2000 Standard Ball Valves 1/2" thru 2"	610		CPVC Duct Pipe Distribution – Sales	749	
CPVC True Union 2000 Standard Ball Valves 2-1/2" thru 4"	611		PVC White Repair Extender Fittings	894	
PVC True Union 2000 Industrial Ball Valves 6"	612		Blue 75™ Thread Sealant	895	
CPVC True Union 2000 Industrial Ball Valves 6"	613		PVC Duct Distribution – Sales	948	
PVC Horizontal & Vertical 3-Way Diverter Ball Valves 1/2" - 4"	615		CPVC Duct Distribution – Sales	949	



Appendix H - Terms & Conditions

TERMS AND CONDITIONS. Unless accepted in writing by the corporate home office of the Company, no term or condition (including but not limited to all terms and conditions set forth in any offer, purchase order, confirmation or other document) other than the terms and conditions set forth in this Invoice shall be binding upon Company. All other terms and conditions are hereby explicitly rejected and acceptance is limited to the terms and conditions herein stated. All conflicts with the terms and conditions herein shall be resolved in favor of this Invoice. Upon acceptance of the subject goods and services, Customer thereby acknowledges and agrees that the prices and charges set forth in this Invoice for the goods and services are the reasonable value for such goods and services and the other terms and conditions herein set forth are consistent with the parties' prior course of dealing, prior course of performance and/or usage of trade. If any term or condition herein is not acceptable, Customer shall give Company written notice thereof within ten (10) business days after receipt of the respective goods and services and if not, Customer shall be deemed to have unconditionally accepted the respective goods and services upon and subject to the terms and conditions hereof.

PRICING POLICY. Spears® maintains a policy to try and provide stable pricing for its products which can reasonably be relied upon by customers and end users. Irrespective of such policy, unforeseen events could occur which may necessitate immediate price increases without notice and/or cause interruption of Spears® ability to furnish products on a timely basis. Unforeseen events may be destructive acts of nature, labor disruptions, raw material or power shortages. In the event of the situations described, Spears® cannot be held liable for effecting immediate price increases or for costs incurred due to delays in delivery of products.

SPECIAL ORDERS. Orders for non-current products or exceptional runs of current products are custom orders, and as such, cannot be canceled or returned by Customer except upon Company's prior written approval. Company reserves the right to charge back Customer all costs incurred in the cancellation or return of such custom orders, including without limitations the charges applicable to returned goods.

CUSTOM PRODUCTS. Orders for custom-made products are accepted only under the following conditions:

- A. Determination of the custom products' suitability for the user's intended application is the sole responsibility of the purchaser or end user.
- B. Spears® warranty for custom products is strictly limited to workmanship. Buyout components, devices, raw materials, etc. are covered by the warranties of those manufacturers.
- C. Products made on a custom basis are non-returnable once produced and shipped. Customers will be charged for all expenses incurred up to the time of notification to Spears® to cancel a custom product order.
- D. Prior to production of custom products, the following documents must be submitted to Spears®:
 - Customer's signed acceptance of Spears® part drawing submittal;
 - Customer's purchase order acknowledging acceptance of Spears® custom product conditions and any other conditions as may be set forth in the Spears® custom product quotation.

PACKAGING. Spears® standard method of packaging will apply for all orders shipping via normal surface means at no additional charge.

SPECIAL PACKAGING. Packaging charges will be invoiced on orders for

- Custom Products;
- Any packaging requirement specifications submitted to Spears® that exceed Spears® standard methods of packaging.

MINIMUM INVOICE. \$50.00 Net

SALES TAX. Spears® is required to charge applicable national, state, and local tax on all purchased items for which a U.S. sales tax exemption certificate for the Purchaser is not on file. When ordering, please indicate clearly which items are tax exempt and provide the required valid resale certificate and/or number.

