

OFFERING PRODUCTS FOR UTILITY, IRRIGATION, AND DRAINAGE MARKETS



About the Harrington Corporation (HARCO)

HARCO is a producer of gasketed joint injection-molded PVC fittings and push-on gasketed joint ductile fittings. Don Harrington formed the company in 1966. The first product was a gasketed coupling to join plain end PVC pipe. Success after that was based on product innovations, effectiveness in manufacturing, and company discipline in providing superior service. HARCO has become a leading developer of pipe fittings for the utility, irrigation, and drainage markets. HARCO was the first manufacturer in the United States to produce injection molded gasketed PVC fittings for SDR 26 & SDR 21 pipe, injection molded gasketed PVC fittings for SDR 35 sewer pipe, and injection molded gasketed PVC fittings for C900 PVC pipe. HARCO developed the first compact ductile

iron MJ fittings (AWWA C153) in 1977. HARCO also developed the Swivel Joint Lateral Connection System and a series of Lateral Isolation Valves for serving lateral-to-main connections. Recent acquisitions have allowed HARCO to expand into manufacture of Sch 40 and Sch 80 fittings, sewer fittings up to 36", and storm water solutions such as drain basins and inline drains. HARCO also offers a line of HDPE Fittings and other products for HDPE applications. HARCO will now be manufacturing molded Plastic Irrigation Pipe fittings (PIP) from 6" to 12". HARCO manufactures fittings at its facilities in Lynchburg, VA and Janesville, WI and operates warehouses in Winter Haven, FL; Dallas, TX; and Phoenix, AZ.

PVC FITTINGS

- Gasketed IPS Molded Pressure Fittings, 1½" to 8"
- Gasketed Bell IPS Drainage, SDR 26 and 21, 4" to 12"
- Gasketed SDR 35 Sewer Fittings, 4" to 27"
- Gasketed SDR 26 Sewer Fittings, 4" to 27"
- Solvent Weld SDR 35 Fittings, 10" to 30"
- Gasketed SDR 18 Sewer Fittings, 6" & 8"
- Gasketed Molded Pressure Fittings for C907 and C900 Pipe, 4" to 8"
- Gasketed and Solvent Weld C900 Drainage, DR18 and DR25, 8" to 12"
- Gasketed and Solvent Weld C905 Drainage, DR18 and DR25, 14" to 24"
- Solvent Weld Sch 40 & 80 DWV Fittings, 8" to 24"
- Hub Bell Profile Fittings, 8" to 30"
- Solvent Weld Molded PIP Fittings 6" to 12"
- Special Application Sewer Products (Riser and 2-Way Clean-outs)

DUCTILE IRON FITTINGS

- Gasketed Fittings for PVC sewer Pipe, DI-OD Ductile Iron and C900 PVC Pipe, 4" to 12"
- Gasketed Fittings for IPS-Size PVC Pipe, 1½" to 12"; for C905 Pipe, 14" to 18"
- Lateral Isolation Valves, 2" to 4"

PVC DRAIN BASINS

- 8" to 36"

PP COMPRESSION

- 3G Compression Fittings, ¾" to 2"
 - IPS SDR
 - IPS SIDR
 - CTS
 - Kitec/XPA/Q-Line
- Universal Transition Coupling Compression Fittings
- Philmac Ball Valves, ¾" to 2"

HDPE FITTINGS

- Fabricated Butt Fusion Fittings
- Molded Butt Fusion Fittings, ½" to 12"
- Molded Socket Fusion Fittings, ½" to 4"
- Electrofusion Fittings, ¾" to 24"
- Transitions & Adapters

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HARCO

Ductile Iron Fittings for IPS-Size PVC Pipe

For Golf Course Irrigation Systems,
Commercial Turf Irrigation,
and Rural Water Systems



Fittings Designed for Ductility and Reliability

Harco's DI push-on joint fittings are designed to offer the best possible balance of strength, ductility, impact, and corrosion resistance. Fittings are manufactured for ASTM A536, Grade 65-45-12 ductile iron with a tensile strength of 65,000 psi. These fittings are designed for use on IPS PVC pipe and steel pipe in underground water mains, irrigation systems, and sewer force mains.

Harco Offers a Full Line of Top Quality Fittings

Ductile Iron fittings provide greater strength for underground PVC piping systems than either PVC or epoxy-coated steel fittings. Harco's DI fittings come in 2" through 12" diameters, and are available in tees, bends, reducers, plugs, service tees, flange adapters, wyes, and male thread by bell adapters. Our 28 different SEB (Small End Bell) reducers combine with 77 basic patterns to create over 800 possible configurations. Deep bell push-on joints allow quick and easy installation. They also provide extra room in the bells to allow for pipe movement always present in underground systems.

All the Strength You Need... and Then Some

Ductile iron is produced by adding magnesium alloy to molten iron. The magnesium causes the flake-form graphite to assume a spheroidal shape. This change in the carbon structure results in a far stronger, tougher ductile material than cast iron while retaining superior corrosion properties.

Harco fittings are pressure rated at 350 psi. They are cast of ductile iron with 65,000 psi tensile strength and a wall thickness of 0.31". The following chart illustrates how these fittings stack up against steel and PVC fittings. A Harco 6" x 6" tee withstood a pressure test of 3,000 psi without failure. This high strength capacity is vital in withstanding the critical cyclical surges and high mechanical stresses present in golf course irrigation systems. This high strength is especially important on systems utilizing the new computer controllers which can create additional surge pressures.

STRENGTH COMPARISON TABLE FOR 6" FITTINGS

MATERIAL	TENSILE STRENGTH	WALL THICKNESS	RELATIVE STRENGTH
PVC	7,000 psi	.36"	1
Epoxy-Coated Steel	49,000 psi	.08"	7
Ductile Iron	65,000 psi	.31"	9

Superior Corrosion Resistance Makes Ductile Cast Iron and Cast Iron Last and Last

Ductile cast iron is the standard underground material in the waterworks industry. In fact, one cast iron system has been in continuous use in a water supply line for over 345 years! Back in 1664, King Louis XIV of France ordered the construction of a cast iron pipe main extending fifteen miles from a pumping station at Marly-on-Seine to Versailles to supply water for the fountains and the town. That cast iron pipe is still functioning after more than 345 years of continuous service.

In ductile and cast iron, this corrosion resistance is created from a layer of insoluble graphite that is formed from initial corrosion that becomes a protective barrier against additional corrosion attack. This phenomenon is the reason that ductile iron and cast iron has such longevity in direct bury application in the majority of soils.

(Caution, The presence of highly corrosive soils or aggressive carried waters may require the use of protective measures, such as polyethylene encasement and/or epoxy coating. For those areas, Harco offers fusion bonded epoxy coatings and/or Ductile Iron Pipe Research Association (DIPRA) recommended polyethylene encasement.)

Harco's Patented Restraint Lug System Keeps Fittings Together (Patent No. 5,183,298)

Harco developed a special patented system of lugs and restraint rings. Restraint lugs designed to withstand over 10,000 pounds pull per lug are cast on the bells on the horizontal centerline of all fittings. The system provides positive restraint of Small End Bell (SEB) reducers, flange adapters and plugs to other fittings, and prevents separation of the assembled fittings.

The restraint rings are also designed to carry the extreme full load of a restrained plug at 350 psi pressure. Lugs allow fittings to be tied to valves and hydrants with the use of Harco restraint rods. Lugs on the bends provide pinch bar points for quick and easy push-on assembly.



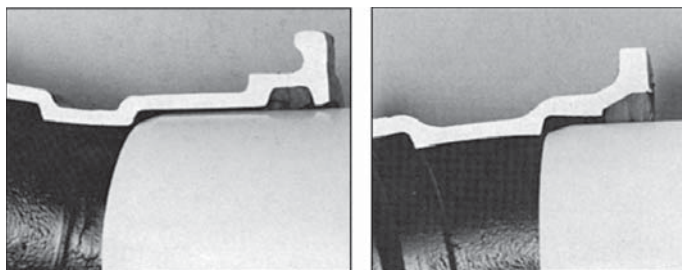
Spigot end of reducers insert into the bells of all other Harco fittings. Restraint rings "lock" reducers to main fitting.

Deep Bells with Gasketed Joints Simplify Installation and Eliminate Problems

Harco's push-on joint design provides for a deep socket bell to accommodate the expansion and contraction of a PVC piping system. The design incorporates a massive gasket in a square groove to prevent roll out and fish mouths. All fittings are designed to work directly on IPS size pipes — without the problems of using transition gaskets.

The push-on joint allows easy, all-weather installation for bottle-type joints every time. The joint assembles exactly like the pipe joints, eliminating all the potential errors that solvent cement voids, incorrect procedures, and inclement weather can cause.

The deep bell was designed in 1969 specifically for PVC pipe, with bell depths equal to pipe joint bell depths. The Harco joint is 2 to 4 times deeper behind the gasket than mechanical joints. The standard MJ joint was designed in 1930 specifically for iron pipe. It wasn't designed to handle the greater expansion and contraction of modern PVC pipe.



Harco Deep Bell

vs.

Mechanical Joint

The Harco joint is 2-4 times deeper than conventional mechanical joints to accommodate expansion and contraction and to prevent roll out and fish mouths.

Gaskets Are Made by Us to Meet Our Own High Standards

Harco manufactures its own gaskets to assure the highest quality and compatible tolerances for gaskets and bells. The gaskets are molded from SBR rubber and are the Chemidur "Z" style of gasket. These gaskets have been used trouble-free in hundreds of thousands of pipe and fitting joints since the mid-60's.

Modular Configurations Make Repairs Easier and Less Costly

Harco's patented system of 28 different SEB (Small End Bell) reducers combines with 77 basic patterns to create over 800 possible configurations for golf course irrigation systems. Restraint lugs on all fittings allow reducers to be positively attached to the basic fittings, so separation is never a concern. All configurations can either be assembled in the factory or in the field by contractors using standard fittings. This means your job won't be delayed waiting for special order fittings to be manufactured and shipped.

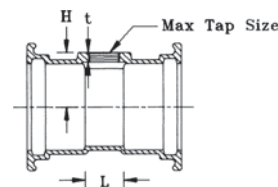
If a particular configuration doesn't get used, no problem. It can be disassembled into standard fittings for use elsewhere. This flexibility is a real plus for designers, contractors and suppliers because changes in the field become easier than ever. You can also reduce the stock you need on hand as well as long lead times for special order.



Shown is an assembled 3 x 2 x 3 tee. The 3 x 2 reducer is installed and restraint rings have been latched over the lugs to create an assembled fitting.

Install Services Easily with Harco Service Tees

Ductile iron service tees are the ideal solution for attaching services or irrigation swing joints onto the main. The gasketed joints of service tees provide added freedom for the service and protect the main line from service line or sprinkler head shocks. Harco service tees eliminate the variety of problems associated with incorrectly installed saddles and incorrect drilling procedures. Iron threads also provide large safety factors for installation — no more cracked PVC threaded fittings from overtorquing and improper assembly. By using a service tee, the main line pipe wall structural integrity is maintained, eliminating the combined stresses formed when a hole is drilled into the pipe.

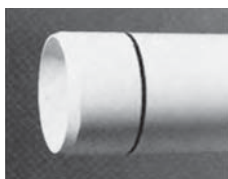


Service Tee - Gasket Joints on each end provide added degrees of freedom.

All Harco tapped tee outlets come furnished with female NPT threads in sizes you require.

Installation Instructions

1. Cut the pipe squarely and bevel the plain end of the pipe. Bevel should be approximately 15 degrees and $\frac{3}{4}$ " long. Remove any burrs and ridges on pipe. Measure the bell depth and mark the pipe for reference. In cold weather, allow $\frac{1}{2}$ " Clearance between end of pipe and bell stop, to allow for later pipe expansion. (See illustration.)
2. Clean all debris from the bell areas of the fitting. Check the position of the gasket so it's completely seated in the groove with no raised areas.
3. Lubricate the gasket and the plain end of the pipe with the lubricant supplied by the pipe manufacturer.
4. Align the pipe with the fitting and push together by hand or with pry bars on the end of the fitting with two pry bars using the lugs on the fitting. Insert until the reference line mark is even with the edge of the fitting bell.



Length from reference mark to end of pipe equal to "A" from Standard Bell Dimensions, less $\frac{1}{2}$ " to allow for expansion.

TABLE 1 - THRUST/100 TABLE (POUNDS PER 100 PSI)

SIZE	TEES, PLUGS	90° BENDS	45° BENDS	22½° BENDS
1½	284	401	217	111
2	363	513	278	141
2½	531	751	407	207
3	788	1,114	603	307
4	1,302	1,841	997	508
5	1,989	2,814	1,523	776
6	2,822	3,990	2,159	1,101
8	4,783	6,763	3,662	1,865
10	7,430	10,506	5,689	2,898
12	10,452	14,778	8,002	4,076

For reducers, subtract small opening plug thrust from large opening thrust to calculate thrust/100.

TABLE 2 - SOIL BEARING CAPACITY

SOIL TYPE	SAFE BEARING LOAD LBS PER SQ FT*
Soft Clay	1,000
Sand	2,000
Sand and Gravel	3,000
Sand and Gravel Cemented with Clay	4,000
Hard Pan	10,000

**Harco assumes no responsibility for the above load data. The engineer is responsible for determining safe bearing loads and when doubt exists, soil bearing tests should be specified. The bearing loads given are for horizontal thrusts when depth of cover exceeds 2 ft.*

Thrust Blocking

1. Provide poured concrete thrust blocks at all changes in size or direction. Bends, reducers, plugs, and the opposite side of tee branches all require thrust blocks.
2. The size of the thrust block is determined by the working pressure, the size and type of fitting, and the soil conditions at the job site. To calculate the area of contact with the soil, follow these steps:
3. Calculate the total thrust by selecting thrust/100 by size and type of fitting from Table 1 and multiplying thrust/100 by system pressure divided by 100.
4. Divide the total thrust by the bearing capacity of the soil in excavation (from Table 2) to determine the area (in square feet) of thrust block required to be in contact with the undisturbed soil.

Suggested Specification

Fittings shall be manufactured of ductile iron, Grade 65-45-12 in accordance with ASTM A536. Fittings shall have deep bell push-on joints with gaskets meeting ASTM F477. Fittings shall be HARCO DEEP BELL by The Harrington Corporation (HARCO Fittings) of Lynchburg, VA. Transition gaskets are not allowed.

The Harrington Corporation

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PRICE LIST

HARCO DEEP BELL DUCTILE IRON FITTINGS

1½" – 12" FITTINGS AND JOINT RESTRAINTS FOR IPS PVC PIPE
14" – 18" FITTINGS AND JOINT RESTRAINTS FOR DIPS PVC PIPE
2" – 4" LATERAL ISOLATION VALVES

IRRIGATION PRICE LIST ID0212

See www.harcofittings.com for latest additions

FREIGHT TERMS – F.O.B. Lynchburg, Virginia

ALL FITTINGS MEET OR EXCEED:

Materials ASTM A-536
Joints AWWA C-111
Gaskets ASTM F-477
Coating AWWA C-153



ENGINEERED FOR DURABILITY

Applicable U.S. Patents: #5,183,298; #5,464,247; #7,055,865; #7,255,124; #7,552,949

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IRRIGATION PRICE LIST HARCO DUCTILE IRON PRODUCTS

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NOTES

1. All 14", 16", and 18" bells are for Ductile Iron Pipe Size (DIPS) PVC Pipe made to AWWA C905 and ductile iron pipe.
2. GASKETS — Included in prices unless otherwise noted.
3. CONNECTION LINKS — Are included in the price and shipped automatically with each SEB reducer, solid and tapped plug, and spigot x flange adapter.
4. CEMENT LINING — Per AWWA C153. Available upon request. Add 5% to list prices, please specify on purchase order and allow up to two weeks for shipment. Cement lined fittings are non-cancellable, non-returnable, and non-refundable.
5. FUSION BOND EPOXY EXTERIOR COATING — Per AWWA C116. Available upon request. Add 15% to list prices, please specify on purchase order and allow up to three weeks for shipment. Non-cancellable. Returnable value subject to restock and coating charge.
6. FUSION BOND EPOXY INTERIOR COATING — Per AWWA C116. Available upon request. Add 15% to list prices, please specify on purchase order and allow up to three weeks for shipment. Non-cancellable. Returnable value subject to restock and coating charge.
7. OTHER COATINGS available upon request, COAL TAR EPOXY, PROTECTO 401, and others. Call for pricing and lead times. Non-cancellable. Returnable value subject to restock and coating charge.
8. ADDITIONAL ITEMS — Many additional configurations are possible by assembling standard fittings. Please inquire if fittings required are not in this list.
9. SUITABILITY — The presence of corrosive soils or carried water may require the use of protective measures such as polyethylene encasement and/or coatings.

IRRIGATION PRICE LIST

HARCO DEEP BELL DUCTILE IRON FITTINGS

Discount Category A

REPAIR COUPLING

(Knock-On)



SIZE	PART NUMBER	WT	LIST PRICE
1½	80040	6	\$39.00
2	80140	6	\$40.00
2½	80240	7	\$41.00
3	80340	10	\$68.00
4	80440	12	\$82.00
5	80540	17	\$122.00
6	80640	23	\$126.00
8	80840	33	\$144.00
10	81040	57	\$240.00
12	81240	71	\$361.00
14	81440MJ	193	\$833.00
16	81640MJ	232	\$971.00
18	81840MJ	270	\$2,014.00

MJ suffix in part number indicates Mechanical Joint, price includes accessories

90° BEND

(1/4 Bend)



SIZE	PART NUMBER	WT	LIST PRICE
1½	80020	4	\$32.00
2	80120	7	\$58.00
2½	80220	7	\$63.00
3	80320	10	\$84.00
4	80420	15	\$98.00
6	80620	27	\$195.00
8	80820	42	\$251.00
10	81020	77	\$479.00
12	81220	102	\$501.00
14	81420	230	\$1,123.00
16	81620	309	\$2,001.00
18 **	81820	482	\$3,273.00

45° BEND

(1/8 Bend)



SIZE	PART NUMBER	WT	LIST PRICE
1½ *	80022	7	\$60.00
2	80122	5	\$57.00
2½	80222	6	\$58.00
3	80322	9	\$73.00
4	80422	13	\$90.00
6	80622	23	\$147.00
8	80822	37	\$230.00
10	81022	56	\$344.00
12	81222	75	\$494.00
14	81422	180	\$750.00
16	81622	266	\$914.00
18 **	81822	209	\$2,599.00

* Assembled from subcomponents.

