



TECHNICAL INFORMATION WEIGHTS & DIMENSIONS

January 1, 2012
SUPERSEDES ALL PREVIOUS EDITIONS





Visit our web site www.spearsmfg.com

FG-4-0112



FlameGuard® cpvc fire sprinkler piping products

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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.

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; \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; ± 1/16 inch.

 $M = Outside diameter of socket/thread hub; <math>\pm 1/16$ inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

 $Q = Width of flats; \pm 1/16 inch.$

W = Height of cap; $\pm 1/16 \text{ inch.}$

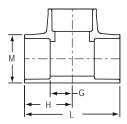
CPVC FIRE SPRINKLER PIPE SDR 13.5 (ASTM F 442)

				-			
Dord Novellon	Nomina	al Size	Av	erage O.D.	Averag	e I.D.	A
Part Number	Inches	(mm)	Inches	(mm)	Inches	(mm)	Approx. Weight Lbs./Ft.
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



TEE

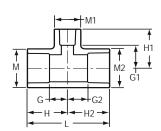
Socket x Socket x Socket



Part Number	Size	G	Н	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



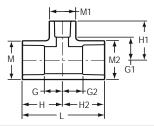
Part Number	Size	G	G1	G2	Н	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4201-102	3/4x3/4x1	3/4	25/32	3/4	1-11/16	1-13/16	1-11/16	3-3/8	1-5/16	1-21/32	1-5/16	.13
4201-125	1x3/4x3/4	21/32	13/16	5/8	1-25/32	1-13/16	1-5/8	3-13/32	1-17/32	1-5/16	1-5/16	.15
4201-126	1x3/4x1	3/4	1-7/8	1-3/32	1-27/32	2-31/32	1-31/32	3-13/16	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



REDUCING TEE

(continued)

Socket x Socket x Socket

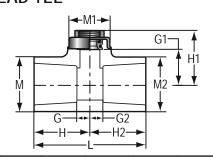


Part Number	Size	G	G1	G2	Н	H1	H2	L	М	M1	M2	Approx. Wt. (Lbs.)
4201-248	2x2x3/4	11/16	1-13/32	11/16	2-7/32	2-7/16	2-7/32	4-7/16	2-27/32	1-3/8	2-27/32	.52
4201-249	2x2x1	27/32	1-7/16	27/32	2-11/32	2-9/16	2-11/32	4-23/32	2-7/8	1-3/4	2-7/8	.57
4201-250	2x2x1-1/4	1	1-11/32	1	2-17/32	2-19/32	2-17/32	5-3/32	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
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

TorqueSafe™ SPRINKLER HEAD TEE

Gasket Sealed Brass Thread Insert Style

Socket x Socket x Gasket FIPT
With Elastomer Seal - Use NO Thread Sealant

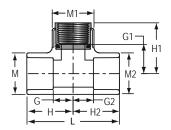


Part Number	Size	G	G1	G2	Н	H1	H2	L	М	M1	M2	Approx. Wt. (Lbs.)
4202-101 G	3/4x3/4x1/2	7/16	1-3/16	7/16	1-7/16	1-7/16	1-17/32	2-29/32	1-3/8	1-3/8	1-3/8	.22
4202-124 G	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130 G	1x1x1/2	7/16	1-11/32	7/16	1-9/16	1-11/16	1-9/16	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

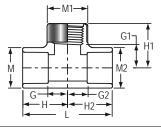


Part Number	Size	G	G1	G2	Н	H1	H2	L	М	M1	M2	Approx. Wt. (Lbs.)
4202-101	3/4x3/4x1/2	7/16	1-5/32	7/16	1-7/16	1-17/32	1-7/16	2-29/32	1-3/8	1-7/32	1-3/8	.27
4202-124	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130	1x1x1/2	7/16	1-7/32	7/16	1-9/16	1-25/32	1-9/16	3-1/8	1-3/4	1-3/16	1-3/4	.26
4202-010	1x1x1	11/16	1-3/32	11/16	1-13/16	1-29/32	1-13/16	3-19/32	1-23/32	1-23/32	1-23/32	.37
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	Н	H1	H2	L	М	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
4202-010SR	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
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