TERMS OF PAYMENT. Terms of payment are 2% 35 days, net 45 days from date of invoice, past due at 46 days on open accounts unless otherwise agreed in writing. Company's monthly cut-off is the 25th, and as such, all invoices dated after the 25th will be considered the next month's business. Freight charges are net and not subject to any discount. THERE IS NO 2% CASH DISCOUNT ON C.O.D. OR C.I.A. ORDERS. Company reserves the right to levy a late charge on any past due balances equal to the lower of one point five percent (1.5%) per month or the highest rate permitted by law. Customer agrees to pay all costs of collection incurred by Company, including all reasonable attorney's fees and costs but in no event less than Seven Hundred Fifty Dollars (\$750) and costs, regardless of whether formal legal action is instituted. Customer agrees to honor and to pay this Invoice according to the terms of payment contained herein. All payments must be made in U.S. legal currency and by readily available funds. In the event shipment is made hereunder in multiple lots, payment for each lot received shall be made in accordance therewith. Furthermore, Customer agrees not to debit or offset against any amount due Customer from Company on account of any claim or defense that Customer now has or may have in the future against Company. In the event Customer's account is assigned to a collection agency



or commercial lender, Customer also agrees not to assert any such claims or defenses against its account with such collection agency or commercial lender.

FREIGHT AND DELIVERY. All orders are FOB point of shipment. Title of goods and risk of loss passes to Customer when order is picked up by freight carrier. Company shall determine the type of container and arrange for suitable packing of the goods for transport and delivery. Company will attempt to expedite all back-ordered items. All back-ordered items will be subject to product availability and Company does not assume any liability for any damage or additional cost resulting from non-delivery or late delivery.

FREIGHT TERMS:

Prepaid and Allowed: Pipe Excluded. (Freight Charges Borne by Spears®). Freight charges will be prepaid and allowed on customer orders for Spears® products when the following conditions are met (see exclusions):

- A. Shipment is to a single destination from the designated Spears® servicing Regional Distribution Center.
- B. Shipment is by surface means via a freight carrier selected by Spears®
- C. \$2,000.00 USD net order value is met for shipments within the Continental USA.
- D. \$2,500.00 USD net order value is required for exclusive orders of PVC-DWV Molded Fittings. (Mixed orders of PVC-DWV and other Spears® products qualify for \$2,000.00 prepaid and freight-allowed.)
- E. \$2,500.00 USD net order value is met for shipments to Alaska, Hawaii & Canada.
- F. \$3,000.00 USD net order value is required for exclusive orders of PVC-DWV Molded Fittings to Alaska, Hawaii & Canada. (Mixed orders of PVC-DWV and other Spears® products qualify for the \$2,500.00 net order value for freight prepaid and allowed.)

Prepaid and Allowed – Pipe Included (SEE ADDITIONAL CONDITIONS BELOW*):

- A. Pipe Only, \$6,000.00 Continental US; \$7,000.00 Canada.
- B. Pipe, with qualified Spears® product, \$5,000.00 Continental US; \$6,000.00 Canada.
- C. Alaska & Hawaii – No Prepaid and Allowed Shipments.

***Pipe Shipments.** In order to contain shipping costs, the following conditions have been implemented:

- A. Pipe orders for 10,000 pounds or more will generally be shipped on flatbed trailers at Spears® discretion and expense.
- B. Orders for smaller quantities of pipe, which qualify for Full Freight Allowed shipment, will generally be shipped in closed containers.
- C. Customers may request flatbed delivery of any shipment of pipe. However, despite an order qualifying for FFA under our normal terms, any increase in shipping cost over the cost of a closed truck will be invoiced to the customer. If requested, customer will be advised of this cost prior to shipment. It should also be noted that, due to limited availability of flatbed trailers in some areas, delays in shipping and delivery may occur.

Exclusions. The following products do not qualify for freight allowance regardless of net order value amount or if included in an order with other Spears® products. Actual freight charges will be billed on orders for these products. Upon request, a freight charge estimate will be provided on inquiries or orders for these products.

- Fabricated Duct Fittings and Duct Pipe
- Custom Fabricated Manifolds
- Custom Molded & Fabricated Fittings
- Custom Manual & Actuated Valves
- Large Quantities Fabricated Fittings
- Neutralization Tanks

Prepaid and Charged Back (Charges Borne by Customer). All orders not meeting the requirements for freight charges being allowed will be invoiced with the carrier's actual freight charges.