22½° BEND

(1/16 Bend)



SIZE	PART NUMBER	WT	LIST PRICE
2½	80224	7	\$60.00
3	80324	8	\$74.00
4	80424	12	\$90.00
6	80624	21	\$124.00
8	80824	32	\$222.00
10	81024	51	\$416.00
12	81224	77	\$422.00
14	81424	180	\$893.00
16	81624	269	\$1,307.00
18 **	81824	290	\$2,451.00

11¼° BEND

(1/32 Bend)



SIZE	PART NUMBER	WT	LIST PRICE
4	80426	10	\$107.00
6	80626	21	\$162.00
8	80826	35	\$222.00
10	81026	56	\$447.00
12	81226	77	\$571.00
14	81426	180	\$893.00
16	81626	271	\$1,168.00
18 **	81826	290	\$2,599.00

The HARCO Ductile Iron Fitting product line of easily connected modular components is covered by US Patent #5,183,298.

Products in this price list are mostly import. Call for domestic products, which are available for a limited set of configurations.

1½" - 12": Bells and spigots are IPS size

14" - 18": Bells and spigots are Ductile Iron Pipe Size (DIPS) for AWWA C905 PVC Pipe or Ductile Iron Pipe

** 18" Push-On bells are not joint restrainable. Concrete thrust block only. If joint restraint is required, ask for MJ fitting.

Call for other MJ sizes and configurations.

HARCO DEEP BELL DUCTILE IRON FITTINGS

Discount Category A

ONE-PIECE TEE



SIZE	PART NUMBER	WT	LIST PRICE
1½	8000000	6	\$45.00
2	8010101	8	\$60.00
2 x 2 x 2½	8010102	9	\$169.00
2 x 2 x 3	8010103	10	\$179.00
2½ x 2½ x 2	8020201	9	\$95.00
2½	8020202	10	\$66.00
2½ x 2½ x 3	8020203	12	\$139.00
2½ x 2½ x 4	8020204	40	\$269.00
3 x 2 x 2	8030101	13	\$195.00
3 x 2½ x 2½	8030202	11	\$204.00
3 x 3 x 2	8030301	12	\$142.00
3 x 3 x 2½	8030302	12	\$147.00
3	8030303	14	\$118.00
4 x 4 x 2	8040401	16	\$144.00
4 x 4 x 2½	8040402	17	\$147.00
4 x 4 x 3	8040403	18	\$151.00
4	8040404	21	\$153.00
6 x 6 x 2	8060601	25	\$189.00
6 x 6 x 2½	8060602	26	\$194.00
6 x 6 x 3	8060603	28	\$194.00
6 x 6 x 4	8060604	31	\$232.00
6	8060606	37	\$247.00
8 x 8 x 3	8080803	39	\$247.00
8 x 8 x 4	8080804	44	\$352.00
8 x 8 x 6	8080806	51	\$355.00
8	8080808	61	\$358.00
10 x 10 x 4	8101004	70	\$628.00
10 x 10 x 6	8101006	79	\$521.00
10 x 10 x 8	8101008	89	\$537.00
10	8101010	109	\$552.00
12 x 12 x 6	8121206	100	\$515.00
12 x 12 x 8	8121208	112	\$593.00
12	8121212	147	\$900.00
14	8141414	286	\$1,317.00
16	8161616	335	\$1,622.00
18 x 18 x 16 **	8181816	362	\$3,950.00
18	8181818MJ	435	\$4,155.00

One Piece Tees are one piece castings. At times, some of these may be supplied as Assembled Tees due to inventory status.

** 18 x 16 One Piece Tee is not joint restrainable. Concrete thrust block only. If joint restraint required, ask for MJ fitting.

L.E.B. REDUCER

Large End Bell (Bell x Spigot)



SIZE	PART NUMBER	WT	LIST PRICE
4 x 3	80431	10	\$66.00

Links sold separately.

S.E.B. REDUCER

Small End Bell (Spigot x Bell)

U.S. Patent #5,183,298



SIZE	PART NUMBER	WT	LIST PRICE
2 x 1½	80130	9	\$85.00
2½ x 1½	80232	11	\$86.00
2½ x 2	80230	6	\$53.00
3 x 2	80332	7	\$53.00
3 x 2½	80330	8	\$60.00
4 x 2	80434	9	\$64.00
4 x 2½	80432	9	\$64.00
4 x 3	80430	10	\$66.00
6 x 2	80638	19	\$116.00
6 x 2½	80636	20	\$118.00
6 x 3	80634	14	\$102.00
6 x 4	80632	16	\$113.00
6 x 5	80628	16	\$104.00
8 x 2½	80838	26	\$139.00
8 x 3	80836	27	\$139.00
8 x 4	80834	21	\$134.00
8 x 6	80832	25	\$134.00
10 x 3	81036	31	\$148.00
10 x 4	81034	57	\$235.00
10 x 6	81032	42	\$235.00
10 x 8	81030	43	\$235.00
12 x 4	81236	67	\$344.00
12 x 6	81234	52	\$232.00
12 x 8	81232	55	\$232.00
12 x 10	81230	69	\$283.00
14 x 2½	81437	135	\$713.00
14 x 3	81436	137	\$725.00
14 x 4	81435	163	\$739.00
14 x 6	81434	148	\$801.00
14 x 8	81433	151	\$801.00
14 x 10	81432	159	\$547.00
14 x 12	81430	98	\$401.00
16 x 3	81637	166	\$954.00
16 x 4	81636	195	\$967.00
16 x 6	81635	179	\$1,009.00
16 x 8	81634	183	\$1,022.00
16 x 10	81633	192	\$1,044.00
16 x 12	81632	130	\$753.00
16 x 14	81630	126	\$637.00
18 x 12 *	81834MJ	150	\$1,721.00
18 x 14 *	81832MJ	175	\$1,738.00
18 x 16 *	81830MJ	170	\$1,895.00

Two (2) links and two (2) wedges for each spigot side only of S.E.B. Reducer are included in price and shipped automatically. In case of 14" and 16", six (6) restraint rods supplied. Some S.E.B.s assembled from Tapped Plug and Male Adapter.

* 18" S.E.B.s do not "lock" into bells for 18" tees or bends. 18" Reducers must be independently thrust blocked with concrete.

Call for other MJ sizes and configurations.

IRRIGATION PRICE LIST

HARCO DEEP BELL DUCTILE IRON FITTINGS

ASSEMBLED TEE



SIZE	PART NUMBER	WT	LIST PRICE
2 x 1½ x 1½	8010000	20	\$197.00
2 x 1½ x 2	8010001	14	\$147.00
2 x 2 x 1½	8010100	12	\$99.00
2 x 2 x 4	8010104	37	\$269.00
2 x 2 x 6	8010106	78	\$505.00
2½ x 1½ x 1½	8020000	21	\$201.00
2½ x 1½ x 2	8020001	16	\$205.00
2½ x 1½ x 2½	8020002	19	\$206.00
2½ x 2 x 1½	8020100	16	\$157.00
2½ x 2 x 2	8020101	17	\$152.00
2½ x 2 x 2½	8020102	17	\$116.00
2½ x 2 x 3	8020103	19	\$189.00
2½ x 2½ x 1½	8020200	11	\$99.00
2½ x 2½ x 6	8020206	80	\$452.00
3 x 2 x 2½	8030102	19	\$197.00
3 x 2 x 3	8030103	21	\$168.00
3 x 2 x 4	8030104	41	\$273.00
3 x 2½ x 1½	8030200	21	\$214.00
3 x 2½ x 2	8030201	21	\$203.00
3 x 2½ x 3	8030203	21	\$178.00
3 x 2½ x 4	8030204	41	\$273.00
3 x 3 x 1½	8030300	14	\$146.00
3 x 3 x 4	8030304	42	\$273.00
3 x 3 x 6	8030306	66	\$479.00
4 x 2 x 2	8040101	25	\$221.00
4 x 2 x 2½	8040102	26	\$222.00
4 x 2 x 3	8040103	27	\$225.00
4 x 2 x 4	8040104	31	\$209.00
4 x 2 x 6	8040106	72	\$471.00
4 x 2½ x 2	8040201	25	\$238.00
4 x 2½ x 2½	8040202	26	\$206.00
4 x 2½ x 3	8040203	27	\$206.00
4 x 2½ x 4	8040204	31	\$206.00
4 x 2½ x 6	8040206	74	\$469.00
4 x 3 x 2	8040301	26	\$209.00
4 x 3 x 2½	8040302	27	\$209.00
4 x 3 x 3	8040303	26	\$209.00
4 x 3 x 4	8040304	32	\$209.00
4 x 3 x 6	8040306	64	\$469.00
4 x 4 x 1½	8040400	16	\$160.00
4 x 4 x 6	8040406	70	\$460.00
4 x 4 x 8	8040408	86	\$608.00
6 x 2 x 4	8060104	52	\$361.00
6 x 2 x 6	8060106	58	\$361.00
6 x 2 x 8	8060108	111	\$600.00
6 x 2½ x 3	8060203	49	\$308.00
6 x 2½ x 4	8060204	53	\$346.00
6 x 2½ x 6	8060206	59	\$361.00
6 x 2½ x 8	8060208	116	\$608.00
6 x 3 x 2	8060301	41	\$292.00

Assembled Tees assembled using One Piece Tees and
S.E.B. reducers. Call for other configurations.

ASSEMBLED TEE

(Continued)



SIZE	PART NUMBER	WT	LIST PRICE
6 x 3 x 2½	8060302	42	\$309.00
6 x 3 x 3	8060303	44	\$309.00
6 x 3 x 4	8060304	47	\$346.00
6 x 3 x 6	8060306	53	\$362.00
6 x 3 x 8	8060308	88	\$623.00
6 x 4 x 2	8060401	43	\$301.00
6 x 4 x 2½	8060402	43	\$301.00
6 x 4 x 3	8060403	45	\$301.00
6 x 4 x 4	8060404	48	\$344.00
6 x 4 x 6	8060406	54	\$355.00
6 x 4 x 8	8060408	88	\$615.00
6 x 6 x 1½	8060600	18	\$196.00
6 x 6 x 8	8060608	88	\$615.00
6 x 6 x 10	8060610	164	\$1,057.00
8 x 2½ x 6	8080206	78	\$491.00
8 x 2½ x 8	8080208	86	\$491.00
8 x 3 x 6	8080306	79	\$492.00
8 x 3 x 8	8080308	87	\$492.00
8 x 4 x 4	8080404	67	\$486.00
8 x 4 x 6	8080406	74	\$486.00
8 x 4 x 8	8080408	82	\$486.00
8 x 4 x 10	8080410	217	\$1,220.00
8 x 6 x 2	8080601	60	\$412.00
8 x 6 x 2½	8080602	61	\$414.00
8 x 6 x 3	8080603	64	\$379.00
8 x 6 x 4	8080604	69	\$486.00
8 x 6 x 6	8080606	76	\$486.00
8 x 6 x 8	8080608	84	\$486.00
8 x 6 x 10	8080610	203	\$1,057.00
8 x 6 x 12	8080612	264	\$1,363.00
8 x 8 x 2	8080801	36	\$261.00
8 x 8 x 2½	8080802	36	\$265.00
8 x 8 x 10	8080810	205	\$1,057.00
8 x 8 x 12	8080812	265	\$1,363.00
10 x 3 x 8	8100308	127	\$684.00
10 x 3 x 10	8100310	146	\$701.00
10 x 3 x 12	8100312	258	\$1,520.00
10 x 4 x 6	8100406	143	\$942.00
10 x 4 x 8	8100408	153	\$959.00
10 x 4 x 10	8100410	172	\$972.00
10 x 4 x 12	8100412	285	\$1,520.00
10 x 6 x 4	8100604	119	\$883.00
10 x 6 x 6	8100606	127	\$774.00
10 x 6 x 8	8100608	137	\$791.00
10 x 6 x 10	8100610	156	\$800.00
10 x 6 x 12	8100612	260	\$1,406.00
10 x 8 x 3	8100803	120	\$694.00
10 x 8 x 4	8100804	120	\$883.00
10 x 8 x 6	8100806	127	\$785.00
10 x 8 x 8	8100808	138	\$792.00
10 x 8 x 10	8100810	157	\$800.00

Discount Category A

IRRIGATION PRICE LIST

HARCO DEEP BELL DUCTILE IRON FITTINGS

Discount Category A

ASSEMBLED TEE

(Continued)



SIZE	PART NUMBER	WT	LIST PRICE
10 x 8 x 12	8100812	274	\$1,406.00
10 x 10 x 2	8101001	70	\$447.00
10 x 10 x 2½	8101002	79	\$447.00
10 x 10 x 3	8101003	80	\$447.00
10 x 10 x 12	8101012	286	\$1,455.00
12 x 4 x 8	8120408	183	\$1,520.00
12 x 4 x 10	8120410	288	\$1,520.00
12 x 4 x 12	8120412	220	\$1,234.00
12 x 6 x 6	8120606	157	\$737.00
12 x 6 x 8	8120608	170	\$822.00
12 x 6 x 10	8120610	213	\$1,413.00
12 x 6 x 12	8120612	204	\$1,129.00
12 x 8 x 3	8120803	193	\$582.00
12 x 8 x 4	8120804	185	\$737.00
12 x 8 x 6	8120806	162	\$737.00
12 x 8 x 8	8120808	173	\$822.00
12 x 8 x 10	8120810	276	\$1,413.00
12 x 8 x 12	8120812	268	\$1,129.00
12 x 10 x 3	8121003	202	\$822.00
12 x 10 x 4	8121004	192	\$900.00
12 x 10 x 6	8121006	169	\$792.00
12 x 10 x 8	8121008	242	\$875.00
12 x 10 x 10	8121010	285	\$1,455.00
12 x 10 x 12	8121012	277	\$1,180.00
12 x 12 x 2	8121201	89	\$501.00
12 x 12 x 2½	8121202	90	\$501.00
12 x 12 x 3	8121203	133	\$503.00
12 x 12 x 4	8121204	116	\$624.00
12 x 12 x 10	8121210	214	\$1,178.00

REDUCER

(Bell x Bell)



SIZE	PART NUMBER	WT	LIST PRICE
2 x 1½	80130BB	13	\$136.00
2½ x 1½	80232BB	19	\$138.00
2½ x 2	80230BB	16	\$91.00
3 x 2	80332BB	17	\$113.00
3 x 2½	80330BB	17	\$121.00
4 x 2	80434BB	21	\$139.00
4 x 2½	80432BB	22	\$139.00
4 x 3	80430BB	23	\$142.00
6 x 2	80638BB	43	\$256.00
6 x 2½	80636BB	44	\$232.00
6 x 3	80634BB	38	\$232.00
6 x 4	80630	40	\$116.00
8 x 2½	80838BB	60	\$284.00
8 x 3	80836BB	61	\$273.00
8 x 4	80834BB	55	\$264.00
8 x 6	80830	58	\$157.00
10 x 6	81032BB	106	\$476.00
10 x 8	81030BB	107	\$476.00
12 x 6	81234BB	130	\$569.00
12 x 8	81232BB	134	\$569.00
12 x 10	81230BB	143	\$623.00
14 x 12	81430BB	250	\$884.00
16 x 12	81632BB	314	\$1,085.00
16 x 14	81630BB	343	\$1,161.00
18 x 14 *	81832BB	217	\$2,158.00
18 x 16 *	81830BB	202	\$2,297.00

* 18" BxB Reducers not joint restrainable. Concrete thrust block only. If joint restraint required, ask for MJ fitting.

CROSS

(All Gasketed Bell)



SIZE	PART NUMBER	WT	LIST PRICE
2½ x 2½ x 1½ x 1½	802150303	16	\$153.00
2½ x 2½ x 2 x 2	802150404	17	\$165.00
3 x 3 x 2 x 2	803150404	21	\$205.00
3 x 3 x 2½ x 2½	803150505	24	\$210.00
4 x 4 x 2 x 2	804150404	26	\$220.00
4 x 4 x 2½ x 2½	804150505	28	\$225.00
4 x 4 x 3 x 3	804150606	30	\$227.00
6 x 6 x 2 x 2	806150404	40	\$253.00
6 x 6 x 2½ x 2½	806150505	41	\$258.00
6 x 6 x 3 x 3	806150606	44	\$260.00
8 x 8 x 2 x 2	808150404	51	\$330.00
8 x 8 x 2½ x 2½	808150505	54	\$334.00
8 x 8 x 3 x 3	808150606	57	\$337.00

Any combination of outlets available; 1½", 2", 2½", and 3".

TAPPED CROSS

(Female NPT Outlet)



SIZE	PART NUMBER	WT	LIST PRICE
2½ x 1¼	802510252	10	\$57.00
2½ x 1½	802510303	10	\$57.00
2½ x 2	802510404	10	\$57.00
3 x 2	803510404	14	\$147.00
3 x 2½	803510505	14	\$147.00
4 x 2	804510404	18	\$160.00
4 x 2½	804510505	17	\$160.00
4 x 3	804510606	17	\$160.00
6 x 2	806510404	31	\$182.00
6 x 2½	806510505	31	\$182.00
6 x 3	806510606	30	\$182.00
8 x 2	808510404	43	\$267.00
8 x 2½	808510505	43	\$267.00
8 x 3	808510606	43	\$267.00

Any combination of outlets available; 1½", 2", 2½", and 3".