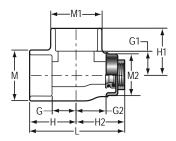


FlameGuard® cpvc fire sprinkler piping products

TORQUESAFE™ SPRINKLER HEAD TEE

Gasket Sealed Brass Thread Insert Style Socket x Gasket FIPT x Socket With Elastomer Seal -

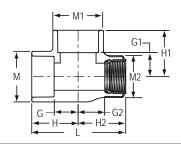
Use NO Thread Sealant



Part Number	Size	G	G1	G2	Н	H1	H2	L	М	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



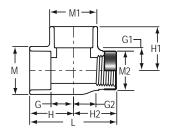
Part Number	Size	G	G1	G2	Н	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122	1x1/2x1	23/32	3/4	1-1/4	1-5/8	1-5/8	1-15/16	3-1/2	1-23/32	1-23/32	1-3/16	.25

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

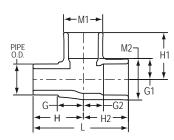


Part Number	Size	G	G1	G2	Н	H1	H2	L	М	M1	M2	Approx. Wt. (Lbs.)
4203-122SR	1x1/2x1	27/32	23/32	1-3/32	1-23/32	1-5/8	1-25/32	3-13/32	1-3/4	1-3/4	1-3/16	.21



STREET TEE

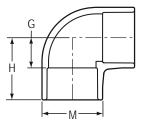
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	Н	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

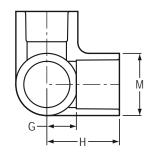
Socket x Socket



Part Number	Size	G	Н	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

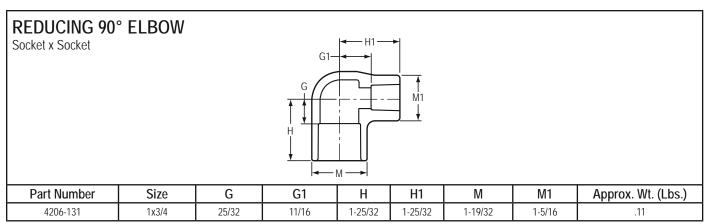
SIDE OUTLET ELBOW

Socket x Socket x Socket



Part Number	Size	G	Н	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

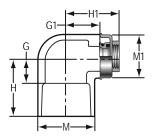




TorqueSafe™ 90° SPRINKLER HEAD ELBOW Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT With Elastomer Seal -

Use NO Thread Sealant

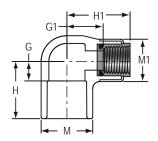


Part Number	Size	G	G1	Н	H1	M	M1	Approx. Wt. (Lbs.)
4207-101 G	3/4x1/2	9/16	1-7/32	1-13/32	1-17/32	1-13/32	1-3/8	.19
4207-130 G	1x1/2	15/32	1-13/32	1-9/16	1-11/16	1-23/32	1-3/8	.23
4207-166 G	1-1/4x1/2	15/32	1-19/32	1-15/16	1-11/16	2-3/32	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking $% \left(1\right) =\left(1\right) \left(1$

SPRINKLER HEAD 90° ELBOW Brass Thread Insert Style

Socket x Fipt



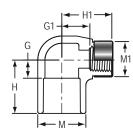
Part Number	Size	G	G1	Н	H1	М	M1	Approx. Wt. (Lbs.)
4207-101	3/4x1/2	7/16	1-5/32	1-23/32	1-17/32	1-13/32	1-17/32	.25
4207-130	1x1/2	15/32	1-5/8	1-9/16	1-11/16	1-23/32	1-17/32	.28
4207-131	1x3/4	17/32	1-1/4	1-21/32	2	1-23/32	1-3/8	.25
4207-166	1-1/4x1/2	15/32	1-17/32	1-11/16	1-15/16	2-3/32	1-17/32	.33

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



SPRINKLER HEAD 90° ELBOW

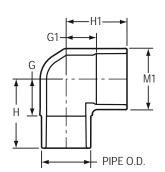
Special Reinforced Plastic Thread Style Socket x SR Fipt