Exceptions to this policy are noted below and will be invoiced the actual freight charges incurred:

- A. All orders shipping to Alaska or Hawaii with a net value less than \$2,500.00. (\$3,000.00 for PVC-DVW exclusive orders.)
- B. All orders shipped to Hawaii via customer's requested carrier.
- C. Customer-requested special freight regardless of order's net value (Air Freight, Bus, etc.).
- D. Original orders and backorders regardless of net value that are shipped at the customer's request from a Spears® warehouse other than the designated servicing warehouse.
- E. All C.O.D. shipments not meeting minimum for full freight allowance.

Freight Collect:

- A. All orders shipping to CANADA with a net value of less than \$2,500.00 USD. (\$3,000.00 for PVC-DWV exclusive orders.)
- B. As requested by the customer.
- C. Customer-requested routings for shipment of goods via a non-contracted freight carrier (not normally used by Spears® Manufacturing Company) regardless of value.



Appendix H - Terms & Conditions

Freight carrier fees and small package carrier fees on all C.O.D. shipments must be paid by the customer upon delivery of the order. FREIGHT TERMS FOR ORDERS SHIPPED OUTSIDE THE CONTINENTAL USA, OTHER THAN THOSE LOCATIONS NOTED ABOVE, WILL BE QUOTED ON A "PER ORDER BASIS".

INSPECTION AND REJECTION. Customer shall inspect all goods promptly upon delivery. If Customer does not object in writing, stating all its reasons, to the goods as delivered and/or the services provided within ten (10) days of delivery, Customer shall be deemed to have irrevocably accepted the goods and services as satisfactory and in full compliance with its requirements, and to have waived all objections thereto which may be patently observable by a thorough and reasonable inspection. In the event Customer timely rejects any of the goods or is otherwise entitled to reject any of the goods, Customer agrees to and shall hold such rejected goods, free of charge, at Customer's place of business until Company has been notified in writing of the rejection and has had a reasonable opportunity to arrange for suitable transportation. Customer shall, under no circumstance, be entitled to resell, destroy, or discard any rejected goods without the prior written consent of Company.

CARRIER CLAIMS. Company will not be liable for any damage, loss or delay caused by any freight carrier. Claims for damaged goods, suspected damages, container shortages or pilferage within the container on delivery must be so noted on the carrier's delivery receipt and the carrier's claims representative should be notified immediately. Upon receipt of this Invoice, Customer shall make timely payment to Company notwithstanding any claims due to any carrier's responsibility. Claims proven to be the responsibility of Company shall be resolved as expeditiously as possible through replacement or credit of goods involved.

RETURNED GOODS. No goods shall be returned to Company for credit without the prior written consent of Company. Company reserves the right to levy a minimum handling and re-stocking charge of thirty percent (30%) on all returns (due to Customer's option). There may be additional charges or deductions from the credit for cleaning and reboxing costs. All returned goods shall be sent prepaid unless Company otherwise agrees in writing. Except for large quantities of slow-moving goods, for returns of goods, on a cumulative basis, in excess of Two Thousand Five Hundred Dollars (\$2,500) and as herein otherwise provided, Customer's requests to return goods are normally granted provided the proposed return is in compliance with Company's Current Return Goods Policy. Said policy requires returned goods to be limited to only goods manufactured or currently sold by Company, all returned goods must be clean, in resalable condition and of current design and color. Except for defective or damaged goods due to the sole fault of Company, Customer shall be entitled only to a credit against further sales for returned goods. The credit shall apply only to returned goods actually received by Company with credit to be issued based on the lowest price in effect within the prior twelve (12) month period, unless the original Invoice numbers and verification is provided by Customer. For further information on this policy, please consult with Company's servicing Regional Distribution Center.

FORCE MAJEURE. Spears® shall not be liable for any delay in or impairment of performance resulting in whole or in part from Acts of God, severe weather conditions, labor disruptions, governmental decrees or controls, insurrections, war risks, shortages, inability to procure or ship product or obtain permits and licenses, supplies or raw materials, or any other circumstances or causes beyond the control of Spears® in the conduct of its business.