IRRIGATION PRICE LIST

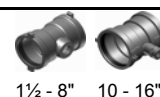
HARCO DEEP BELL DUCTILE IRON FITTINGS

TAPPED TEE (Service Tee) (Female NPT Outlet)



SIZE	PART NUMBER	WT	LIST PRICE
1 1/2 x 1 *	800502	8	\$58.00
1 1/2 x 1 1/2 *	800503	8	\$58.00
2 x 1	801502	7	\$48.00
2 x 1 1/4	8015025	6	\$48.00
2 x 1 1/2	801503	6	\$46.00
2 x 2 *	801504	30	\$105.00
2 1/2 x 1	802502	7	\$48.00
2 1/2 x 1 1/4	8025025	7	\$48.00
2 1/2 x 1 1/2	802503	7	\$46.00
2 1/2 x 2	802504	9	\$46.00
2 1/2 x 2 1/2 *	802505	15	\$119.00
3 x 1	803502	10	\$95.00
3 x 1 1/4	8035025	11	\$95.00
3 x 1 1/2	803503	10	\$93.00
3 x 2	803504	9	\$93.00
3 x 2 1/2	803505	11	\$95.00
3 x 3 *	803506	20	\$130.00
4 x 1	804502	14	\$109.00
4 x 1 1/4	8045025	14	\$109.00
4 x 1 1/2	804503	13	\$109.00
4 x 2	804504	13	\$105.00
4 x 2 1/2	804505	16	\$105.00
4 x 3	804506	16	\$105.00
6 x 1	806502	16	\$138.00
6 x 1 1/4	8065025	16	\$138.00
6 x 1 1/2	806503	15	\$138.00
6 x 2	806504	16	\$138.00
6 x 2 1/2	806505	22	\$138.00
6 x 3	806506	21	\$138.00
8 x 1	808502	32	\$197.00
8 x 1 1/4	8085025	32	\$197.00
8 x 1 1/2	808503	32	\$197.00
8 x 2	808504	31	\$197.00
8 x 2 1/2	808505	31	\$197.00
8 x 3	808506	30	\$197.00
10 x 1 *	810502	66	\$372.00
10 x 1 1/4 *	8105025	66	\$387.00
10 x 1 1/2 *	810503	67	\$393.00
10 x 2 *	810504	66	\$393.00
10 x 2 1/2 *	810505	66	\$393.00
10 x 3 *	810506	66	\$393.00
10 x 4	810508	66	\$429.00
12 x 1 *	812502	84	\$429.00
12 x 1 1/4 *	8125025	84	\$447.00
12 x 1 1/2 *	812503	85	\$447.00
12 x 2 *	812504	84	\$447.00
12 x 2 1/2 *	812505	84	\$447.00
12 x 3 *	812506	84	\$447.00
12 x 4	812508	84	\$501.00
14 x 2 *	814504	158	\$807.00
14 x 2 1/2 *	814505	158	\$807.00
14 x 3 *	814506	158	\$807.00

TAPPED TEE (Service Tee) (Continued)



SIZE	PART NUMBER	WT	LIST PRICE
16 x 2 *	816504	194	\$1,042.00
16 x 2 1/2 *	816505	194	\$1,042.00
16 x 3 *	816506	194	\$1,042.00

* Assembled from subcomponents.

10" through 16" Tapped Tees are assembled from Swivel Tee and Swivel x Thread Adapter.

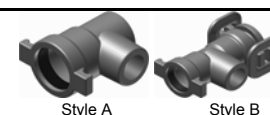
Some items shipped using Ductile Iron Thread Bushing to accomplish smaller thread sizes.

ACME SERVICE TEE (Female ACME)



SIZE	PART NUMBER	WT	STYLE	LIST PRICE
2 x 1	8015302	7	A	\$52.00
2 x 1 1/4	80153025	6	A	\$52.00
2 x 1 1/2	8015303	6	A	\$47.00
2 1/2 x 1	8025302	7	A	\$52.00
2 1/2 x 1 1/4	80253025	7	A	\$52.00
2 1/2 x 1 1/2	8025303	7	A	\$47.00
3 x 1	8035302	11	B	\$98.00
3 x 1 1/4	80353025	11	B	\$98.00
3 x 1 1/2	8035303	11	B	\$98.00
4 x 1	8045302	14	B	\$111.00
4 x 1 1/4	80453025	14	B	\$111.00
4 x 1 1/2	8045303	13	B	\$111.00
6 x 1	8065302	20	B	\$142.00
6 x 1 1/4	80653025	20	B	\$142.00
6 x 1 1/2	8065303	19	B	\$142.00
8 x 1	8085302	34	B	\$200.00
8 x 1 1/4	80853025	34	B	\$200.00
8 x 1 1/2	8085303	33	B	\$200.00

SIDE OUTLET TAPPED CAP



(FNPT or Female ACME)

SIZE	PART NUMBER	WT	STYLE	LIST PRICE
2 x 1 1/2	80168	12	B	\$78.00
2 x 1 1/2 ACME	801683	12	B	\$78.00
2 1/2 x 1 1/2	80268	6	A	\$79.00
2 1/2 x 1 1/2 ACME	802683	6	A	\$79.00

Call for other MJ sizes and configurations.

Discount Category A

HARCO DEEP BELL DUCTILE IRON FITTINGS

Discount Category A

PLUG

(Solid x Spigot)



SIZE	PART NUMBER	WT	LIST PRICE
2	80155	5	\$41.00
2½	80255	6	\$43.00
3	80355	6	\$44.00
4	80455	12	\$53.00
6	80655	17	\$55.00
8	80855	20	\$78.00
10	81055	37	\$102.00
12	81255	51	\$121.00
16	81655	59	\$596.00

Two (2) links and two (2) wedges for each Plug are included in price and shipped automatically. In case of 16", six (6) restraint rods supplied.

TAPPED PLUG

(Spigot x Female NPT)



SIZE	PART NUMBER	WT	LIST PRICE
2 x 1	8015602	5	\$55.00
2 x 1½	8015603	5	\$55.00
2½ x 1	8025602	6	\$56.00
2½ x 1½	8025603	6	\$56.00
2½ x 2	8025604	6	\$56.00
3 x 1	8035602	6	\$47.00
3 x 1½	8035603	6	\$58.00
3 x 2	8035604	6	\$58.00
3 x 2½	8035605	6	\$61.00
4 x 1½	8045603	12	\$56.00
4 x 2	8045604	12	\$66.00
4 x 2½	8045605	12	\$56.00
4 x 3	8045606	12	\$66.00
6 x 1½	8065603	16	\$58.00
6 x 2	8065604	16	\$69.00
6 x 2½	8065605	16	\$58.00
6 x 3	8065606	16	\$69.00
8 x 1½	8085603	20	\$84.00
8 x 2	8085604	20	\$91.00
8 x 2½	8085605	20	\$84.00
8 x 3	8085606	19	\$91.00
10 x 1½	8105603	37	\$101.00
10 x 2	8105604	36	\$116.00
10 x 2½	8105605	36	\$101.00
10 x 3	8105606	36	\$116.00
10 x 4	8105608	51	\$196.00
12 x 1½	8125603	51	\$120.00
12 x 2	8125604	51	\$134.00
12 x 2½	8125605	51	\$120.00
12 x 3	8125606	51	\$134.00
12 x 4	8125608	51	\$214.00

Two (2) links and two (2) wedges for each Tapped Plug are included in price and shipped automatically.

CAP



Style A



Style B

SIZE	PART NUMBER	WT	STYLE	LIST PRICE
1½	80066	4	A	\$78.00
2	80166	8	B	\$78.00
2½	80266	4	A	\$78.00
3	80366	17	B	\$107.00
4	80466	25	B	\$127.00
6	80666	40	B	\$170.00
8	80866	55	B	\$209.00
10	81066	97	B	\$314.00
12	81266	127	B	\$453.00
14	81466MJ	66	A	\$1,437.00
16	81666	92	A	\$1,793.00

MJ suffix in part number indicates MJ bell; price includes accessories.

TAPPED CAP

(Bell x Female NPT)



SIZE	PART NUMBER	WT	LIST PRICE
2 x 1	8016702	5	\$78.00
2 x 1½	8016703	5	\$78.00
2½ x 1	8026702	6	\$79.00
2½ x 1½	8026703	6	\$79.00
2½ x 2	8026704	6	\$79.00
3 x 1	8036702	6	\$109.00
3 x 1½	8036703	6	\$109.00
3 x 2	8036704	6	\$109.00
3 x 2½	8036705	6	\$109.00
4 x 1½	8046703	12	\$127.00
4 x 2	8046704	12	\$127.00
4 x 2½	8046705	12	\$127.00
4 x 3	8046706	12	\$127.00
6 x 1½	8066703	16	\$170.00
6 x 2	8066704	16	\$170.00
6 x 2½	8066705	16	\$170.00
6 x 3	8066706	16	\$170.00
8 x 1½	8086703	20	\$209.00
8 x 2	8086704	20	\$209.00
8 x 2½	8086705	20	\$209.00
8 x 3	8086706	19	\$209.00
10 x 1½	8106703	37	\$314.00
10 x 2	8106704	36	\$314.00
10 x 2½	8106705	36	\$314.00
10 x 3	8106706	36	\$314.00
10 x 4	8106708	51	\$394.00
12 x 1½	8126703	51	\$455.00
12 x 2	8126704	51	\$455.00
12 x 2½	8126705	51	\$455.00
12 x 3	8126706	51	\$455.00
12 x 4	8126708	51	\$535.00

IRRIGATION PRICE LIST

HARCO DEEP BELL DUCTILE IRON FITTINGS

FLANGE x BELL ADAPTER



SIZE	PART NUMBER	WT	STYLE	LIST PRICE
3 x 3	80360FB	22	B	\$152.00
3 x 4	80360-04	35	B	\$231.00
4 x 4	80460FB	29	A	\$173.00
4 x 6	80460-06	57	B	\$331.00
6 x 6	80660FB	47	A	\$267.00
6 x 8	80660-08	93	B	\$419.00
8 x 8	80860FB	67	A	\$305.00
8 x 10	80860-10	141	B	\$665.00
10 x 8	81060-08	99	B	\$798.00
10 x 10	81060FB	56	A	\$563.00
10 x 12	81060-12	216	B	\$976.00
12 x 10	81260-10	145	B	\$971.00
12 x 12	81260FB	76	A	\$689.00
14 x 14	81460	115	A	\$965.00
16 x 16	81660	118	A	\$1,034.00
18 x 18	81860MJ	240	A	\$1,750.00

MJ suffix in part number indicates MJ bell; price includes accessories.

FLANGE OUTLET TEE (Bell x Bell x Flange)



SIZE	PART NUMBER	WT	LIST PRICE
3 x 3	80300F	27	\$206.00
4 x 4	80400F	39	\$246.00
6 x 4	80601F	49	\$337.00
6 x 6	80600F	62	\$401.00
8 x 6	80801F	76	\$515.00
8 x 8	80800F	94	\$535.00
10 x 6	81002F	111	\$692.00
10 x 8	81001F	130	\$729.00
10 x 10	81000F	180	\$902.00
12 x 6	81203F	128	\$678.00
12 x 8	81202F	145	\$785.00
12 x 12	81200F	240	\$1,266.00

SPIGOT x FLANGE ADAPTER



SIZE	PART NUMBER	WT	LIST PRICE
3	80360	13	\$95.00
4	80460	17	\$113.00
6	80660	24	\$163.00
8	80860	33	\$188.00
10	81060	71	\$375.00
12	81260	94	\$395.00

Two (2) links and two (2) wedges for each Spigot x Flange Adapter are included in price and shipped automatically.

FLANGE ACCESSORIES (For Class 125 & 150)



SIZE	PART NUMBER	WT	LIST PRICE
3	856031	2	\$13.00
4	856041	4	\$19.00
6	856061	6	\$30.00
8	856081	6	\$34.00
10	856101	13	\$61.00
12	856121	14	\$69.00
14	856141	15	\$125.00
16	856161	26	\$142.00
18	856181	40	\$221.00

Each kit contains 1/2" red rubber full face gasket and zinc plated bolts and nuts. Call for other configurations.

Flange bolt pattern compatible with 125 and 150 Class flanges.

Call for other MJ sizes and configurations.

Discount Category A

IRRIGATION PRICE LIST

HARCO DEEP BELL DUCTILE IRON FITTINGS

Discount Category A

REPLACEMENT GASKETS



SIZE	PART NUMBER	WT	LIST PRICE
1½	851015	0.1	\$4.00
2	85102	0.1	\$4.00
2½	851025	0.1	\$4.00
3	85103	0.1	\$5.00
4	85504	0.2	\$5.00
6	85506	0.4	\$7.00
8	85508	0.7	\$11.00
10	85510	1.3	\$26.00
12	85512	2.0	\$28.00
14	85514	2.5	\$66.00
16	85516	2.9	\$87.00
18	85518	3.2	\$107.00

LINKS



Fitting Size 1½ - 8" 10 - 12" 10 - 12" Transition 14 - 16"

SIZE & TYPE	PART NUMBER	WT	LIST PRICE
1½ - 8	82000	1	\$7.00
10 - 12	82003	4	\$21.00
10 - 12 Transition *	82004	1	\$7.00
14 - 16	82007	1	\$14.00

Links included in price of and automatically shipped with
S.E.B.s, flange adapters, and plugs.

* Used to assemble old style lug to new style thicker lug.

RETAINER CLIP



SIZE & TYPE	PART NUMBER	WT	LIST PRICE
Retainer Clip	82009	0.3	\$3.00

Alternative to wood wedge used when linking fittings together.

CROSSOVER RING

Links sold Separately

U.S. Patent #5,464,257



SIZE	PART NUMBER	WT	LIST PRICE
3	82103	3	\$37.00
4	82104	4	\$37.00
6	82106	8	\$48.00

Designed to rotate "lug" axis 90°

MALE ADAPTER

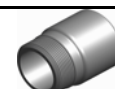
(Bell x Male NPT)



SIZE	PART NUMBER	WT	LIST PRICE
1½ x 1½	80070	3	\$38.00
2 x 1½	80172	3	\$41.00
2 x 2	80170	4	\$41.00
2½ x 2	80272	3	\$47.00
2½ x 2½	80270	5	\$47.00
3 x 2½	80372	5	\$56.00
3 x 3	80370	6	\$56.00
4 x 4	80470	8	\$66.00

ACME ADAPTER

(Male NPT x Female ACME)



SIZE	PART NUMBER	WT	LIST PRICE
2 x 1	872-204	3	\$29.00
2 x 1¼	872-205	3	\$29.00
2 x 1½	872-206	2	\$29.00

POLYETHYLENE ENCASEMENT

(For use in corrosive soils)

SIZE	PART NUMBER	WT	LIST PRICE
20 x 400	82320	34	\$375.00
30 x 200	82330	28	\$294.00
37 x 200	82337	35	\$348.00
2 x 100 Tape	823PT	1	\$15.00

Polyethylene encasement supplied in rolls in tubular form, 8
mils thick. 20" for fittings up to 8", 30" for fittings 10" to 14",
and 37" for fittings 16" to 20". Complies with AWWA C105.

For installation, refer to:

<http://www.dipra.com/pdf/polyEncasement.pdf>

IRRIGATION PRICE LIST

HARCO SADDLES

SADDLE (Female NPT)



SIZE	PART NUMBER	WT	LIST PRICE
3 x 1 *	803802	5	\$51.00
3 x 1½ *	803803	5	\$51.00
3 x 2	803804	4	\$51.00
3 x 2½	803805	4	\$58.00
4 x 1 *	804802	5	\$60.00
4 x 1½ *	804803	5	\$60.00
4 x 2	804804	5	\$60.00
4 x 2½	804805	4	\$68.00
6 x 1 *	806802	6	\$64.00
6 x 1½ *	806803	6	\$64.00
6 x 2	806804	5	\$64.00
6 x 2½	806805	5	\$72.00
8 x 1 *	808802	7	\$72.00
8 x 1½ *	808803	7	\$72.00
8 x 2	808804	6	\$72.00
8 x 2½	808805	6	\$79.00
10 x 1½ *	810803	8	\$81.00
10 x 2	810804	6	\$81.00
10 x 2½	810805	6	\$89.00
12 x 1½ *	812803	8	\$90.00
12 x 2	812804	7	\$90.00
12 x 2½	812805	7	\$98.00

* Produced using 2" NPT with 2" x 1½" or 2" x 1" Ductile Iron Bushing, installed and sealed at factory. Saddles supplied with standard powder coating.
Bolt torque: 40-50 ft-lbs. See installation instructions.

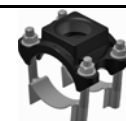
SADDLE FOR PVC & PE (Female NPT)



SIZE	PART NUMBER	WT	LIST PRICE
2 x 1	80180H2	4	\$99.00
2½ x 1	80280H2	5	\$107.00
3 x 2	80380H4	7	\$127.00
4 x 2	80480H4	10	\$127.00
6 x 2	80680H4	10	\$137.00
8 x 2	80880H4	12	\$172.00
10 x 2	81080H4	14	\$201.00
12 x 2	81280H4	16	\$228.00
14 x 2 **	81480H4	15	\$251.00
16 x 2 **	81680H4	16	\$280.00

** Careful not to order these for DIPS PVC & PE Pipe. See saddles below for DIPS.
SDR may not exceed SDR 35. Other outlet sizes available.
Fusion Plastic Coating available (Allow 2 weeks for shipment).
Bolt torque: 45-50 ft-lbs. See installation instructions.

SADDLE FOR DIPS, PVC & PE (Female NPT)



SIZE	PART NUMBER	WT	LIST PRICE
4 x 2	80490H4	10	\$127.00
6 x 2	80690H4	10	\$137.00
8 x 2	80890H4	12	\$172.00
10 x 2	81090H4	14	\$201.00
12 x 2	81290H4	16	\$228.00
14 x 2	81490H4	15	\$251.00
16 x 2	81690H4	16	\$280.00

SDR may not exceed SDR 35. Other outlet sizes available.
Fusion Plastic Coating available (Allow 2 weeks for shipment).
Bolt torque: 45-50 ft-lbs. See installation instructions.

Discount Category B

NOTE: Use of Mechanical Saddle on PE pipe is a compromise. Electrofusion PE saddles should be preferred.

IRRIGATION PRICE LIST

HARCO LATERAL CONNECTION SYSTEM

Discount Category C

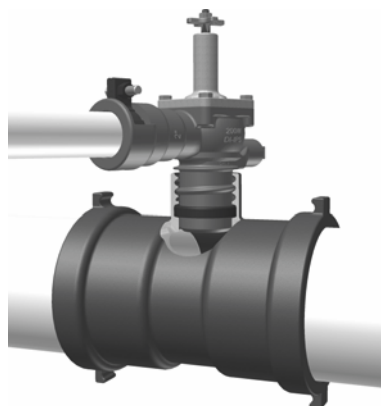
U.S. Patent #7,055,865

HARCO's standard Swivel System utilizes one unique size for the female and male swivel joint connection. All swivel male parts, regardless of functional size, fit all female swivel outlets of Swivel Tees and Swivel Saddles.

SWIVEL TEE				
SIZE	PART NUMBER	WT	LIST PRICE	
2	8015405	23	\$48.00	
2½	8025405	10	\$48.00	
3	8035405	12	\$98.00	
4	8045405	16	\$112.00	
6	8065405	26	\$146.00	
8	8085405	35	\$209.00	
10	8105405	62	\$417.00	
12	8125405	79	\$474.00	
14	8145405	153	\$852.00	
16	8165405	189	\$1,101.00	



See page 23 for HARCO Swivel Valves.