Part Number	Size	G	G1	Н	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

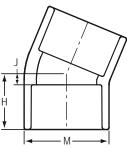


Part Number	Size	G	G1	Н	H1	M1	Approx. Wt. (Lbs.)
4209-007	3/4	29/32	19/32	1-15/16	1-11/16	1-13/32	.12
4209-010	1	1-9/32	23/32	2-13/32	1-27/32	1-3/4	.21
4209-012	1-1/4	1-9/16	27/32	2-13/16	2-3/32	2-3/32	.32
4209-015	1-1/2	1-15/32	1-3/16	2-27/32	2-9/16	2-11/32	.42
4209-020	2	1-23/32	1-3/8	3-7/32	2-15/16	2-27/32	.65



22-1/2° ELBOW

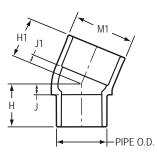
Socket x Socket



Part Number	Size	Н	J	М	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

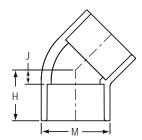


Part Number	Size	Н	H1	J	J1	M1	Approx. Wt. (Lbs.)
4242-007	3/4	1-1/4	1-1/2	1/4	1/2	1-3/8	.08
4242-010	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.14
4242-012	1-1/4	1-9/16	1-25/32	17/32	11/16	2-1/16	.21
4242-015	1-1/2	1-13/32	1-23/32	1/2	11/32	2-11/32	.28
4242-020	2	1-29/32	2-1/8	7/32	5/8	2-7/8	.42
4242-025	2-1/2	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



45° ELBOW

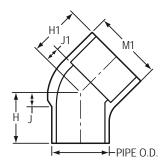
Socket x Socket



Part Number	Size	Н	J	M	Approx. Wt. (Lbs.)
4217-007	3/4	1-5/16	5/16	1-5/16	.07
4217-010	1	1-13/32	3/8	1-5/8	.11
4217-012	1-1/4	1-5/8	3/8	2-5/32	.21
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	1.17

45° STREET ELBOW

Spigot x Socket

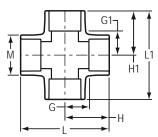


Part Number	Size	Н	H1	J	J1	M1	Approx. Wt. (Lbs.)
4227-010	1	1-1/2	1-5/16	1/2	1/4	1-5/8	.10
4227-012	1-1/4	1-25/32	1-9/16	9/16	11/32	1-31/32	.15
4227-015	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.29
4227-020	2	2-5/16	1-15/16	25/32	13/32	2-7/8	.44



CROSS

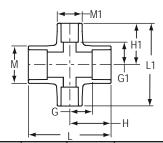
Socket x Socket x Socket



Part Number	Size	G	G1	Н	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	1.43
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

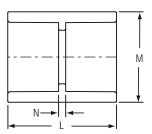


Part Number	Size	G	G1	Н	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
4220-131	1x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.31
4220-167	1-1/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.35
4220-210	1-1/2x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.42
4220-248	2x3/4	11/16	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



COUPLING

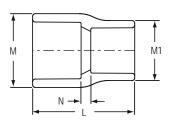
Socket x Socket



Part Number	Size	L	М	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

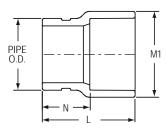


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4229-131	1x3/4	2-3/8	1-23/32	1-13/32	7/32	.10
4229-167	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17
4229-168	1-1/4x1	2-11/16	2-3/32	1-23/32	5/16	.18
4229-210	1-1/2x3/4	2-13/16	2-11/32	1-13/32	15/32	.19
4229-211	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.24
4229-212	1-1/2x1-1/4	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



GROOVED COUPLING ADAPTER

Groove x Socket

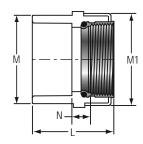


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4233-012	1-1/4	3-5/8	2-3/32	2-11/32	.72
4233-015	1-1/2	3-3/4	2-11/32	2-11/32	.83
4233-020	2	3-27/32	2-27/32	2-11/32	1.27
4233-025	2-1/2	4-3/16	3-15/32	2-7/16	2.02
4233-030	3	4-5/16	4-1/8	1-7/16	2.76