RECOMMENDATIONS FOR INSTALLERS AND USERS. PLASTIC PIPING SYSTEMS SHOULD BE ENGINEERED, INSTALLED, AND OPERATED IN ACCORDANCE WITH INDUSTRY ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES. SUITABILITY FOR THE INTENDED SERVICE APPLICATION SHOULD BE DETERMINED PRIOR TO INSTALLATION. WITH RESPECT TO SOLVENT WELD CONNECTIONS, USE A QUALITY GRADE OF PRIMER AND SOLVENT CEMENT FORMULATED FOR THE TYPE OF CONNECTION, WITH THE CORRECT SIZE APPLICATOR. READ AND FOLLOW ALL OF THE SOLVENT CEMENT MANUFACTURER'S APPLICATION INSTRUCTIONS. WITH RESPECT TO THREADED CONNECTIONS, COMPANY RECOMMENDS THE USE OF SPEARS® BLUE 75™ THREAD SEALANT. CHOICE OF OTHER THREAD SEALANT IS AT THE DISCRETION OF THE INSTALLER. THE MANUFACTURER'S LITERATURE FOR THESE PRODUCTS SHOULD BE REVIEWED FOR PROPER SELECTION AND APPLICATION PROCEDURES. WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES, WHICH COULD CAUSE STRESS CRACKING TO PLASTIC. ONE (1) OR TWO (2) TURNS BEYOND FINGER TIGHT IS GENERALLY ALL THAT IS REQUIRED TO MAKE A SOUND PLASTIC THREADED CONNECTION. UNNECESSARY OVER TIGHTENING WILL CAUSE DAMAGE TO BOTH PIPE AND FITTING. CUSTOMER SHALL BE SOLELY RESPONSIBLE FOR INFORMING ALL INSTALLERS AND OTHER END USERS OF THE FOREGOING AND ALL OTHER PRECAUTIONARY INSTRUCTIONS AND DISCLOSURES.

LIMITED WARRANTY. Except as otherwise mandated by law or herein provided, Spears® Manufacturing Company ("Company") warrants Standard Catalog Products ("Products") which have been directly manufactured by them to be free from defects in material and workmanship for as long as the original intended end user of the Products ("End User") retains ownership and possession of the Products and complies with this Warranty ("Warranty Period"). Each other person or entity acquiring or employing the Products, including buyers, contractors and installers ("Buyer") and End Users ("Buyer/End User") agrees that this Warranty shall



be effective only during the Warranty Period so long as the Products are used solely for the normal purposes for which they are intended and in conformance with industry established standards, engineering, installation, operating, and maintenance specifications, recommendations and instructions including explicit instructions by the Company; the Products are properly installed, operated and used, and have not been modified; and all the other terms of this Warranty are complied with. Any violation thereof shall void this Warranty and relieve Company from all obligations arising from this Warranty and the Products.

Upon receipt or discovery of any Products that appear questionable or defective each Buyer/End User shall promptly inspect and return any such Product to the Company at 15853 Olden Street, Sylmar, California 91342, accompanied by a letter stating the nature of any problems. If the Products are determined by Company to be defective in materials or workmanship directly provided by Company, Company, at its sole option, may either repair or replace the defective Products, or reimburse applicable Buyer/End User for the cost of such Products. The applicable Buyer/End User shall bear all applicable shipping costs. THIS SHALL BE BUYERS/END USERS' SOLE REMEDY. EACH BUYER/END USER AGREES THAT COMPANY WILL NOT BE RESPONSIBLE FOR ANY OTHER OBLIGATIONS RELATING TO THE PRODUCTS, INCLUDING ANY OTHER MATERIALS OR LABOR COSTS, LOSS OF USE OR ANY OTHER ITEM OR FOR ANY DELAYS IN COMPLYING WITH THIS WARRANTY BEYOND COMPANY'S REASONABLE CONTROL.