SADDLE (2" Gasketed Bell Outlet)				
SIZE x OUTLET	PART NUMBER	WT	LIST PRICE	
3 *	80382	7	\$64.00	
4	80482	5	\$65.00	
6	80682	6	\$77.00	
8	80882	6	\$85.00	
10	81082	7	\$87.00	
12	81282	8	\$93.00	
14 **	81492H	18	\$349.00	
16 **	81692H	18	\$352.00	

* Assembled from Service Saddle & Male Adapter
** Double strap saddles with Male Adapter factory installed, for DIPS Pipe
Bolt torque: 40-50 ft-lbs. See installation instructions.

SADDLE FOR DIPS, PVC & PE (Female Swivel Outlet)				
PIPE OD	PART NUMBER	WT	LIST PRICE	
4	80491H	14	\$190.00	
6	80691H	14	\$200.00	
8	80891H	16	\$234.00	
10	81091H	18	\$268.00	
12	81291H	20	\$295.00	
14	81491H	19	\$349.00	
16	81691H	19	\$352.00	

SDR 35 maximum.
Bolt torque: 45-50 ft-lbs. See installation instructions.

SADDLE (Female Swivel Outlet)				
SIZE	PART NUMBER	WT	LIST PRICE	
3 *	80381	7	\$64.00	
4	80481	6	\$65.00	
6	80681	7	\$77.00	
8	80881	7	\$86.00	
10	81081	8	\$103.00	
12	81281	9	\$115.00	

*Assembled from Service Saddle & Male Adapter
Bolt torque: 40-50 ft-lbs. See installation instructions.

SADDLE FOR PVC & PE (Female Swivel Outlet)				
PIPE OD	PART NUMBER	WT	LIST PRICE	
3	80381H	11	\$182.00	
4	80481H	14	\$190.00	
6	80681H	14	\$200.00	
8	80881H	16	\$234.00	
10	81081H	18	\$268.00	
12	81281H	20	\$295.00	
14	81481H	19	\$349.00	
16	81681H	19	\$352.00	

SDR 35 maximum.
Bolt torque: 45-50 ft-lbs. See installation instructions.

NOTE: Use of Mechanical Saddle on PE pipe is a compromise. Electrofusion PE saddles should be preferred.

IRRIGATION PRICE LIST

HARCO LATERAL CONNECTION SYSTEM

HARCO's standard Swivel System utilizes one unique size for the female and male swivel joint connection. All swivel male parts, regardless of functional size, fit all female swivel outlets of Swivel Tees and Swivel Saddles.

Discount Category C

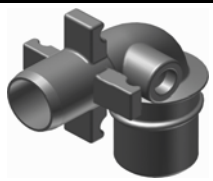
LATERAL 90° (Male NPT x Male Swivel)

	SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	1 x 6	4	80B86	\$46.00	80B862	\$49.00	80B862P	\$52.00
	1½ x 6	4	80086	\$46.00	800862	\$49.00	800862P	\$52.00
	2 x 6	5	80186	\$48.00	801862	\$52.00	801862P	\$55.00
	2 x 12	7	8018612	\$64.00	80186122	\$68.00	80186122P	\$70.00
	2½ x 6	5	80286	\$52.00	802862	\$56.00	802862P	\$58.00
	3 x 7	6	80386	\$55.00	803862	\$58.00	803862P	\$61.00

LATERAL 90° (Female NPT x Male Swivel)

	SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	1½ x 6	5	80084	\$55.00	800842	\$58.00	800842P	\$61.00
	2 x 6	6	80184	\$56.00	801842	\$60.00	801842P	\$63.00
	2 x 12	12	8018412	\$72.00	80184122	\$76.00	80184122P	\$78.00
	2½ x 6	8	80284	\$66.00	802842	\$70.00	802842P	\$73.00
	3 x 7	9	80384	\$76.00	803842	\$79.00	803842P	\$82.00

LATERAL 90° (Spigot x Male Swivel)

	SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	2 x 6	6	8018506	\$33.00	80185062	\$38.00	80185062P	\$40.00
	2½ x 6	7	8028506	\$43.00	80285062	\$47.00	80285062P	\$49.00
	3 x 7	8	8038507	\$48.00	80385072	\$52.00	80385072P	\$55.00

LATERAL NIPPLE (Male NPT x Male Swivel)

	SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	2 x 8	4	8720808	\$35.00	87208082	\$39.00	87208082P	\$41.00
	2 x 12	6	8721208	\$38.00	87212082	\$41.00	87212082P	\$44.00
	2 x 14 *	6	8721408	\$44.00	87214082	\$48.00	87214082P	\$51.00
	2 x 18	8	8721808	\$55.00	87218082	\$58.00	87218082P	\$61.00
	2½ x 8	4	8720810	\$39.00	87208102	\$43.00	87208102P	\$46.00
	3 x 10	5	8721012	\$44.00	87210122	\$48.00	87210122P	\$51.00

* Will not be replenished when current quantities are exhausted.

LATERAL NIPPLE (Spigot x Male Swivel)

	SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	2 x 10	4	8731008	\$22.00	87310082	\$26.00	87310082P	\$29.00
	2 x 12	5	8731208	\$26.00	87312082	\$30.00	87312082P	\$32.00
	2 x 18	7	8731808	\$44.00	87318082	\$48.00	87318082P	\$51.00

"Rise" is the rise in inches from "top of main" to "top of lateral line" with valve or fitting installed.

IRRIGATION PRICE LIST

HARCO LATERAL CONNECTION SYSTEM

Discount Category C

U.S. Patent #7,055,865

HARCO's standard Swivel System utilizes one unique size for the female and male swivel joint connection. All swivel male parts, regardless of functional size, fit all female swivel outlets of Swivel Tees and Swivel Saddles.

See page 23 for HARCO Swivel Valves.

LATERAL TEE (Bell x Male Swivel)				
SIZE x RISE	PART NUMBER	WT	LIST PRICE	
2 x 6	80191	16	\$124.00	
2½ x 6	80291	18	\$136.00	
3 x 7	80391	24	\$143.00	

Alternate configurations may be supplied (Swivel Tee not included.)

LATERAL 90° (Bell x Male Swivel)				
SIZE x RISE	PART NUMBER	WT	LIST PRICE	
2 x 6	80190	14	\$77.00	
2½ x 6	80290	16	\$87.00	
3 x 7	80390	24	\$102.00	

SWIVEL LATERAL KIT (2" Push-On Brass Gate Valve)							
SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
		PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
2 x 6	9	80185K	\$55.00	801852K	\$58.00	801852PK	\$61.00

(Swivel Tee, Valve, and Swing Joint not included.) Compatible valve: Nibco PR113

SWIVEL LATERAL KIT (Push-On Iron Gate Valve)							
SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
		PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
2 x 6	10	8018506K	\$76.00	80185062K	\$79.00	80185062PK	\$82.00
2½ x 6	10	8028506K	\$96.00	80285062K	\$101.00	80285062PK	\$103.00
3 x 7	19	8038507K	\$118.00	80385072K	\$121.00	80385072PK	\$124.00
3 x 4 x 7	48	803048507K	\$209.00	8030485072K	\$213.00	8030485072PK	\$215.00

(Swivel Tee, Valve, and Swing Joint not included.) Compatible valves: American Flow Control, AVK, Clow, Kennedy, Matco-Norca, M&H, Nibco, Waterous

PUSH-ON LATERAL KIT (For G x G Lateral Isolation Valve)			
SIZE	PART NUMBER	WT	LIST PRICE
4	80482K1	7	\$98.00
6	80682K1	8	\$99.00
8	80882K1	8	\$102.00
10	81082K1	9	\$103.00
12	81282K1	10	\$107.00

(Valve not included.) Compatible valves: HARCO, see page 23.

IRRIGATION PRICE LIST

HARCO LATERAL CONNECTION SYSTEM

U.S. Patent #7,055,865

HARCO's standard Swivel System utilizes one unique size for the female and male swivel joint connection. All swivel male parts, regardless of functional size, fit all female swivel outlets of Swivel Tees and Swivel Saddles.

See page 23 for HARCO Swivel Valves.

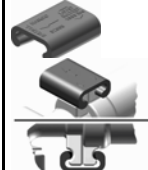
	SWIVEL EXTENSION (Male Swivel x Female Swivel)			
	RISE	PART NUMBER	WT	LIST PRICE
	6	871106	6	\$29.00
12	871112	11	\$47.00	

	ADAPTER (Female Swivel x Thread)			
	SIZE	PART NUMBER	WT	LIST PRICE
	2 MNPT	873-008	3	\$60.00

	SPIGOT x MALE NPT ADAPTER			
	SIZE	PART NUMBER	WT	LIST PRICE
	1½ x 6	8740606	3	\$33.00
	2 x 4	8740408	2	\$33.00
	2 x 6	8740608	3	\$37.00
	2 x 8	8740808	5	\$41.00
	2 x 10	8741008	6	\$44.00
	2 x 12	8741208	7	\$48.00
	2½ x 6	8740610	4	\$39.00
	3 x 6	8740612	5	\$43.00

Part has groove on spigot end for restraint to HARCO Bell with Knuckle Restraint. Call for other sizes and lengths. Also available in spigot x spigot. Knuckles sold separately.

	ADAPTER (Female NPT x Male Swivel)			
	SIZE	PART NUMBER	WT	LIST PRICE
	1½	875-025-06	6	\$52.00
	2	875-025-08	5	\$52.00
	2½	875-025-10	5	\$52.00
	3	875-025-12	4	\$52.00

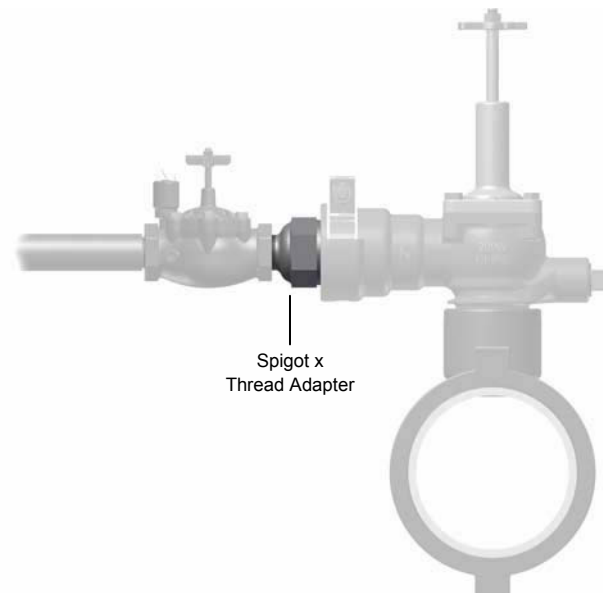
	WEDGE LINK			
	SIZE	PART NUMBER	WT	LIST PRICE
	N/A	82008	0.8	\$5.00

Wedge Link is rated for 1,000 pounds of load.

	SPIGOT x MALE NPT ADAPTER, COMPACT			
	SIZE	PART NUMBER	WT	LIST PRICE
	2 x 1	874030804	3	\$32.00
	2 x 1¼	874030805	3	\$32.00
	2 x 1½	874030806	3	\$32.00
	2 x 2	874030808	3	\$32.00
	2 x 2½	874030810	3	\$35.00

Part has groove on spigot end for restraint to HARCO bell with Knuckle Restraint. Knuckles sold separately.

	2" SWING ARM KIT			
	SIZE	PART NUMBER	WT	LIST PRICE
	2	881-0101K	14	\$62.00



Discount Category C

IRRIGATION PRICE LIST

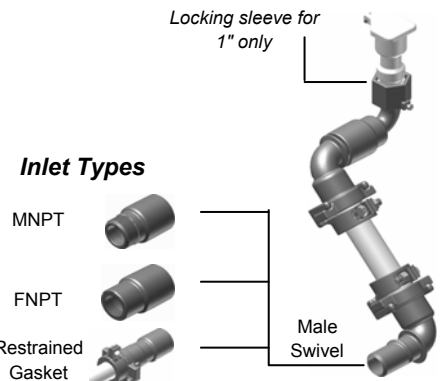
HARCO LATERAL CONNECTION SYSTEM

Discount Category C

U.S. Patent #7,055,865

HARCO's standard Swivel System utilizes one unique size for the female and male swivel joint connection. All swivel male parts, regardless of functional size, fit all female swivel outlets of Swivel Tees and Swivel Saddles.

See page 23 for HARCO Swivel Valves.

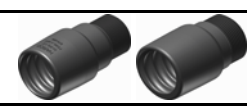
		DUCTILE IRON SWING JOINT			
		SIZE, INLET x OUTLET	PART NUMBER	WT	LIST PRICE
 Locking sleeve for 1" only Inlet Types MNPT FNPT Restrained Gasket Male Swivel		1 Female NPT x ¾ Male NPT	878-10-08	19	\$130.00
		1 Female NPT x 1 Male NPT	878-10-10	18	\$109.00
		1½ Female NPT x 1 Male NPT	878-15-10	17	\$103.00
		1½ Male NPT x 1 Male NPT	877-15-10	19	\$122.00
		2 Male NPT x 1 Male NPT	877-20-10	17	\$103.00
		1½ Restrained Gasket x 1 Male NPT	879-15-10	21	\$118.00
		1½ Restrained Gasket x 1½ Male NPT	879-15-15	21	\$144.00
		1½ Male Swivel x 1 Male NPT	881-15-10	14	\$104.00
		1½ Male Swivel x 1½ Male NPT	881-15-15	15	\$130.00
		Quick Coupler Valve and pipe not included. Quick Coupler Anchor purchased separately may be used instead of locking sleeve. Call for other inlets and outlets. Knuckle bolt torque: 35 ft-lbs.			

HARCO SPECIAL 1½" LATERAL CONNECTION SYSTEM

	SWIVEL TEE (W/ 1½" Female Swivel)			
	SIZE	PART NUMBER	WT	LIST PRICE
	2 x 1½	8015403	12	\$105.00
	2½ x 1½	8025403	12	\$105.00
	3 x 1½	8035403	14	\$112.00
	4 x 1½	8045403	16	\$126.00
	6 x 1½	8065403	23	\$157.00
	8 x 1½	8085403	47	\$217.00
	10 x 1½	8105403	73	\$413.00
	12 x 1½	8125403	91	\$467.00
For use with 80090DK and 881-XX-YY Ductile Iron Swing Joints.				

		SPECIAL KITS			
		DESCRIPTION	PART NUMBER	WT	LIST PRICE
	875-015	1½ Gasket Knuckle / Swing Joint Assembly	875-015	11	\$135.00
	80090DK	1½ Lateral 90° Kit, MSWL x Gasket	80090DK	5	\$73.00
	80190DK	2" Lateral 90° Kit, MSWL x Gasket	80190DK	13	\$96.00
Part number 80090DK: For use with Swivel Tees with 1½" Female Swivel, part number series 8xx5403. Part number 80190DK: For use with standard Swivel Tees, part number series 8xx5405. Knuckle bolt torque: 35 ft-lbs.					

1½" FEMALE SWIVEL ADAPTERS

				
DESCRIPTION		PART NUMBER	WT	LIST PRICE
1½ Female Swivel x 1½ Male NPT Adapter		873-006	3	\$57.00
1½ Female Swivel x 2 Male NPT Adapter		876-008	2	\$65.00

IRRIGATION PRICE LIST

HARCO LATERAL CONNECTION SYSTEM

Discount Category C

LATERAL 90° (Male NPT x Male NPT)

	SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	1½	5	80088	\$56.00	800882	\$62.00	800882P	\$66.00
	2	7	80188	\$57.00	801882	\$63.00	801882P	\$66.00
	2½	8	80288	\$66.00	802882	\$72.00	802882P	\$77.00
	3	9	80388	\$69.00	803882	\$74.00	803882P	\$79.00

LATERAL 90° (Female NPT x Male NPT)

	SIZE x RISE	WT	Standard		1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	1½	7	80087	\$68.00	800872	\$73.00	800872P	\$78.00
	2	9	80187	\$72.00	801872	\$77.00	801872P	\$81.00
	2½	11	80287	\$89.00	802872	\$95.00	802872P	\$99.00
	3	12	80387	\$96.00	803872	\$102.00	803872P	\$105.00

LATERAL 90° WITH 1½" SIDE OUTLET

	SIZE	WT	1" Side Outlet		1" Side Outlet Plugged	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	2 Male NPT x Male NPT	7	801883	\$69.00	801883P	\$74.00
	2 Female NPT x Male NPT	7	801873	\$84.00	801873P	\$87.00
	2½ Male NPT x Male NPT	9	802883	\$79.00	802883P	\$84.00
	2½ Female NPT x Male NPT	9	802873	\$102.00	802873P	\$106.00
	3 Male NPT x Male NPT	11	803883	\$82.00	803883P	\$88.00
	3 Female NPT x Male NPT	11	803873	\$111.00	803873P	\$114.00

IRRIGATION PRICE LIST

HARCO JOINT RESTRAINT

PRICE LIST ID0212
EFFECTIVE FEBRUARY 6, 2012
PAGE 18 OF 24

Discount Category D

KNUCKLE RESTRAINT

U.S. Patent #7,552,949



SIZE	PART NUMBER	WT	LIST PRICE
1½	60-100-01	2	\$26.00
2	60-100-02	3	\$29.00
2½	60-100-25	3	\$32.00
3	60-100-03	3	\$37.00
4	60-100-04	6	\$71.00

Knuckle bolt torque: 35 ft-lbs.

FITTING TO PIPE RESTRAINT

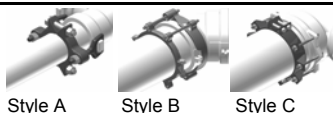
(Clamshell Restraint)



SIZE	PART NUMBER	WT	LIST PRICE
4	820411	11	\$83.00
6	820611	12	\$108.00
8	820811	16	\$145.00
10	821011	29	\$196.00
12	821211	38	\$261.00

Price is for one (1) set consisting of two (2) clamp halves and four (4) clamp bolts with nuts.

FITTING TO PIPE RESTRAINT



SIZE	PART NUMBER	WT	STYLE	LIST PRICE
2	820110	4	A	\$54.00
2½	820210	4	A	\$59.00
3	820310	5	A	\$64.00
4	820410	8	A	\$83.00
6	820610	10	A	\$108.00
8	820810	15	A	\$145.00
10 *	821010	51	B	\$196.00
12 *	821210	66	B	\$261.00
14	821410	50	C	\$389.00
16	821610	55	C	\$470.00

* Will not be replenished when current quantities are exhausted. Style D, Clamshell Restraints, can be used instead.

Style A: Price is for one (1) set including one (1) clamp and bolt set, and two (2) eye bolts with nuts.

Style B: Price is for one (1) set including one (1) clamp and bolt set, one (1) backup ring, and four (4) restraint rods with nuts.

Style C: Price is for one (1) set including one (1) clamp and bolt set and six (6) restraint rods with nuts.