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

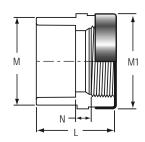
Not intended to convey or dispense water for human consumption through drinking or cooking



FEMALE ADAPTER

Special Reinforced Plastic Thread Style

Socket x SR Fipt

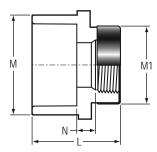


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
4235-010SR	1	2-5/32	1-23/32	1-7/8	3/32	.22
4235-012SR	1-1/4	2-5/16	2-1/8	2-1/16	3/16	.20

FEMALE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

Socket x SR Fipt



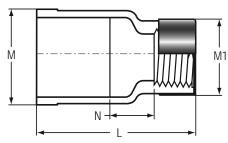
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101SR	3/4x1/2	1-29/32	1-13/32	1-3/16	1/8	.08
4235-130SR	1x1/2	1-31/32	1-23/32	1-3/8	3/32	.16
4235-131SR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.13

FEMALE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style with Socket Wrench Flats

Socket x SR Fipt

M = Flat-to-Flat Dimension



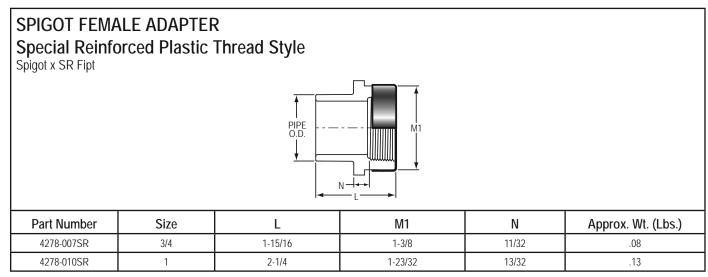
Part Number	Size	L	М	M1	N	Approx. Wt. (Lbs.)
W4235-101SR	3/4x1/2	2-9/32	1-13/32	1-3/16	17/32	.09
W4235-130SR	1x1/2	2-9/32	1-3/4	1-3/16	13/32	.12



FEMALE SPRINKLER HEAD ADAPTER Special Reinforced Plastic Thread w/Metal Thread Start Socket x SR Fipt

Part Nui	mber	Size	L	M	M1	N	Approx. Wt. (Lbs.)
Z4235-10	1SR	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 PIPE Approx. Wt. (Lbs.) Part Number Size L M1 N 3/4 17/32 4278-007 2-5/32 1-3/8 .15 .22 4278-010 1-11/16 7/16 2-9/32 Not intended to convey or dispense water for human consumption through drinking or cooking



FlameGuard® cpvc fire sprinkler piping products

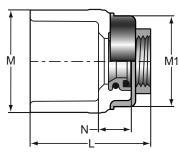


TorqueSafe™ FEMALE SPRINKLER HEAD ADAPTER

Gasket Sealed Brass Thread Insert Style

Socket x Gasket Fipt

With Elastomer Seal - Use NO Thread Sealant



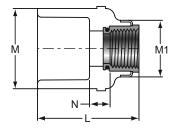
Part Number	Size	L	М	M1	N	Approx. Wt. (Lbs.)
4235-101 G	3/4x1/2	1-7/8	1-13/32	1-3/8	9/16	.15
4235-130GS	1x1/2	2-1/32	1-11/16	1-3/8	17/32	.17
4235-131 G	1x3/4	2	1-11/16	1-9/16	9/16	.18

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



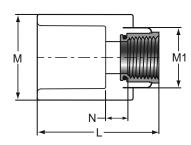
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101	3/4x1/2	1-7/8	1-13/32	1-17/32	15/32	.19
4235-130	1x1/2	2-11/32	1-11/16	1-3/16	5/8	.16
4235-131	1x3/4	2-5/16	1-11/16	1-3/8	17/32	.18

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 Approx. Wt. (Lbs.) N 3/4x1/2 2-1/32 1-7/16 1-3/16 15/32 R4235-101

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.)