COMPANY SHALL NOT BE LIABLE FOR, DOES NOT ASSUME, AND EXPRESSLY DISCLAIMS, ANY LIABILITY, RESPONSIBILITY AND DAMAGES: DUE TO ANY BUYER/END USER'S FAILURE TO COMPLY WITH THIS WARRANTY, INCLUDING IMPROPER INSTALLATION, USE OR OPERATION; USE WITH PRODUCTS FROM OTHER MANUFACTURERS THAT DO NOT MEET ASTM OR OTHER APPLICABLE PRODUCT STANDARDS; IMPROPER CONTROL OF SYSTEM HYDRAULICS, IMPROPER WINTERIZATION PROCEDURES, IMPROPER VOLTAGE SUPPLY, CONTACT WITH INCOMPATIBLE MATERIALS OR CHEMICALS, EXCAVATION/DIGGING, EXCESSIVE WEIGHT, AND VANDALISM; DUE TO REASONABLE WEAR AND TEAR AND DUE TO ANY ACTS OF NATURE, INCLUDING LIGHTNING, EARTHQUAKES, GROUND MOVEMENT, FROST HEAVE, OR FLOODS.

COMPANY EXTENDS ONLY THIS WARRANTY AND EXPLICITLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER IMPLIED OR OTHERWISE EXPRESSED, WHETHER ORAL, STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTIES OR AFFIRMATIONS FOR SUITABILITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO AFFIRMATION BY COMPANY OR ANY OF ITS REPRESENTATIVES, BY WORDS, CONDUCT OR OTHERWISE, SHALL CONSTITUTE A WARRANTY. THIS WARRANTY MAY NOT BE TRANSFERRED, EXTENDED, ALTERED OR OTHERWISE MODIFIED IN ANY MANNER, EXCEPT BY WRITTEN AGREEMENT SIGNED BY COMPANY.

BY ITS ACCEPTANCE OF THE PRODUCTS, EACH BUYER/END USER EXPRESSLY WAIVES ALL OTHER LIABILITY OR OBLIGATION OF ANY KIND OR CHARACTER OF COMPANY, INCLUDING LIABILITY PREDICATED UPON CONTRACT, TORT, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE GROUNDS, AND ALL, IF ANY, DAMAGES AND LOSSES AS A RESULT THEREOF, INCLUDING ALL, IF ANY, COMPENSATORY, GENERAL, SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR PUNITIVE DAMAGES. WITH RESPECT TO SUCH WAIVERS, EACH BUYER/END USER EXPLICITLY WAIVES CALIFORNIA CIVIL CODE §1542 WHICH STATES "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THIS RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY ADVERSELY AFFECTED HIS SETTLEMENT WITH DEBTOR" AND ALL OTHER SIMILAR STATUTORY, COMMON AND CASE LAW RIGHTS, DEFENSES AND LIMITATIONS.

Having previously independently inspected the Products, or a sample, as fully as desired, or having the opportunity to and having not done so, upon acceptance of delivery of the Products, and except as otherwise herein explicitly provided, each Buyer/End User by acceptance or use of the Products accepts them in their "AS IS" and "WITH ALL FAULTS" condition without any other warranty, expressed, implied or otherwise, and accepts and assumes the entire risk and cost of all servicing, remediation and consequences thereof. This Warranty shall be governed by California law and any unenforceable provisions severed without affecting the remaining provisions. As used herein, "including" includes "without limitation."

MATERIALS OF TRADE. Purchaser represents that it is purchasing goods as its "materials of trade" as defined in the Hazardous Materials Regulations in Title 49 of the Code of Federal Regulations. It further represents that the goods shall be used in direct support of its business, which is not transportation, and that such goods shall not be resold or transported in a vehicle other than the one owned by itself unless it has properly packaged, documented and declared such shipment to the carrier.

INTERPRETATION. Except as otherwise explicitly provided herein, this Invoice shall constitute the entire and final understanding of the parties, and shall supersede all prior understanding, as to the subject matter herein stated. Each party hereby acknowledges that there is no other, and that it is not relying on any other, statement, representation or agreement with respect to this Invoice not herein stated or referred to. This Invoice may be modified or amended only in writing signed by the party against whom enforce-