Grip Ring bolt torque: 100 ft-lbs.

Knuckle Restraint bolt torque: 35 ft-lbs.

QUICK COUPLER ANCHOR

U.S. Patent #7,255,124



SIZE	PART NUMBER	WT	LIST PRICE
¾ or 1	82201	2	\$21.00
1½	82202	2	\$22.00

PIPE TO PIPE RESTRAINT

(Style A)



SIZE	PART NUMBER	WT	LIST PRICE
2	820115	7	\$65.00
2½	820215	7	\$81.00
3	820315	10	\$122.00
4	820415	14	\$150.00
6	820615	18	\$196.00
8	820815	26	\$246.00
10	821015	47	\$462.00
12	821215	52	\$585.00
14	821415	113	\$887.00
16	821615	133	\$1,055.00
18	821815	187	\$1,231.00

Price is for one (1) set consisting of two (2) clamp and bolt sets and two (2) restraint rods with nuts.

PIPE TO PIPE RESTRAINT

(Style B)



SIZE	PART NUMBER	WT	LIST PRICE
3	820316	8	\$122.00
4	820416	12	\$150.00
6	820616	16	\$196.00
8	820816	34	\$246.00

Price is for one (1) set consisting of one (1) clamp and bolt set, one (1) backup ring, and two (2) T-bolts with nuts.

MECHANICAL JOINT BELL RESTRAINT



SIZE	PART NUMBER	WT	LIST PRICE
3	820335	5	\$64.00
4	820435	7	\$83.00
6	820635	9	\$108.00
8	820835	13	\$145.00
10	821035	22	\$196.00
12	821235	25	\$261.00
14	USE FITTING TO PIPE RESTRAINT THIS PAGE		
16			
18			
	821835	65	\$500.00

Price is for one (1) joint including one (1) clamp bolt set and restraint rods with nuts as required

3" - 12" for IPS pipe.

14" - 18" for DIPS pipe

IRRIGATION PRICE LIST

HARCO JOINT RESTRAINT

Discount Category D

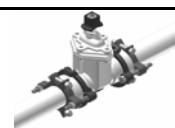
FITTING TO VALVE RESTRAINT



SIZE	PART NUMBER	WT	LIST PRICE
3	820320	5	\$46.00
4	820420	7	\$59.00
6	820620	8	\$66.00
8	820820	11	\$80.00

Price is for one (1) set including backup ring and two (2) eye bolts with nuts.

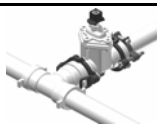
VALVE TO PIPE RESTRAINT (Style A)



SIZE	PART NUMBER	WT	LIST PRICE
3	820325	10	\$196.00
4	820425	14	\$230.00
6	820625	18	\$284.00
8	820825	26	\$357.00

Price is for one (1) set including two (2) clamp and bolt sets, two (2) backup rings, and four (4) T-Bolts with Nuts.

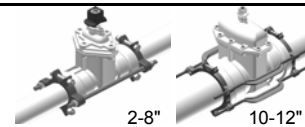
FITTING TO VALVE TO PIPE RESTRAINT (Style B)



SIZE	PART NUMBER	WT	LIST PRICE
3	820321	8	\$166.00
4	820421	10	\$183.00
6	820621	14	\$212.00
8	820821	22	\$244.00

Price is for one (1) set including two (2) backup rings, one (1) clamp and bolt set, two (2) eye bolts with nuts, and two (2) T-Bolts with nuts.

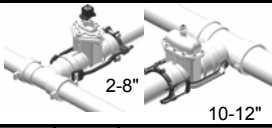
VALVE TO PIPE RESTRAINT (Style B)



SIZE	PART NUMBER	WT	LIST PRICE
2	820125	7	\$173.00
2½	820225	7	\$188.00
3	820326	13	\$196.00
4	820426	17	\$230.00
6	820626	22	\$284.00
8	820826	33	\$357.00
10	821025	47	\$479.00
12	821225	52	\$601.00

Price is for one (1) set including two (2) clamp and bolt sets, and restraint rods with nuts as required.

FITTING TO VALVE TO PIPE RESTRAINT (Style A)



SIZE	PART NUMBER	WT	LIST PRICE
2	820121	6	\$156.00
2½	820221	6	\$162.00
3	820322	8	\$166.00
4	820422	10	\$183.00
6	820622	14	\$212.00
8	820822	22	\$244.00
10	821021	50	\$317.00
12	821221	60	\$383.00

Price is for one (1) set including one (1) clamp and bolt set, and restraint rods with nuts.

PVC PIPE SPIGOTS FOR VALVE RESTRAINTS (Factory Beveled, SDR21)



SIZE	PART NUMBER	WT	LIST PRICE
2	820123	1	\$5.00
2½	820223	1	\$6.00
3	820323	1	\$6.00
4	820423	2	\$8.00
6	820623	5	\$14.00
8	820823	8	\$22.00
10	821023	12	\$35.00
12	821223	16	\$52.00

Length is compatible with valves noted and HARCO valve restraints.

Valve restraints fit the following brands:
American Flow Control, AVK, Clow, Kennedy,
Matco-Norca, M&H, Nibco, Waterous

Grip Ring bolt torque: 100 ft-lbs.

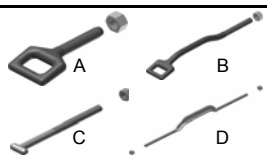
IRRIGATION PRICE LIST

HARCO JOINT RESTRAINT

PRICE LIST ID0212
EFFECTIVE FEBRUARY 6, 2012
PAGE 20 OF 24

Discount Category D

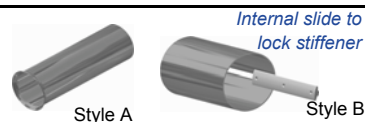
RESTRAINT RODS & BOLTS



DESCRIPTION	PART NO.	STYLE	WT	LIST PRICE
5/8 x 3 Joint Restraint Bolt	82001	A	1	\$15.00
3/4 x 3 Joint Restraint Bolt	82002-3	A	1	\$17.00
3/4 x 4 Joint Restraint Bolt	82002	A	1	\$17.00
2-3 Valve to Pipe Rod	820021-17	D	1	\$32.00
4 Valve to Pipe Rod	820021-20	D	2	\$39.00
6 Valve to Pipe Rod	820021-23	D	3	\$49.00
8 Valve to Pipe Rod	820021-26	D	4	\$61.00
10-12 Valve to Pipe Rod	820021-33	D	6	\$65.00
2-3 Fitting to Valve to Pipe Rod	82001-12	B	2	\$28.00
4 Fitting to Valve to Pipe Rod	82002-15	B	3	\$47.00
6 Fitting to Valve to Pipe Rod	82002-19	B	4	\$54.00
8 Fitting to Valve to Pipe Rod	82002-21	B	5	\$63.00
10 Fitting to Valve to Pipe Rod	82010C	B	12	\$81.00
12 Fitting to Valve to Pipe Rod	82012C	B	17	\$97.00
5/8 x 5 T-Bolt	82006	C	1	\$10.00
3/4 x 6 T-Bolt	82007	C	1	\$14.00
3/4 x 9 T-Bolt	T-BOLT-9	C	1	\$19.00
3/4 x 11 T-Bolt	T-BOLT-11	C	2	\$32.00

Price includes nut.

PE PIPE STIFFENER



SIZE	PART NUMBER	WT	STYLE	LIST PRICE
1 1/2	825-015	1	A	\$37.00
2	825-020	1	A	\$37.00
3	825-030	2	B	\$95.00
4	825-040	2	B	\$102.00
6	825-060	3	B	\$118.00
8	825-080	4	B	\$132.00
10	825-100	5	B	\$150.00
12	825-120	6	B	\$165.00
14	825-140	7	B	\$176.00
16	825-160	7	B	\$263.00
18	825-180	15	B	\$299.00

Specify whether IPS or Ductile Iron Pipe Size and SDR of pipe.

Use PE Pipe Stiffeners when PE Pipe is used with Ductile Iron Fittings.

IRRIGATION PRICE LIST

JOINT RESTRAINT SELECTION

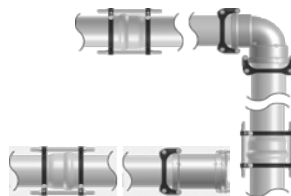
Tables below list number of adjacent pipe joints to be restrained for basic fitting configurations. These were calculated using the joint restraint calculator available at www.harcofittings.com for a set of assumptions that will envelop many applications. Check that the assumptions listed below meet or exceed your application. If your situation is not covered by the assumptions or a more refined restraint scheme is desired, use the restraint calculator at www.harcofittings.com.

Bends, Reducers, Caps, and Valves

Size	Bends				Reductions			Dead Ends
	11¼	22½	45	90	1	2	3	
2	—	—	—	—	—	—	—	—
2½	—	—	—	—	—	—	—	1
3	—	—	—	—	—	—	1	1
4	—	—	—	—	—	1	1	2
6	—	—	—	1	1	2	2	3
8	—	—	—	1	1	3	3	4
10	—	—	—	1	1	2	3	4
12	—	—	—	1	2	2	3	4
14	—	—	—	1	1	2	3	4
16	—	—	—	2	1	2	3	5

Bends & Caps/Dead Ends:

Restrain all bells and the adjacent joints listed in table (both directions for bends).



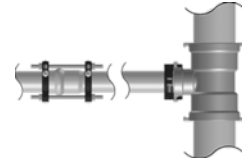
Reducers: Restrain large bell and adjacent joints listed in table.



Valves: Treat as Dead End. Use Valve Restraint and restrain adjacent upstream joints listed in table. If closed valve can have pressure from either side, restrain adjacent joints both sides per table.

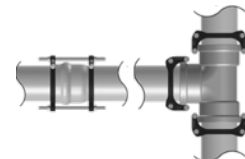


Tees - Branch bell only restrained: Use joint restraints ONLY on branch. Number below is number of 20' joints to be restrained with pipe to pipe restraints.



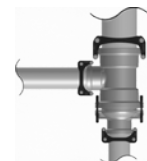
Run Size	Tees (Branch Size)									
	2	2½	3	4	6	8	10	12	14	16
2	—	—	—	—	—	—	—	—	—	—
2½	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—
6	—	1	1	—	—	—	—	—	—	—
8	—	1	1	—	—	—	—	—	—	—
10	—	—	1	1	—	—	—	—	—	—
12	—	—	1	1	—	—	—	—	—	—
14	—	—	1	1	1	—	—	—	—	—
16	—	—	1	1	1	—	—	—	—	—

Tees - Branch bell only restrained: Use joint restraint on ALL three branches of tee. Number below is number of 20' joints to be restrained with pipe to pipe restraints in branch only direction.



Run Size	Tees (Branch Size)									
	2	2½	3	4	6	8	10	12	14	16
2	—	—	—	1	—	—	—	—	—	—
2½	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	1	1	—	—	—
8	—	—	—	—	—	—	—	2	2	3
10	—	—	—	—	—	—	—	1	1	2
12	—	—	—	—	—	—	—	—	1	2
14	—	—	—	—	—	—	—	—	—	1
16	—	—	—	—	—	—	—	—	—	1

Tees - With Run Reductions: Restrain all bells and adjacent branch joints noted. Treat run reduction as a reducer. Restrain as noted adjacent joints to large bell per reducer table.



Restraint Calculation Assumptions:

Maximum pressure: 125 psi

Restrained Lengths: Each restraint connects 20 ft length of pipe

Soil Type: Type GM, gravel-sand-silt mixture

Minimum Burial Depths: 2"—2½", 18" cover; 3"—8", 24" cover; 10"—12", 30" cover; 14"—16", 36" cover

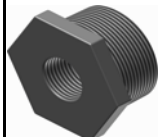
Trench Type: 3, pipe bedded in 4 inches minimum loose soil. Backfill lightly consolidated to top of the pipe.

Safety Factor: 1.5

HARCO DUCTILE IRON THREADED FITTINGS

Discount Category E

TEE	SIZE	PART NUMBER	WT	LIST PRICE
	1½	88115	2	\$21.00
	2	88120	3	\$31.00
	2½	88125	5	\$67.00
	3 *	88130	7	\$86.00

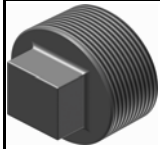
BUSHING	SIZE	PART NUMBER	WT	LIST PRICE
	1¼ x 1	8851210	1	\$9.00
	1½ x 1	8851510	1	\$9.00
	1½ x 1¼	8851512	1	\$11.00
	2 x 1	8852010	1	\$11.00
	2 x 1¼	8852012	1	\$11.00
	2 x 1½	8852015	1	\$11.00
	2½ x 1½ *	8852515	1	\$16.00
	2½ x 2 *	8852520	1	\$16.00
	3 x 2 *	8853020	1	\$19.00
	3 x 2½ *	8853025	2	\$17.00

CAP	SIZE	PART NUMBER	WT	LIST PRICE
	1½	88403	1	\$16.00
	2	88404	1	\$19.00
	2½	88405	2	\$46.00
	3 *	88406	3	\$61.00

COUPLING	SIZE	PART NUMBER	WT	LIST PRICE
	1½	88015	1	\$12.00
	2	88020	1	\$17.00
	2½	88025	3	\$29.00
	3 *	88030	3	\$34.00

90° BEND	SIZE	PART NUMBER	WT	LIST PRICE
	1½	88215	1	\$16.00
	2	88220	2	\$21.00
	2½	88225	4	\$46.00
	3 *	88230	5	\$67.00

45° BEND	SIZE	PART NUMBER	WT	LIST PRICE
	1½	88315	1	\$21.00
	2	88320	2	\$24.00
	2½	88325	3	\$57.00
	3 *	88330	5	\$76.00

PLUG	SIZE	PART NUMBER	WT	LIST PRICE
	1	88102	1	\$7.00
	1½	88103	1	\$9.00
	2	88104	1	\$11.00
	2½ *	88105	1	\$12.00
	3 *	88106	2	\$16.00

* Malleable iron.

UNION	SIZE	PART NUMBER	WT	LIST PRICE
	1½	88615	2	\$56.00
	2	88620	3	\$71.00
	2½ *	88625	4	\$127.00
	3 *	88630	5	\$154.00

NIPPLE (Male NPT x Male NPT)		T.O.E. Nipples available		
SIZE	PART NUMBER	WT	LIST PRICE	
1½ x Close	87015-00	1	\$9.00	
1½ x 2	87015-02	1	\$9.00	
1½ x 3	87015-03	2	\$10.00	
1½ x 4	87015-04	2	\$11.00	
1½ x 6	87015-06	3	\$16.00	
1½ x 8	87015-08	4	\$22.00	
1½ x 10	87015-10	5	\$27.00	
1½ x 12	87015-12	5	\$32.00	
1½ x 14	87015-14	6	\$38.00	
1½ x 16	87015-16	7	\$44.00	
1½ x 18	87015-18	8	\$51.00	
1½ x 20	87015-20	9	\$59.00	
2 x Close	87020-00	1	\$11.00	
2 x 3	87020-03	2	\$11.00	
2 x 4	87020-04	2	\$14.00	
2 x 6	87020-06	3	\$21.00	
2 x 8	87020-08	5	\$28.00	
2 x 10	87020-10	6	\$34.00	
2 x 12	87020-12	7	\$41.00	
2 x 14	87020-14	8	\$56.00	
2 x 16	87020-16	9	\$61.00	
2 x 18	87020-18	10	\$64.00	
2 x 20	87020-20	12	\$71.00	
2 x 24	87020-24	14	\$86.00	
2 x 30	87020-30	18	\$102.00	
2 x 36	87020-36	21	\$121.00	
2½ x 4	87025-04	3	\$31.00	
2½ x 6	87025-06	4	\$36.00	
2½ x 8	87025-08	6	\$42.00	
2½ x 10	87025-10	7	\$47.00	
2½ x 12	87025-12	9	\$61.00	
2½ x 14	87025-14	10	\$61.00	
2½ x 16	87025-16	11	\$67.00	
2½ x 18	87025-18	13	\$74.00	
2½ x 20	87025-20	14	\$81.00	
3 x Close	87030-00	2	\$31.00	
3 x 3	87030-03	3	\$32.00	
3 x 4	87030-04	4	\$32.00	
3 x 6	87030-06	5	\$39.00	
3 x 8	87030-08	7	\$46.00	
3 x 10	87030-10	9	\$56.00	
3 x 12	87030-12	11	\$69.00	
3 x 14	87030-14	13	\$69.00	
3 x 16	87030-16	14	\$76.00	
3 x 18	87030-18	16	\$84.00	
3 x 20	87030-20	18	\$92.00	

IRRIGATION PRICE LIST

HARCO VALVES

Discount Category G

LATERAL ISOLATION VALVE

(U.S. Patents #7,055,865; #7,552,949)

STYLE	DESCRIPTION (Size x "Rise to Lateral")	WT	With Cross Handle		With Square Nut *	
			PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
	2" x 6" Gasket x Male Swivel	15	**Discontinued		**Discontinued	
	2" x 6" Gasket x Male Swivel, 1" Side Outlet Plugged	15	**Discontinued		**Discontinued	
	2" x 12" Gasket x Male Swivel		**Discontinued		**Discontinued	
	2" x 12" Gasket x Male Swivel, 1" Side Outlet Plugged		**Discontinued		**Discontinued	
	2" Gasket x Gasket	17	**Discontinued		**Discontinued	
	2" Gasket x Gasket, 1" Side Outlet Plugged	17	**Discontinued		**Discontinued	
	2½" x 6" Gasket x Male Swivel, 1" Side Outlet Plugged	15	**Discontinued		**Discontinued	
	3" x 6" Gasket x Male Swivel, 1" Side Outlet Plugged	22	N/A		**Discontinued	
	4" x 6" Gasket x Male Swivel, 1" Side Outlet Plugged	29	N/A		**Discontinued	

**** Use the New HARCO Lateral Isolation Valve Price List for LIV pricing ****

PARTS

STYLE	DESCRIPTION	PART NUMBER	WT	LIST PRICE	STYLE	DESCRIPTION	PART NUMBER	WT	LIST PRICE
	LIV Cross Handle	841-01	0.3	\$42.00		LIV Bonnet Assembly, 2" & 2½"	841-03	5.0	\$175.00
	LIV Square Operating Nut	841-12	1.8	\$18.00		LIV Bonnet Assembly, 3" & 4"	8413-03	9.0	\$294.00
	2" Grip Ring Assembly	8411-04	0.8	\$18.00		2" Gasket	85102	0.1	\$4.00
	2½" Grip Ring Assembly	8412-04	0.8	\$22.00		2½" Gasket	851025	0.1	\$4.00
	3" Grip Ring Assembly	8413-04	0.9	\$26.00		3" Gasket	85103	0.1	\$5.00
	4" Grip Ring Assembly	8414-04	0.9	\$30.00		4" Gasket	85104	0.2	\$5.00

OTHER COMPATIBLE PIPE STANDARDS

British Standards: BS 3505/3506 1½", 2", 3", 4", 6", 8", 10", 12"
Japanese Standards: JIS K 6741 with transition gaskets, Call for Product #'s 50mm, 75, 150, 200, 250, 300

US made Push On fittings are available in many configurations. Call for price and availability.