1-7/16

1-7/32

7/32

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

3/4x1/2

1-15/16

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 Ν Approx. Wt. (Lbs.) 4238-101 G 3/4x1/2 1-15/16 1-3/8 21/32 .14 4238-130 G 1x1/2 1-3/8 19/32 .15 2-1/16 Not intended to convey or dispense water for human consumption through drinking or cooking

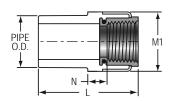
R4235-101SR



SPIGOT FEMALE SPRINKLER HEAD ADAPTER

Brass Thread Insert Style

Spigot x Fipt

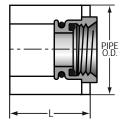


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101	3/4x1/2	1-15/16	1-17/32	17/32	.18
4238-130	1x1/2	2-1/4	1-3/16	11/32	.19

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

TORQUESAFE™ BUSHING - GASKET SEALED

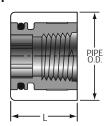
Brass Thread Insert Style
Spigot x Gasket FIPT With Elastomer Seal -Use NO Thread Sealant



Part Number	Size	L	Approx. Wt. (Lbs.)			
4238-130BR G	-130BR G 1x1/2 1-7/32					
Not intended to convey or dispense water for human consumption through drinking or cooking						

BUSHING with BRASS THREAD INSERT

Spigot x Fipt



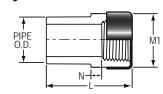
Part Number	Size	L	Approx. Wt. (Lbs.)
4238-130BR	1x1/2	1	.13

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

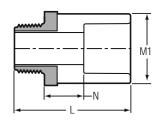


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101SR	3/4x1/2	1-29/32	1-7/32	1/8	.07
4238-130SR	1x1/2	2-1/32	1-7/32	7/32	.09



MALE ADAPTER

With CPVC Lined Thread Brass Insert Mipt x Socket

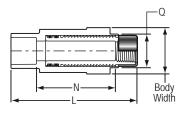


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4236-007	3/4	2-17/32	1-13/32	13/16	.26
4236-010	1	2-15/16	1-23/32	29/32	.43
4236-012	1-1/4	3-1/8	2-3/32	31/32	.66
4236-015	1-1/2	3-9/32	2-11/32	31/32	.80
4236-020	2	3-7/16	2-27/32	31/32	1.00

ADJUSTABLE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

Socket x SR Fipt

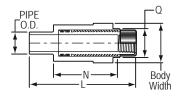


Doub Nousehou	Cina	l	=	ľ	V	0	De de Midde	A
Part Number	Size	Min	Max	Min	Max	Ú	Body Width	Approx. Wt. (Lbs.)
42001SR	3/4x1/2	6-9/32	8	4-7/16	6-1/4	1-7/16	2-3/16	.66
42011SR	1x1/2	6-13/32	8	4-1/2	6-1/8	1-7/16	2-1/8	.68

ADJUSTABLE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

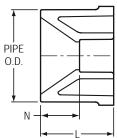
Spigot x SR Fipt



Part Number	Size	ı	_	ı	V	0	Body Width	Approx. Wt. (Lbs.)
T dit Number	3120	Min	Max	Min	Max]	Body Widin	лиргох. Wt. (Lb3.)
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

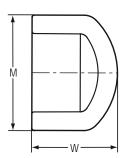


REDUCER BUSHING Flush Style Spigot x Socket



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	.15					
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

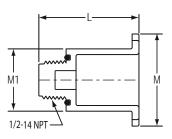


Part Number	Size	М	W	Approx. Wt. (Lbs.)
4247-007	3/4	1-3/8	1-13/32	.05
4247-010	1	1-5/8	1-9/16	.06
4247-012	1-1/4	2-3/32	1-27/32	.13
4247-015	1-1/2	2-11/32	2	.17
4247-020	2	2-27/32	2-9/32	.39
4247-025	2-1/2	3-17/32	2-5/8	.50
4247-030	3	4-3/8	3	.92



TEST PLUG - O-ring Sealed

Mipt - For Pressure Testing Only, Not For use with Z4235 Series Adapters

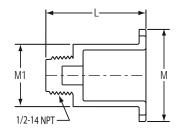


Part Number	Size	L	М	M1	Approx. Wt. (Lbs.)
FTP-005	1/2	1-27/32	1-15/16	1-7/32	.03

TEST PLUG for **TorqueSafe™** Gasket Sealed Head Adapters

Mipt - For Pressure Testing Only.