Appendix H - Terms & Conditions

ment of the amendment or modification is sought. This Invoice shall be interpreted under and governed by the laws of California, except as preempted or otherwise controlled by applicable Federal law in which case such Federal law shall apply. Time is of the essence to this Invoice, and unless stated otherwise, the reasonable time required during which to perform any act shall be thirty (30) days after demand. Except as herein explicitly otherwise provided, this Invoice shall not be varied, supplemented, qualified or interpreted by any prior or subsequent oral understanding, course of dealing or performance between the parties, or by any usage of trade. No party shall be entitled to any advantage due to another party's legal representation or preparation of this Invoice. As used herein, certain capitalized words shall have the meaning as herein provided. Any conflict between said capitalized words and any other meaning shall be resolved as herein provided. To the extent that any provision of this Invoice is declared unenforceable, ambiguous, severable or contradictory, and to the extent it is commercially reasonable, said provision and this Invoice shall be deemed amended with such terms and conditions as to effect and enforce the intention, terms and conditions of this Invoice.

REMEDIES. Except as herein otherwise provided, all remedies provided for herein or by law or equity shall be cumulative and non-exclusive and the exercise of one shall not be deemed a waiver of any other remedy. Notwithstanding anything to the contrary, before any default or breach can be declared hereunder against any party and to the extent written demand has not been so made, at least a ten (10) business day prior notice and opportunity to cure demand shall be made of such a party. Further, provided that in the case of a non-monetary default or where such cure reasonably requires additional time to cure, if such a party promptly commences within the notice period and thereafter diligently pursues the same, such party shall be entitled to complete such cure. Except for any monetary obligations, neither Buyer nor Company shall be considered in default in the performance of its obligations herein to the extent that performance of such is delayed or prevented due to causes beyond the control of said party, including but not limited to acts of God, war, revolution, civil commotion, blockade or embargo, any law, order, regulation or ordinance of any government, fires, floods, unavoidable casualties, strikes, and labor disputes; provided that within ten (10) business days of such cause, party required to perform hereunder provides the other party with written notice of such cause and the estimated time of the delay or in the case performance is prevented, the termination of this Invoice or the respective part thereof. THE PARTIES AGREE AND ACKNOWLEDGE THAT ANY PROVISION OF THIS INVOICE WHICH SHALL SEEK TO LIMIT ANY PARTY'S RIGHT TO ANY REMEDY OR RECOVERY SHALL BE INTERPRETED TO THE EXTENT NECESSARY AND MADE ENFORCEABLE AS EITHER A LIMITATION OF REMEDIES OR LIQUIDATED DAMAGES. EACH PARTY ACKNOWLEDGES THAT, AS APPLICABLE, IT WOULD BE IMPRACTICAL OR EXTREMELY DIFFICULT TO FIX THE ACTUAL DAMAGES IN THE EVENT OF LIQUIDATED DAMAGES AND THAT SUCH LIMITATIONS OR LIQUIDATED DAMAGES PROVISIONS HAVE BEEN REASONABLY DETERMINED AND UNDER THE CIRCUMSTANCES ARE FAIR AND EQUITABLE TO EACH PARTY.

WAIVER. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition will not constitute a waiver of that right or excuse any subsequent nonperformance of any such term or condition by the other party.

JURISDICTION AND LITIGATION. The parties agree that any disputes concerning this Invoice and all goods and services covered by this Invoice shall be litigated only within the County of Los Angeles, California which the parties agree for jurisdictional purposes is the place where this Invoice has been entered into and where it will be substantially performed. All causes of action related to this Invoice and the covered goods and services shall be commenced within two (2) years of the date of the respective shipment or providing to Customer or are all hereby waived.

NOTICES. All notices, demands, acknowledgements, approvals, waivers, responses and any other instruments of any kind (collectively "Notices"), which any party may be required, or desires, to be provided, or served on any party shall be written, dated, state its purpose and the time during which to respond, and served on the respective parties at the addresses set forth in this Invoice, or as may otherwise be subsequently directed in writing. Service shall be deemed made if personally at the time of such service; if by certified or registered mail within seventy-two (72) hours after deposit in the United States mail, postage prepaid and properly addressed, and if by telegraph, telefacsimile, telex or other carrier service (such as Federal Express, DHL, etc.) at the time the machine or agency confirms delivery, provided that within three (3) business days thereafter the original thereof shall have been sent by certified mail (as herein provided) to the party to whom such Notice was directed.