Mechanical Joint Fittings are available. Call for price and availability.

Conditions of Sale

RETURNS: All returned merchandise must have authorization from Harco. Returned merchandise will only be accepted within one (1) year of the date of invoice. Merchandise must be in new and marketable condition. Freight charges on authorized returns must be prepaid and a restocking charge will be made except for returns resulting from shipping errors on our part or material proven to be defective.

CLAIMS: All claims for damage or shortage in transit shall be handled with the carrier by the consignee.

GUARANTEE: The Harrington Corporation (Seller) guarantees to credit against invoice price or, at its option, to furnish, but not to install, replacement parts of like kind, F.O.B. its plant, Lynchburg, Virginia, any item of its manufacture proved to be defective in material or workmanship within one (1) year from date of shipment provided Buyer (or Purchaser) gives immediate written notice of such alleged defect and, if required, returns defective item to Seller's plant freight prepaid. Items or components not of Seller's manufacture are not included in the foregoing guarantee but are subject only to any warranty of their respective manufacturers. Seller shall not be liable for the cost of any repairs or work done or materials used by the Buyer because of defective or non-conforming items, unless authorized in writing by Seller. IN NO EVENT SHALL SELLER BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY BREACH OF THIS GUARANTEE unless applicable federal or state law forbids exclusion of incidental or consequential damages.

WARRANTIES: EXCEPT FOR THE ABOVE "GUARANTEE," SELLER MAKES NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE AS TO PRODUCTS SOLD BY US, UNLESS APPLICABLE FEDERAL OR STATE LAW FORBIDS SUCH DISCLAIMER OF WARRANTIES. NO WAIVER, ALTERATION, OR MODIFICATION OF THIS DISCLAIMER OF WARRANTIES SHALL BE VALID UNLESS MADE IN WRITING AND SIGNED BY AN EXECUTIVE OFFICER OF SELLER.

PRICES: Subject to change without notice. Possession of price sheets does not constitute an obligation to sell and orders may be refused without cause.

SUITABILITY: The presence of corrosive soils or carried water may require the use of protective measures such as polyethylene encasement and/or coatings.



Plant in
Lynchburg, Virginia

Warehouses in Virginia, Florida, Texas, and Arizona



ENGINEERED FOR DURABILITY

HARRINGTON CORPORATION
— HARCO Fittings —
www.harcofittings.com

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HARCO PRICE LIST

LATERAL ISOLATION VALVES

FULL PORT, STAINLESS STEEL BODY

CROSS HANDLE, DUCTILE IRON GRIP RING

	ITEM	PART NUMBER	LIST PRICE
	2" x 6"	8411062PL	\$ 264.00
	2" x 12"	8411122PL	\$ 288.00
	2½" x 6"	8412062PL	\$ 355.00
	3" x 6"	8413062PL	\$ 408.00
	4" x 6"	8414062PL	\$ 493.00

FULL PORT, STAINLESS STEEL BODY

CROSS HANDLE, STAINLESS STEEL GRIP RING

	ITEM	PART NUMBER	LIST PRICE
	2" x 6"	8411062PQ	\$ 289.00
	2" x 12"	8411122PQ	\$ 312.00
	2½" x 6"	8412062PQ	\$ 380.00
	3" x 6"	8413062PQ	\$ 432.00
	4" x 6"	8414062PQ	\$ 517.00

FULL PORT, STAINLESS STEEL BODY

2" SQUARE NUT, DUCTILE IRON GRIP RING

	ITEM	PART NUMBER	LIST PRICE
	2" x 6"	8411062PN	\$ 280.00
	2" x 12"	8411122PN	\$ 303.00
	2½" x 6"	8412062PN	\$ 373.00
	3" x 6"	8413062PN	\$ 423.00
	4" x 6"	8414062PN	\$ 508.00

FULL PORT, STAINLESS STEEL BODY

2" SQUARE NUT, STAINLESS STEEL GRIP RING

	ITEM	PART NUMBER	LIST PRICE
	2" x 6"	8411062PR	\$ 301.00
	2" x 12"	8411122PR	\$ 329.00
	2½" x 6"	8412062PR	\$ 398.00
	3" x 6"	8413062PR	\$ 448.00
	4" x 6"	8414062PR	\$ 533.00

STANDARD PORT VALVE, DI BODY

DUCTILE IRON GRIP RING

	ITEM	PART NUMBER	LIST PRICE
	2" x 6"	843106	\$ 183.00
	2" GxG	8431GG	\$ 192.00

STANDARD PORT VALVE, DI BODY

STAINLESS STEEL GRIP RING

	ITEM	PART NUMBER	LIST PRICE
	2" x 6"	843106Q	\$ 208.00
	2" GxG	8431GGQ	\$ 242.00

NOTE: 2" x 12" valves are assembled from 2" x 6" valves and FBE coated 6" extensions

Lateral Isolation Valve



**With Cross Handle
and DI Grip Ring**

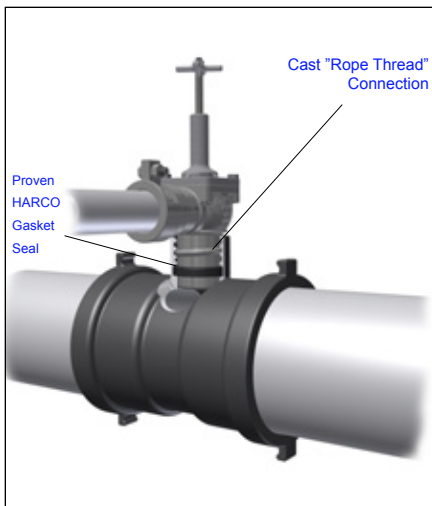
Available In:
2", 2½" , 3" & 4"



**With Square Nut
and SS Grip Ring**



ENGINEERED FOR DURABILITY



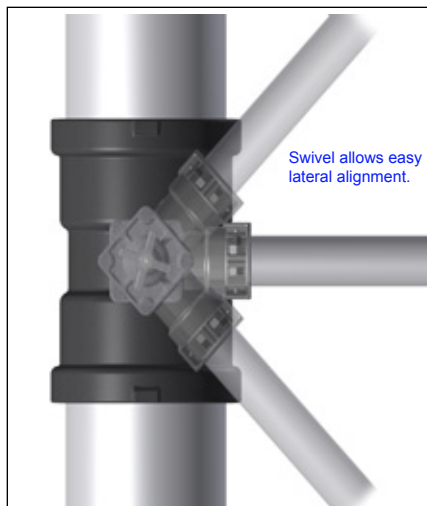
Easy to Install, Self Restrained Joints

HARCO Lateral Isolation Valves easily assemble into HARCO female swivel outlet tees and saddles. The swivel joint maintains the seal while orienting for lateral alignment without the risk of seal or over tightening failures common with NPT thread joints. The HARCO swivel connection does not require extra pieces or bolts.

The HARCO Lateral Isolation Valve is covered by US Patents
7,055,865 & 7,552,949

Construction

HARCO Lateral Isolation Valves are made of materials selected for the extremes found in irrigation systems. HARCO Lateral Isolation Valves have 316 stainless steel components and peroxide cured EPDM seals assuring long life. Bonnets and bodies are gall resistant stainless steel assuring the stainless steel stem and bonnet bolts won't seize. The twin stem seals are permanently lubricated. And, each valve is factory hydro tested.

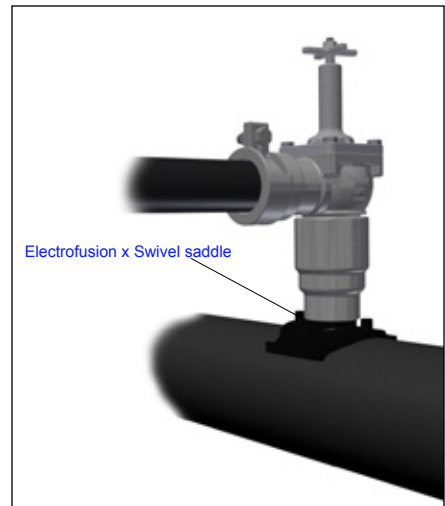


High Strength, Corrosion Resistant

Pressure rated 200 psi, HARCO Lateral Isolation Valves are manufactured with stainless steel bonnets, bodies, and stem assemblies for high strength and superior corrosion resistance. These materials are ideal for golf and commercial irrigation systems where chemical treatments and reclaimed water are used.

Configuration, Options

HARCO Lateral Isolation Valves are available in 2", 2 1/2", 3", and 4" sizes. All sizes are available in male swivel inlet and restrained gasketed outlet. With a nominal 6" rise from top of main to top of lateral, the rise can be increased in increments of 6" swivel extension fittings. These valves can be had with cross handles, 2" square operating nuts, and ductile iron and 316 stainless steel outlet grip rings.

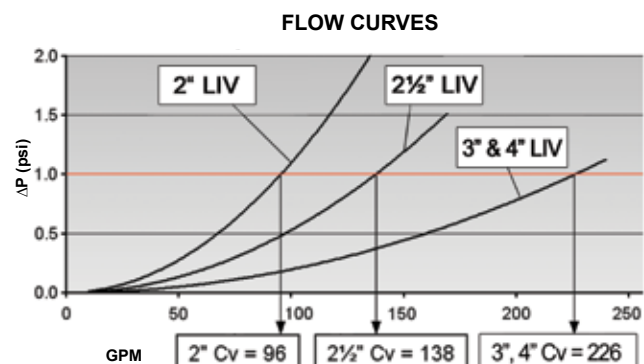
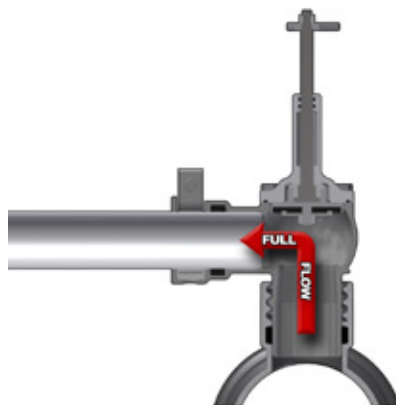


PVC or PE Systems

HARCO Lateral Isolation Valves can be used on PVC or PE systems. A full range of ductile iron swivel tees, ductile iron swivel saddles, electrofusion swivel saddles, and side wall fusion swivel saddles are available. PE saddles are available with ductile iron or 316 stainless steel outlets.

High Flow, Low Pressure Loss

The Lateral Isolation Valve features full port flow with a fully retractable seal assembly. Flow loop testing yields a Cv of 96 for 2", 138 for 2 1/2", and 226 for the 3" and 4" LIV's. For a 2" with a 50 gpm flow there is a pressure drop across the valve of 1/4 psi. This flow performance can benefit the user in reduced pumping costs and greater operating flexibility.



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LATERAL ISOLATION VALVES

CROSS HANDLE

DUCTILE IRON GRIP RING



Item	Part Number
2" x 6"	8411062PL
2" x 12"	8411122PL
2 1/2" x 6"	8412062PL
3" x 6"	8413062PL
4" x 6"	8414062PL

CROSS HANDLE

STAINLESS STEEL GRIP RING



Item	Part Number
2" x 6"	8411062PQ
2" x 12"	8411122PQ
2 1/2" x 6"	8412062PQ
3" x 6"	8413062PQ
4" x 6"	8414062PQ

2" SQUARE NUT

DUCTILE IRON GRIP RING



Item	Part Number
2" x 6"	8411062PN
2" x 12"	8411122PN
2 1/2" x 6"	8412062PN
3" x 6"	8413062PN
4" x 6"	8414062PN

2" SQUARE NUT

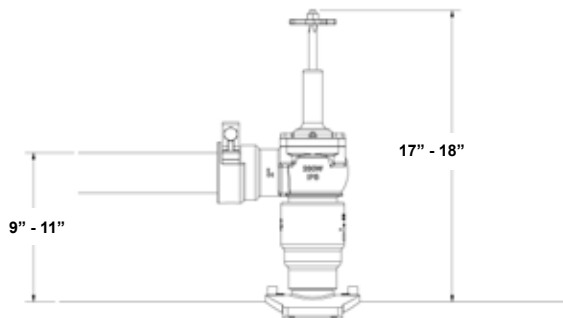
STAINLESS STEEL GRIP RING



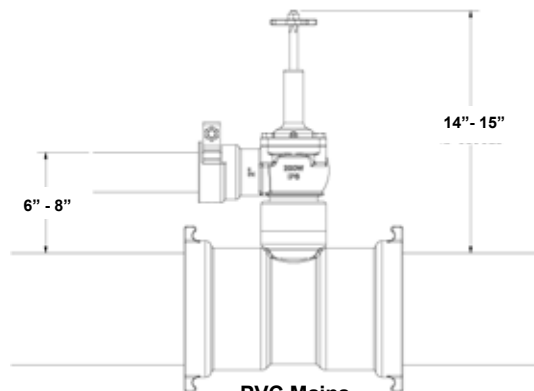
Item	Part Number
2" x 6"	8411062PR
2" x 12"	8411122PR
2 1/2" x 6"	8412062PR
3" x 6"	8413062PR
4" x 6"	8414062PR

NOTES

- 2x12 valves are assembled from 2x6 valves and FBE coated 6" extensions



PE Mains
(varies by valve size)



PVC Mains
(varies by valve size)



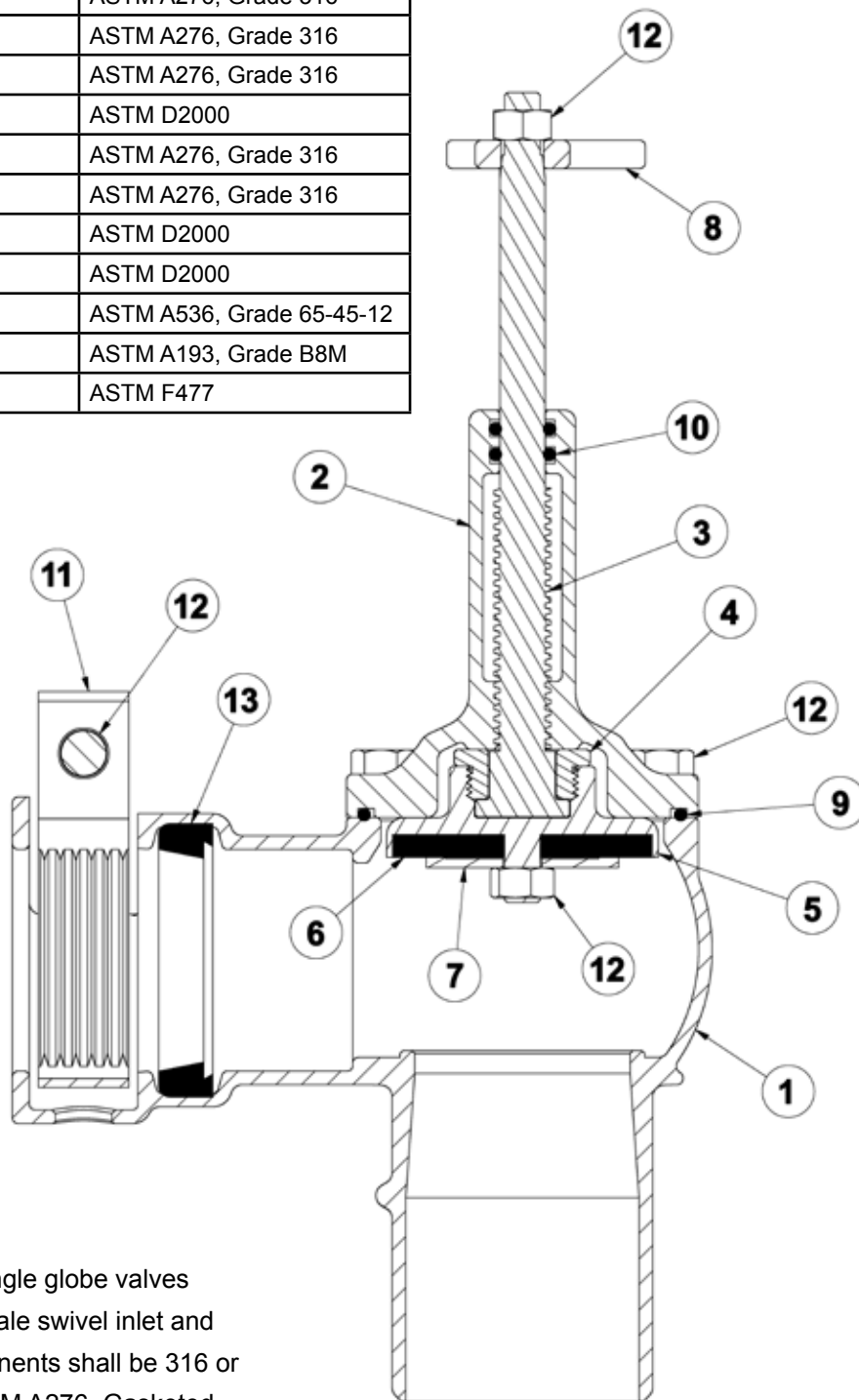
MATERIALS OF CONSTRUCTION			
ITEM	DESCRIPTION	MATERIAL	STANDARD
1	BODY	GALL RESISTANT SS	UNS 21800
2	BONNET	GALL RESISTANT SS	UNS 21800
3	STEM	316 SS	ASTM A276, Grade 316
4	RETAINER BUSHING	316 SS	ASTM A276, Grade 316
5	SEAL CUP	316 SS	ASTM A276, Grade 316
6	SEAL	EPDM †	ASTM D2000
7	RETAINING WASHER	316 SS	ASTM A276, Grade 316
8	HANDLE	316 SS	ASTM A276, Grade 316
9	BONNET O-RING	EPDM †	ASTM D2000
10	STEM O-RING	EPDM † ‡	ASTM D2000
11	GRIP RING	DUCTILE IRON	ASTM A536, Grade 65-45-12
12	NUTS & BOLTS	316 SS	ASTM A193, Grade B8M
13	GASKET	SBR	ASTM F477

† PEROXIDE CURED

‡ PERMANENTLY LUBRICATED

Installation

1. Lubricate the gasket in the mating female swivel joint and the inlet spigot of the valve with PVC pipe lubricant.
2. Rotate male thread "in" until joint "bottoms out".
3. Rotate male thread "out" to proper horizontal orientation for valve up to and no more than 360°.
4. Install beveled pipe in outlet bell after lubricating outlet gasket and pipe end. Remove wood wedge and tighten restraint bolt to 35 ft-lbs. Use internal stiffener with PE pipe.