Use ONLY with Gasket Sealed Head Adapters

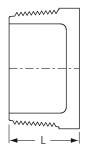


Part Number	Size	L	M	M1	Approx. Wt. (Lbs.)
FTP-005GS	1/2	1-25/32	2-1/32	1-1/4	.05

TEST PLUG

(PVC White) Not UL Listed; For Pressure Testing Only,

Mipt

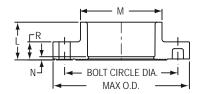


Part Number	Size	L	Approx. Wt. (Lbs.)
4250-005	1/2	27/32	.02



FLANGE - ONE PIECE

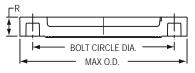
4 Bolt Holes, 175 psi Socket



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

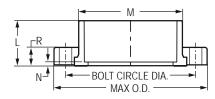
4 Bolt Holes, 175 psi



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

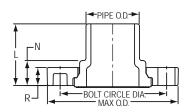


Part Number	Size	L	М	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4254-030	3	2-1/8	4-1/4	9/32	1-1/32	6	4	5/8	3-1/4	7-15/32	1.75



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 NUT O.D. N-Part Number Size M N Nut O.D. Approx. Wt. (Lbs.) L 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 1-1/2 2-1/2 4257-015 3-1/8 3/8 3-17/32 .63

3-1/32

9/16

4-3/16

4257-020

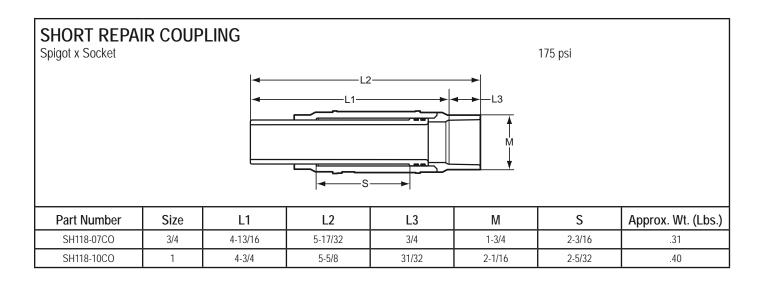
2

3-5/8

1.09



TRANSITION UNION **Brass Thread Insert Style** 175 psi Socket x Fipt NUT O.D. Part Number Size M N Nut O.D. Approx. Wt. (Lbs.) L 4259-010BR 2-13/16 1 1-7/8 1-1/32 2-7/8 .52 4259-012BR 3 1-1/8 3-9/32 .98 1-1/4 2-3/16 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



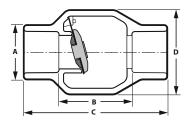


FlameGuard® CPVC Drain & Swing Check Valves for NFPA 13D Applications Only

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 DRAIN VALVES **PVC Valve with CPVC End Connector** Socket x Socket В С Ε Part Number Size Α D 3 3622-007FG 3/4 2-1/4 2-3/4 4-3/4 2 3622-010FG 1 2-1/2 2-7/8 5-1/8 2-5/16 3-7/16

CPVC SWING CHECK VALVES Socket x Socket

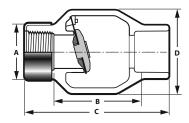


Part Number	Size	А	В	С	D	C _v (GPM)
S1520-10CO	1	1-11/16	2-5/16	4-9/16	2-5/8	.33
S1520-12CO	1-1/4	2-1/16	2-15/16	5-1/2	3-3/8	.42
S1520-15CO	1-1/2	2-7/16	3	5-5/8	3-3/8	.89



CPVC SPECIAL REINFORCED THREAD INLET SWING CHECK VALVES

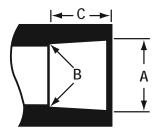
SR Fipt x Socket



Part Number	Size	А	В	С	D	C _v (GPM)
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

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

NOTES

NOTES

NOTES

PRODUCT LIMITED LIFETIME WARRANTY



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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."





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