For additional information, contact Spears® Manufacturing Company Regional Distribution Center.
Possession of these Terms & Conditions shall not be construed as an offer to sell Spears® products.

Limited Lifetime Warranty



Except as otherwise specified for certain products, mandated by law or herein provided, Spears® Manufacturing Company ("Company") warrants Standard Catalog Products ("Products") which have been directly manufactured by them to be free from defects in material and workmanship for as long as the original intended end user of the Products ("End User") retains ownership and possession of the Products and complies with this Warranty ("Warranty Period"). Each other person or entity acquiring or employing the Products, including buyers, contractors and installers ("Buyer") and End Users ("Buyer/End User") agrees that this Warranty shall be effective only during the Warranty Period so long as the Products are used solely for the normal purposes for which they are intended and in conformance with industry established standards, engineering, installation, operating, and maintenance specifications, recommendations and instructions including explicit instructions by the Company; the Products are properly installed, operated and used, and have not been modified; and all the other terms of this Warranty are complied with. Any violation thereof shall void this Warranty and relieve Company from all obligations arising from this Warranty and the Products.

Upon receipt or discovery of any Products that appear questionable or defective each Buyer/End User shall promptly inspect and return any such Product to the Company at 15853 Olden Street, Sylmar, California 91342, accompanied by a letter stating the nature of any problems. If the Products are determined by Company to be defective in materials or workmanship directly provided by Company, Company, at its sole option, may either repair or replace the defective Products, or reimburse applicable Buyer/End User for the cost of such Products. The applicable Buyer/End User shall bear all applicable shipping costs. THIS SHALL BE BUYERS/END USERS' SOLE REMEDY. EACH BUYER/END USER AGREES THAT COMPANY WILL NOT BE RESPONSIBLE FOR ANY OTHER OBLIGATIONS RELATING TO THE PRODUCTS, INCLUDING ANY OTHER MATERIALS OR LABOR COSTS, LOSS OF USE OR ANY OTHER ITEM OR FOR ANY DELAYS IN COMPLYING WITH THIS WARRANTY BEYOND COMPANY'S REASONABLE CONTROL.

COMPANY SHALL NOT BE LIABLE FOR, DOES NOT ASSUME, AND EXPRESSLY DISCLAIMS, ANY LIABILITY, RESPONSIBILITY AND DAMAGES: DUE TO ANY BUYER/END USER'S FAILURE TO COMPLY WITH THIS WARRANTY, INCLUDING IMPROPER INSTALLATION, USE OR OPERATION; USE WITH PRODUCTS FROM OTHER MANUFACTURERS THAT DO NOT MEET ASTM OR OTHER APPLICABLE PRODUCT STANDARDS; IMPROPER CONTROL OF SYSTEM HYDRAULICS, IMPROPER WINTERIZATION PROCEDURES, IMPROPER VOLTAGE SUPPLY, CONTACT WITH INCOMPATIBLE MATERIALS OR CHEMICALS, EXCAVATION/DIGGING, EXCESSIVE WEIGHT, AND VANDALISM; DUE TO REASONABLE WEAR AND TEAR AND DUE TO ANY ACTS OF NATURE, INCLUDING LIGHTNING, EARTHQUAKES, GROUND MOVEMENT, FROST HEAVE, OR FLOODS.

COMPANY EXTENDS ONLY THIS WARRANTY AND EXPLICITLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER IMPLIED OR OTHERWISE EXPRESSED, WHETHER ORAL, STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTIES OR AFFIRMATIONS FOR SUITABILITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO AFFIRMATION BY COMPANY OR ANY OF ITS REPRESENTATIVES, BY WORDS, CONDUCT OR OTHERWISE, SHALL CONSTITUTE A WARRANTY. THIS WARRANTY MAY NOT BE TRANSFERRED, EXTENDED, ALTERED OR OTHERWISE MODIFIED IN ANY MANNER, EXCEPT BY WRITTEN AGREEMENT SIGNED BY COMPANY.