Suggested Specification

Lateral Isolation Valves shall be 200 psi rated angle globe valves with integrally restrained ends. Ends shall be male swivel inlet and restrained push on gasketed joint outlet. Components shall be 316 or UNS 21800 Stainless Steel, complying with ASTM A276. Gasketed joints shall be SBR Rubber and Internal seals shall be EPDM rubber complying with ASTM F477. Lateral Isolation Valves shall be as manufactured by The Harrington Corporation of Lynchburg, VA.



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HARCO

FITTINGS

QUICK COUPLER ANCHOR

**DUCTILE
IRON**

***Prevents
Quick
Coupler
Valves from
Loosening***

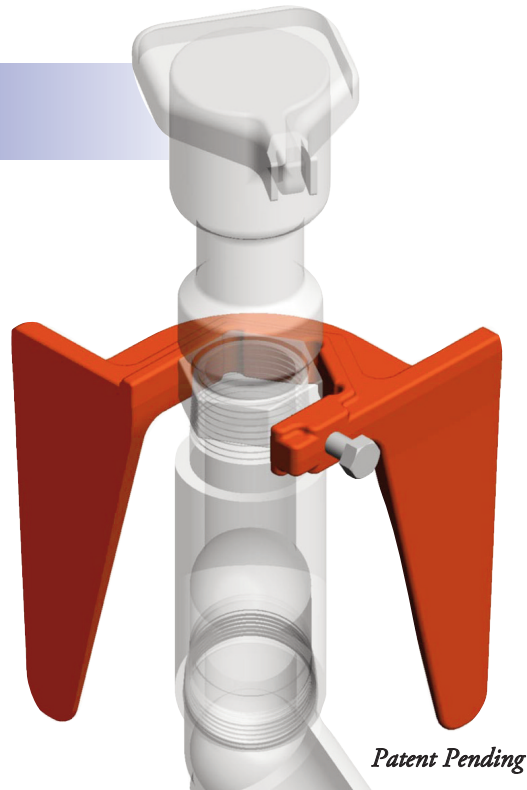
***Fits Inside
Most Valve
Boxes —
No Cutting
Required***

***Available
for ¾"-1"
and 1½"
Valves***

The Superior Product on the Market...HARCO's Quick Coupler Anchor

The problem: quick coupling valves becoming unscrewed from swing joints — a dangerous situation during valve operation. The solution: HARCO's new Quick Coupler Anchor — designed to help avoid this potentially dangerous occurrence from happening.

HARCO's Quick Coupler Anchor securely attaches to the base of the quick coupler valve. Once embedded in the soil, the Anchor prevents movement of the quick coupler. It will fit inside most valve boxes and, unlike similar products, there is no need to cut the valve box to make it fit. This benefit saves valuable installation time while also retaining the structural integrity of the valve box.



Unlike other designs, the 90° angle was chosen to provide restraint in all horizontal directions. The tines are oriented to go deep instead of wide, away from potentially soggy (and less stable) soil near the surface.

The HARCO Quick Coupler Anchor is made from high strength ductile iron and comes in two sizes. Product #82201 fits all ¾" and 1" valves and Product #82202 fits all 1½" valves.



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PF101-071404

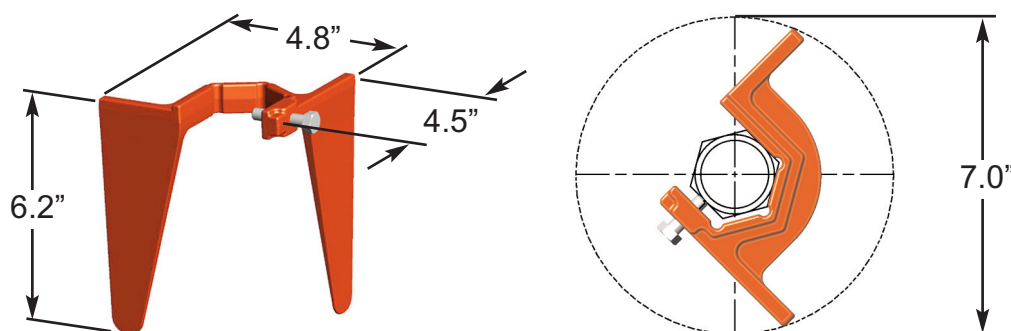
QUICK COUPLER ANCHOR

Product Information

Product #	Valve Size	Weight
82201	¾", 1"	2 lbs.
82202	1½"	2 lbs.

Dimensions

(Dimensions apply to both sizes)



Material

Body — Ductile Iron, ASTM A536

Bolt — Stainless Steel, Type 316

Suggested Specifications

Quick Coupler Anchors shall restrain rotational, vertical, and horizontal motions of the quick coupler valve. They shall be cast in one piece of ductile iron and attach to the quick coupler valve by means of a hexagonal receptacle and a single Type 316 stainless steel bolt. The Anchor shall have two tines aligned

vertically and oriented 90° to each other. These tines shall extend a minimum of 6" below the plane of the attachment. The Anchor shall fit within valve boxes without cutting the box. All Quick Coupler Anchors shall be HARCO as manufactured by the Harrington Corporation of Lynchburg, Virginia.

Installation Instructions

1. Install swing joint and quick coupler valve.
2. Engage hex portion of the quick coupler valve with the hex portion of the Anchor and tighten bolt.
3. Set quick coupler valve as required, backfilling and compacting soil around the Anchor.



**DUCTILE
IRON**

***Prevents
Quick
Coupler
Valves from
Loosening***

***Fits Inside
Most Valve
Boxes —
No Cutting
Required***

***Available
for ¾"-1"
and 1½"
Valves***



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HARCO

FITTINGS

Product Sheet

DUCTILE IRON ACME SERVICE TEE



**DUCTILE
IRON**

**350 psi
Pressure
Rating**

**Gasketed
Mainline
Bells**

**Straight
Thread,
O-Ring Seal
Branch
Outlet**

**Faster
Installation**

**No Teflon
Tape or Paste**

**Eliminates
Split Threads**

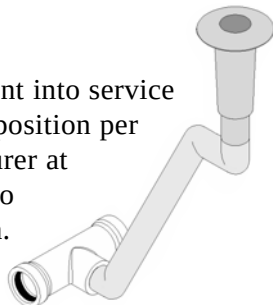
Gasket x Gasket x Acme, O-Ring

Application

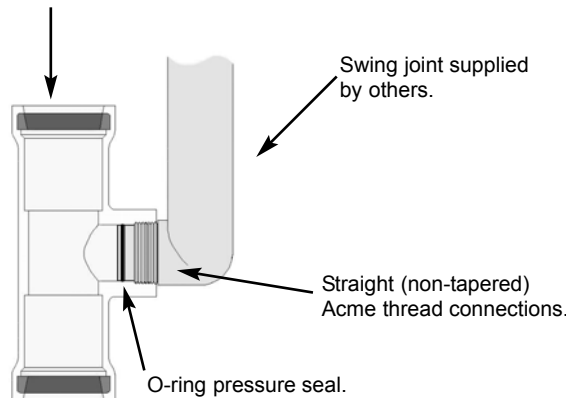
For use with swing joints having compatible inlet (threads and O-ring for Rainbird/Toro/Hunter Acme standard).

Installation

Fully thread swing joint into service tee. Back off to final position per swing joint manufacturer at least $\frac{1}{4}$ rotation, but no more than $1\frac{1}{4}$ rotation.



HARCO gasketed swing joint tee with O-ring seal outlet.



Suggested Specifications

Service tees for swing joints shall be push-on gasketed and molded in one piece as manufactured by The Harrington Corporation of Lynchburg, Virginia. Branch outlets shall have a straight thread and an O-ring sealing surface compatible with the O-ring joint inlet of the mating swing joint. Fittings shall meet the requirements of a 315 psi long term pressure rating per ASTM D3139, per ASTM F1970, and per the methods of AWWA C907.

Product Information

Size	Part Number	Style
2 x 1	8015302	A
2 x 1 $\frac{1}{4}$	80153025	A
2 x 1 $\frac{1}{2}$	8015303	A
2 $\frac{1}{2}$ x 1	8025302	A
2 $\frac{1}{2}$ x 1 $\frac{1}{4}$	80253025	A
2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	8025303	A
3 x 1	8035302	B
3 x 1 $\frac{1}{4}$	80353025	B
3 x 1 $\frac{1}{2}$	8035303	B
4 x 1	8045302	B
4 x 1 $\frac{1}{4}$	80453025	B
4 x 1 $\frac{1}{2}$	8045303	B
6 x 1	8065302	B
6 x 1 $\frac{1}{4}$	80653025	B
6 x 1 $\frac{1}{2}$	8065303	B
8 x 1	8085302	B
8 x 1 $\frac{1}{4}$	80853025	B
8 x 1 $\frac{1}{2}$	8085303	B

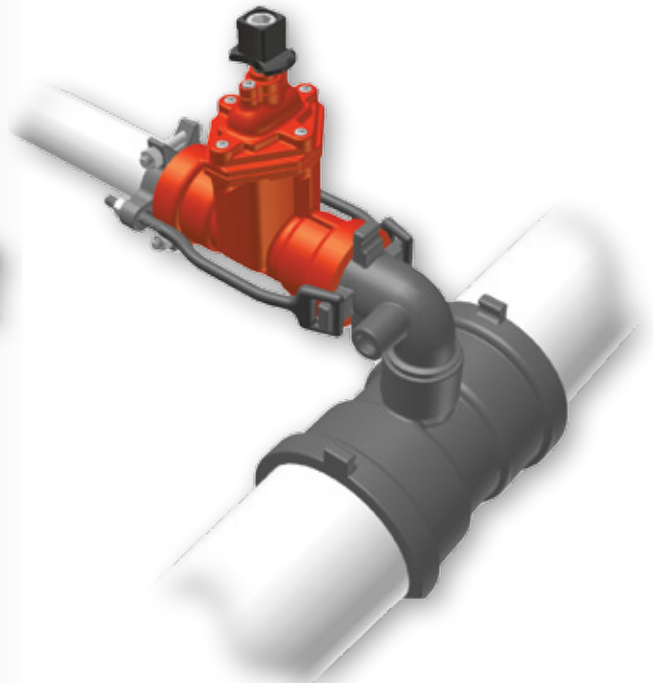
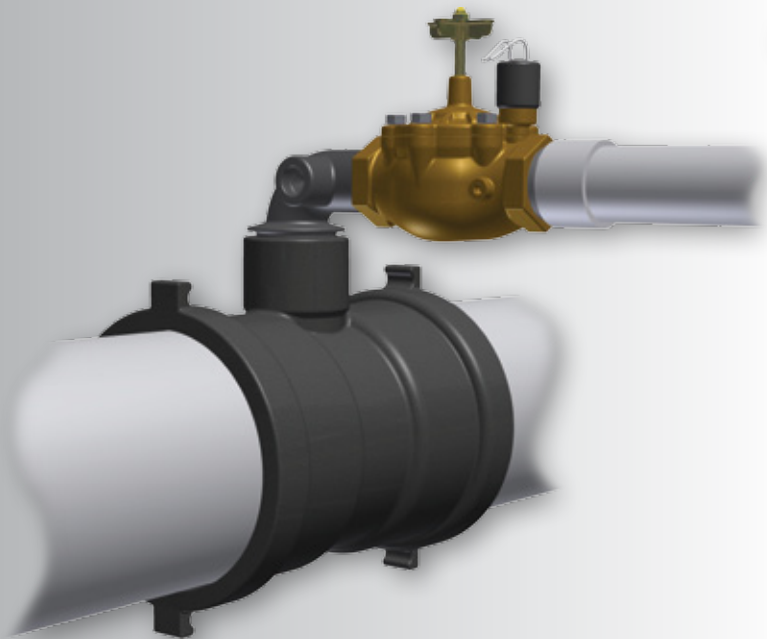
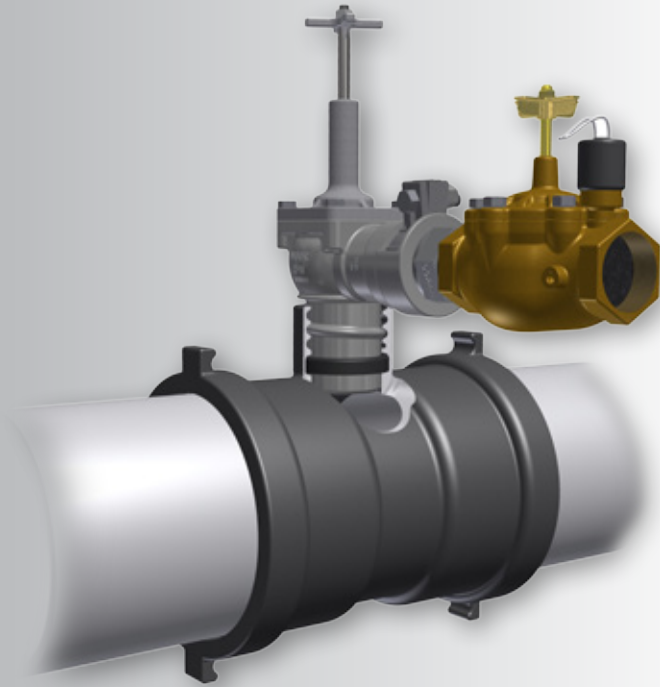


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PF108-061808

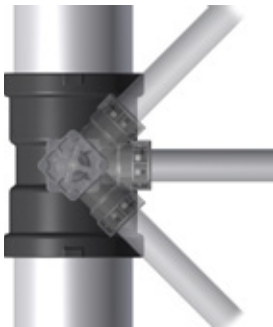
SWIVEL JOINT LATERAL CONNECTION



SWIVEL JOINT LATERAL CONNECTION

Lateral to main connections are now quick, easy, and durable

HARCO ductile iron Lateral 90°s, Lateral Nipples, Service Tees, Saddles, and Lateral Isolation Valves equipped with the Swivel Joint make for quick and problem free connections that are easy to seal and orient unlike conventional NPT pipe joints. Ductile Iron construction makes for long term reliability. The Swivel Joint Lateral Connection System can be used in PVC or PE systems. The Swivel Joint Lateral Connection System is covered by U.S. Patent # 4,055,865.



No tape or paste and true 360° of lateral orientation

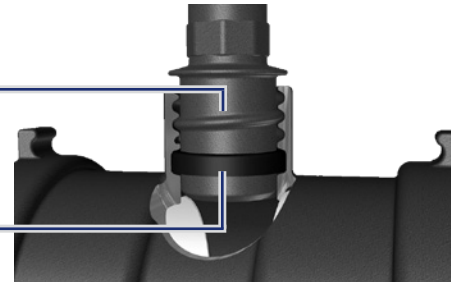
Simply lube the gasket and spigot with ordinary pipe lube, thread the connection home, and then rotate the joint back to the desired lateral line direction. No risk or strain of over tightening a joint or risk of losing seal.

Universal mainline branch connection

Swivel Tees and Swivel Saddles are provided with a universal branch design serving all sizes of Lateral 90°s and Lateral Nipples. No more ordering the wrong size branch outlet. The joint is based on the proven 2½" joint used in HARCO ductile iron fittings. The flow way is maximized and transitions are tapered to smooth flow through the joint.

CAST "ROPE THREAD" CONNECTION

PROVEN HARCO GASKET SEAL



Eliminate NPT threads and glue joints with Swivel Joint systems for push-on valves

Outlets of valves are restrained to the pipe with mechanical joint restraint. See information on HARCO Restraints for additional options.

Different riser elevations

Different riser elevations are served with Lateral 90°s and Lateral Nipples of various lengths. For special situations Swivel Extensions are available that provide height adjustments in 6" increments.

Side Outlet Taps

Side Outlet Taps are available for all Lateral 90°s, Lateral Nipples, and Lateral Isolation Valves to utilize quick coupler valves.

No extra pieces

With the Swivel Joint there is no need for "collar style clamps" that must be bolted together. There are no restraint links requiring screws to attach to valves. There are no "clips" required to permit 360° of rotation or to hold the valve in place. Joint restraint for Lateral Isolation Valves require only one clamp bolt to actuate.

INSTALLATION INSTRUCTIONS

1. See that gasket in female Swivel Joint is properly installed and that joint is free of debris.
2. See that spigot and thread of male Swivel Joint is smooth and free of debris.
3. Lubricate the gasket and the spigot with the lubricant supplied by the pipe manufacturer.
4. Insert male Swivel Joint into female Swivel Joint so that the threads are "started."
5. Rotate male thread "in" until joint "bottoms out."
6. Rotate male thread "out" to proper horizontal orientation up to and no more than 360°.