BY ITS ACCEPTANCE OF THE PRODUCTS, EACH BUYER/END USER EXPRESSLY WAIVES ALL OTHER LIABILITY OR OBLIGATION OF ANY KIND OR CHARACTER OF COMPANY, INCLUDING LIABILITY PREDICATED UPON CONTRACT, TORT, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE GROUNDS, AND ALL, IF ANY, DAMAGES AND LOSSES AS A RESULT THEREOF, INCLUDING ALL, IF ANY, COMPENSATORY, GENERAL, SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR PUNITIVE DAMAGES. WITH RESPECT TO SUCH WAIVERS, EACH BUYER/END USER EXPLICITLY WAIVES CALIFORNIA CIVIL CODE §1542 WHICH STATES "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THIS RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY ADVERSELY AFFECTED HIS SETTLEMENT WITH DEBTOR" AND ALL OTHER SIMILAR STATUTORY, COMMON AND CASE LAW RIGHTS, DEFENSES AND LIMITATIONS.

Having previously independently inspected the Products, or a sample, as fully as desired, or having the opportunity to and having not done so, upon acceptance of delivery of the Products, and except as otherwise herein explicitly provided, each Buyer/End User by acceptance or use of the Products accepts them in their "AS IS" and "WITH ALL FAULTS" condition without any other warranty, expressed, implied or otherwise, and accepts and assumes the entire risk and cost of all servicing, remediation and consequences thereof. This Warranty shall be governed by California law and any unenforceable provisions severed without affecting the remaining provisions. As used herein, "including" includes "without limitation."

Spears® Quality Policy

It is the policy and objective of Spears® Manufacturing Company to produce a superior quality product suitable for its intended use, with regard to functionality, structural integrity and conformance to established industry standards and practices. It is the commitment of this Company to do so in a manner which provides consistency of product quality, optimum availability, and superior customer service, while maintaining efficiency of operations and profitability necessary to perpetuate product improvement and customer satisfaction. Furthermore, it is recognized that the attainment of these objectives is the responsibility of all Company operations and personnel according to their respective functions.

The information contained in this publication is based on current information and product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variations. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular application or results to be obtained therefrom. For information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263]. Reproduction of this publication in whole or in part is prohibited without the authorized consent of Spears® Manufacturing Company, Sylmar, California.

Watch for NEW PRODUCT SUPPLEMENTS from Spears® Innovation and Technology



SPEARS® MANUFACTURING COMPANY • CORPORATE OFFICE

15853 Olden St., Sylmar, CA 91342 • PO Box 9203, Sylmar, CA 91392
(818) 364-1611 • www.spearsmfg.com

PACIFIC SOUTHWEST

15860 Olden St.
Sylmar (Los Angeles), CA 91342
(818) 364-1611 • (800) 862-1499
Fax (818) 367-3014

ROCKY MOUNTAIN

4880 Florence St.
Denver, CO 80238
(303) 371-9430 • (800) 777-4154
Fax (303) 375-9546

UTAH

5395 West 1520 South
Salt Lake City, UT 84104
(303) 371-9430 • (800) 777-4154
Fax (303) 375-9546

SOUTHEAST

4205 Newpoint Pl., Suite 100
Lawrenceville (Atlanta), GA 30043
(678) 985-1263 • (800) 662-6326
Fax (678) 985-5642

MIDWEST

1 Gateway Ct., Suite A
Bolingbrook (Chicago), IL 60440
(630) 759-7529 • (800) 662-6330
Fax (630) 759-7515

NORTHWEST

4103 C St. NE Suite 200
Auburn (Seattle), WA 98002
(253) 939-4433 • (800) 347-7327
Fax (253) 939-7557

SOUTH CENTRAL

1000 Lakeside Parkway
Flower Mound, TX 75028
(469) 528-3000 • (800) 441-1437
Fax (469) 528-3001

NORTHEAST

590 Industrial Dr., Suite 100
Lewisberry (Harrisburg), PA 17339-9532
(717) 938-8844 • (800) 233-0275
Fax (717) 938-6547

FLORIDA

9563 Parksouth Court
Orlando, FL 32837
(407) 843-1960 • (800) 327-6390
Fax (407) 425-3563

INTERNATIONAL SALES

15853 Olden St.
Sylmar (Los Angeles), CA 91342
(818) 364-1611 • Fax (818) 898-3774

Authorized Distributor