SUGGESTED SPECIFICATION

Fittings connecting mainlines to lateral lines shall be HARCO Ductile Iron Swivel Joint Fittings. The connection shall be sealed by a gasketed joint and separately restrained by means of a threaded connection. The connection shall permit 360° adjustment of the lateral line orientation while maintaining the joint seal. All fittings shall be Ductile Iron to ASTM A536 and rated for 350 psi. Gaskets shall be SBR and meet ASTM F477. Fittings shall be as manufactured by The Harrington Corporation of Lynchburg, Virginia

STAINLESS STEEL LATERAL ISOLATION VALVES

GASKET x MALE SWIVEL (OUTLET SIZE x HEIGHT FROM TOP OF MAIN TO TOP OF LATERAL)



	CROSS HANDLE PART #		SQUARE NUT PART #	
SIZE	DUCTILE IRON GRIP RING	STAINLESS STEEL GRIP RING	DUCTILE IRON GRIP RING	STAINLESS STEEL GRIP RING
2 x 6	8411062PL	8411062PQ	8411062PN	8411062PR
2 x 12'	8411122PL	8411122PQ	8411122PN	8411122PR
2½ x 6	8412062PL	8412062PQ	8412062PN	8412062PR
3 x 6	8413062PL	8413062PQ	8413062PN	8413062PR
4 x 6	8414062PL	8414062PQ	8414062PN	8414062PR

* 2" X 12" VALVES ARE ASSEMBLED FROM 2" X 6" VALVES AND FBE COATED 6" EXTENSIONS

STANDARD PORT VALVE, DI BODY

DUCTILE IRON GRIP RING

	(Swivel x Gasket)		PART
	SIZE		NUMBER
	2" x 6"		843106
	2" G x G		8431GG

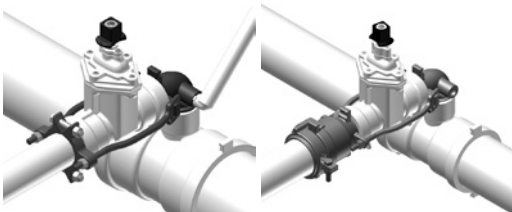
STANDARD PORT VALVE, DI BODY

STAINLESS STEEL GRIP RING

	(Swivel x Gasket)		PART
	SIZE		NUMBER
	2" x 6"		843106Q
	2" G x G		8431GGQ

SWIVEL LATERAL KIT

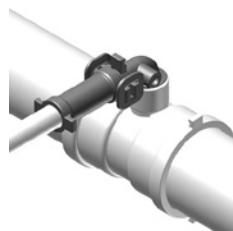
PUSH-ON IRON GATE VALVE



SIZE x RISE	STANDARD PART #	1" SIDE OUTLET	1" SIDE OUTLET PLUGGED
2 x 6	8018506K	80185062K	80185062PK
2½ x 6	8028506K	80285062K	80285062PK
3 x 7	8038507K	80385072K	80385072PK
3 x 4 x 7	803048527K	8030485272K	8030485272PK

LATERAL 90°

BELL X MALE SWIVEL



SIZE	PART #
2 x 6	80190
2½ x 6	80290
3 x 7	80390

SWIVEL TEE



SIZE	PART #
2	8015405
2½	8025405
3	8035405
4	8045405
6	8065405
8	8085405
10	8105405
12	8125405
14	8145405
16	8165405

SADDLE

2" GASKETED BELL OUTLET

Note: For use with 2" knuckle restraint part number 60-100-02



SIZE	PART #
3	80382
4	80482
6	80682
8	80882
10	81082
12	81282
14	81492H
16	81692H

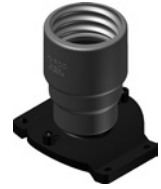
SWIVEL SADDLE



SIZE	PART #
3	80381
4	80481
6	80681
8	80881
10	81081
12	81281

IPS ELECTROFUSION SWIVEL SADDLE

EF X SWIVEL; NUPI BASED



SIZE	PART #
3	70-5303
4	70-5304
6	70-5306
8	70-5308
10	70-5310
12	70-5312
14 - 24	70-5314

DOUBLE STRAP SWIVEL SADDLE FOR PVC & PE



SIZE	IPS PART #	DIPS PART #
3	80381H	n/a
4	80481H	80491H
6	80681H	80691H
8	80881H	80891H
10	81081H	81091H
12	81281H	81291H
14	81481H	81491H
16	81681H	81691H

LATERAL TEE

BELL X MALE SWIVEL



SIZE	PART #
2 x 6	80191
2½ x 6	80291
3 x 7	80391

SWIVEL JOINT LATERAL CONNECTION

LATERAL 90°

MALE NPT X MALE SWIVEL



SIZE x RISE	STANDARD PART #	1" SIDE OUTLET	1" SIDE OUTLET PLUGGED
1 x 6	80B86	80B862	80B862P
1½ x 6	80086	800862	800862P
2 x 6	80186	801862	801862P
2 x 12	8018612	80186122	80186122P
2½ x 6	80286	802862	802862P
3 x 7	80386	803862	803862P

LATERAL NIPPLE

SPIGOT X MALE SWIVEL



SIZE x RISE	STANDARD PART #	1" SIDE OUTLET	1" SIDE OUTLET PLUGGED
2 x 10	8731008	87310082	87310082P
2 x 12	8731208	87312082	87312082P
2 x 18	8731808	87318082	87318082P

SPIGOT x MALE NPT ADAPTER



SIZE	PART #
1½ x 6	8740606
2 x 4	8740408
2 x 6	8740608
2 x 8	8740808
2 x 10	8741008
2 x 12	8741208
2½ x 6	8740610
3 x 6	8740612

SPIGOT x MALE NPT ADAPTER, COMPACT



SIZE	PART #
2 x 1	874030804
2 x 1¼	874030805
2 x 1½	874030806
2 x 2	874030808
2 x 2½	874030810

LATERAL NIPPLE

MALE NPT X MALE SWIVEL



SIZE x RISE	STANDARD PART #	1" SIDE OUTLET	1" SIDE OUTLET PLUGGED
2 x 8	8720808	87208082	87208082P
2 x 12	8721208	87212082	87212082P
2 x 14	8721408	87214082	87214082P
2 x 18	8721808	87218082	87218082P
2½ x 8	8720810	87208102	87208102P
3 x 10	8721012	87210122	87210122P

LATERAL 90°

SPIGOT X MALE SWIVEL



For use with Push-on Gate Valves

SIZE x RISE	STANDARD PART #	1" SIDE OUTLET	1" SIDE OUTLET PLUGGED
2 x 6	8018506	80185062	80185062P
2 x 12	8018512	80185122	80185122P
2½ x 6	8028506	80285062	80285062P
3 x 7	8038507	80385072	80385072P

SWING ARM KIT



SIZE	PART #
2	881-0101K

ADAPTER

FEMALE SWIVEL X THREAD



SIZE	PART #
2 MNPT	873-008

ADAPTER

FEMALE NPT X MALE SWIVEL



SIZE	PART #
1½	875-025-06
2	875-025-08
2½	875-025-10
3	875-025-12

SWIVEL EXTENSION

MALE SWIVEL X FEMALE SWIVEL



RISE	PART #
6	87106
12	87112



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PF134-090116

HARCO

FITTINGS

Product Sheet

SWIVEL ADAPTER Female Swivel x 2" MIPT



**DUCTILE
IRON**

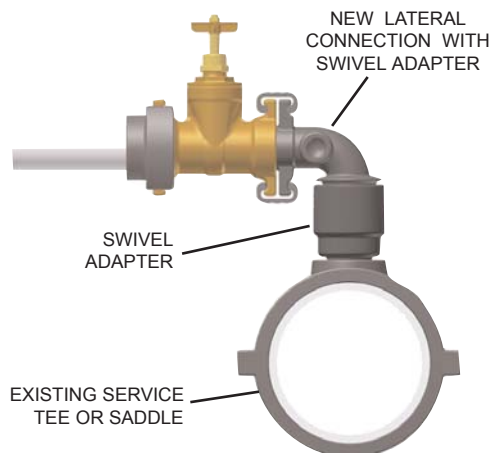
Engineered for Durability

Application

The Harco Swivel Adapter is for use in any 2" FIPT joint adapting any fitting to the HARCO Swivel system.

It is especially useful for retrofitting the HARCO Swivel into existing systems.

Any fitting designed for HDPE pipe with a 2" FIPT outlet can be converted to HARCO Swivel Joint making the swivel available to HDPE Installations



*Convert
any 2" FIPT
Joint to
HARCO
Swivel*

*Retrofit
Swivel into
existing
systems*

HDPE Applications

w/ Iron Body
Service Saddle



w/ HDPE Electrofusion
Service Saddle



w/ Stainless Steel
Tapping Saddle



*Especially
for use
with HDPE
Pipe
Systems*



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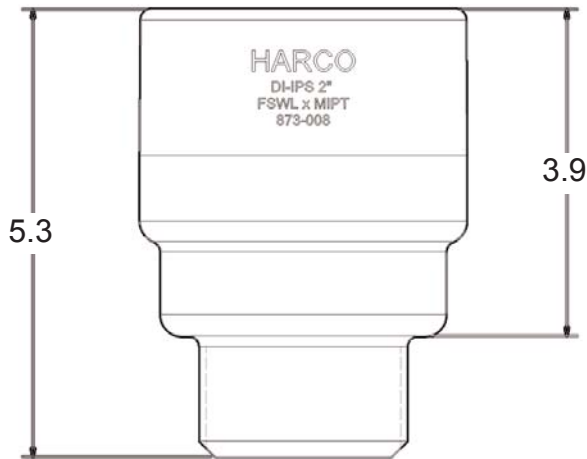
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SWIVEL ADAPTER

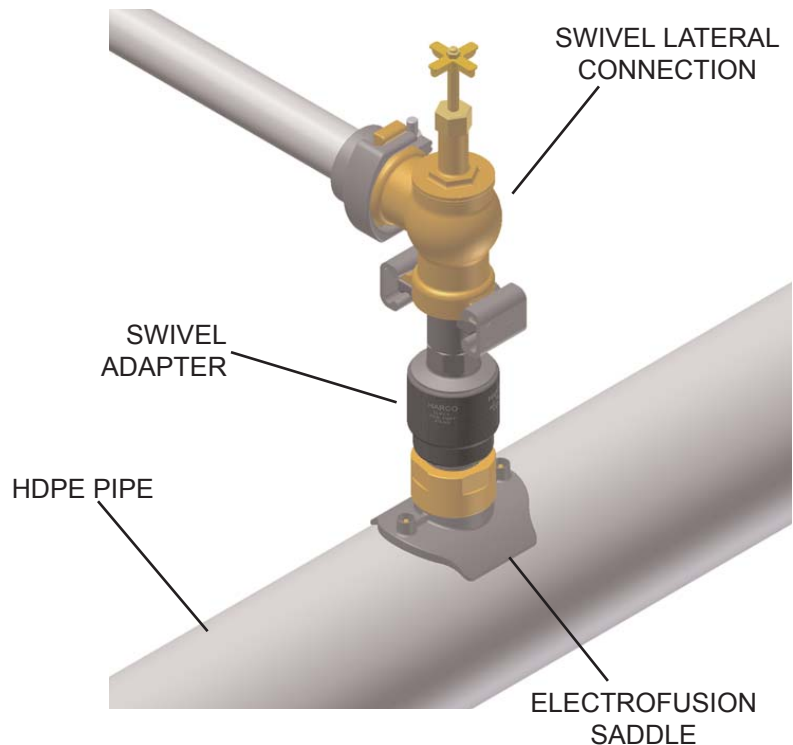
Product Sheet

Product Information

Dimensions:



FSWL x MIPT ADAPTER		
IPT SIZE	PART NUMBER	WEIGHT
2"	873-008	3.6 lbs



Materials

Body: Ductile Iron per ASTM A536

Gaskets: SBR per ASTM A477

Suggested Specifications

Swivel adapters shall be manufactured of ductile iron, Grade 65-45-12, in accordance with ASTM A536 and rated for 350 psi. The swivel connection shall permit 360 degrees of adjustment of the lateral line orientation while maintaining the joint seal. Fittings shall be as manufactured by The Harrington Corporation of Lynchburg, Virginia.

Swivel Adapter Installation

Swivel Adapter into 2" FIPT: Use standard methods for assembling tapered pipe thread. Use teflon tape or paste for sealant. Do not overtighten when used in a plastic female thread.

Swivel Joint Installation

Step 1: Check to see if the gasket in the female swivel joint is properly installed and that the joint is free of debris.

Step 2: Check the spigot and thread of the male swivel joint component to be sure it is smooth and free of debris.

Step 3: Lubricate the gasket in the female swivel joint and the spigot of the male swivel joint component with the lubricate supplied by the pipe manufacturer.

Step 4: Insert male swivel joint component into female swivel joint so that threads are "started".

Step 5: Rotate male swivel joint component "in" until joint "bottoms out". Use of wrench on hex of lateral nipples or swivel extensions may improve assembly.

Step 6: With the joint full in "bottomed out" rotate the male swivel joint component "out" to achieve proper orientation of the lateral line up to 360 degrees from the full in position.



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PF141-111810

HARCO

FITTINGS

Product Sheet

Lateral 90°

1½", 2", 2½" and 3"

DUCTILE
IRON

Transition from Mainline to Lateral Depth

Application and Description

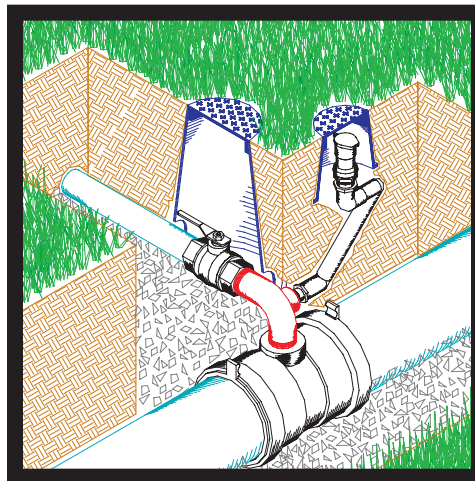
The HARCO Lateral 90° is designed to connect irrigation laterals to mainlines and provide a change in elevation while providing a convenient connection for you NPT isolation valve. High-strength ductile iron eliminates the aggravation and expense associated with repairing pipe and fittings that break at this high-stress area in golf and commercial irrigation systems. Using HARCO ductile iron nipples and threaded couplings, Lateral 90° can reach any height to provide ideal lateral depth. The sweep configuration allows for minimal friction loss during the transition. With the ability to tap the side for a 1" swing joint, Lateral 90° provides convenient quick coupler connection to the "hot side" of the isolation valve.

Options

The Lateral 90° has a side outlet tap to provide a connection port for a quick coupler valve swing joint.

Features and Benefits

The ductile iron material used to make the HARCO Lateral 90° is ASTM A-536 with tensile strength of 45,000 psi. This eliminates the breakage of PVC fittings and nipples caused by the high torque applied during the closing and opening of valves. The high corrosion resistance of this material is not found in black or galvanized steel fitting. Because the Lateral 90° provides a one-piece connection from the main line to the lateral line, fewer joints are subject to leakage. Additionally, the long turn radius reduces head loss at the 90° bend.



Lateral 90° shown **with** optional side outlet tapped for quick coupler swing joint.

*Eliminates
Breakage of
PVC Fittings
& Nipples*

*Made of
Corrosion-
Resistant
Ductile Iron*

*One-Piece
Connection
from
Mainline to
Lateral Line*

*Reduces
Leakage*

*Long Turn
Radius
Reduces
Head Loss*



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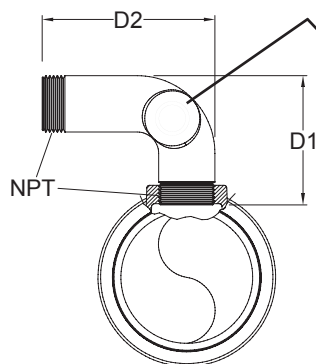
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PF130-100804

Lateral 90°

Product Sheet

Product Data

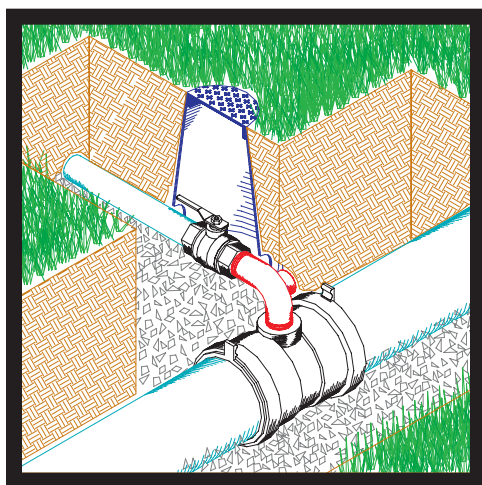


Optional quick coupler swing joint connection port. If option ordered, will be furnished with 1" tap. Lateral 90s ordered without optional tap can be tapped by local machine shop.

Product Data

SIZE	PART NUMBER	1" NPT SIDE OUTLET TAP?	D1	D2	WT.
1½"	80088	No	6	8	12
1½" x 1"	80082	Yes	6	8	19
2"	80188	No	6	8	27
2" x 1"	801882	Yes	6	8	38
2½"	80288	No	6	8	40
2½" x 1"	802882	Yes	6	8	26
3"	80388	No	6	8	40
3 x 1"	803882	Yes	6	8	53

Application Detail



Lateral 90° shown **without** optional side outlet tapped for quick coupler swing joint.

Height of lateral 90 "legs" are 6" and 8" and produce an elevation change of 6" or 8" from top of mainline pipe to top of lateral pipe. Height is selected at time of installation.

Please Note: HARCO is producing ductile iron nipples 1½", 2", 2½" and 3" diameters from 2" up to 14" long. This will allow vertical heights in 2" increments up to 22" when used with the Lateral 90°.

**DUCTILE
IRON**

*Eliminates
Breakage of
PVC Fittings
& Nipples*

*Made of
Corrosion-
Resistant
Ductile Iron*

*One-Piece
Connection
from
Mainline to
Lateral Line*

*Reduces
Leakage*

*Long Turn
Radius
Reduces
Head Loss*



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PF130-100804

DUCTILE IRON NIPPLES

Product Description

1½", 2", 2½" and 3" iron pipe size (IPS) size ductile iron nipples, TBE (Threaded Both Ends), lengths from 2" to 36" in 2" increments. Nipples can be furnished Threaded, Plain End, and Groove End.

Application

HARCO ductile iron nipples are designed to be used wherever brass, galvanized, black iron or PVC nipples are used in irrigation, industrial, and waterworks applications. Nipples used in conjunction with ductile iron couplings allow HARCO Lateral 90's to be raised 2" to 36" in 2" increments.

Features & Benefits

- ASTM A-536 ductile iron material with tensile strength of 65,000 psi is much stronger than brass, steel or PVC. Eliminates breakage of PVC nipples caused by high torque, external loads and ground movement.



- Ductile Iron is corrosion resistant.
- Different coatings are available.
- Ductile Iron thread fittings also available.
- Available in IPS size diameters 1½" (1.900"), 2" (2.375"), 2½" (2.875"), and 3" (3.500").

Suggested Specification

1½" through 3" nipples shall be made of ductile iron meeting ASTM A-536, Grade 65-45-12, with minimum wall thickness equal to 0.25" and diameters equal to IPS size pipe. Threads shall be NPT per ANSI B.120-1-1983. Nipples shall be manufactured by the Harrington Corporation of Lynchburg, Virginia.

**DUCTILE
IRON**

**Tensile
Strength of
65,000 psi**

**Made of
Corrosion-
Resistant
Ductile
Iron**

**Available
in 1½", 2"
2½" and 3"
Diameters**

**A Variety
of Lengths
up to 36"**

**Ductile
Iron
Threaded
Fittings
Also
Available**



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PF110-04112008

Product Information



DUCTILE IRON

**Tensile
Strength of
65,000 psi**

**Made of
Corrosion-
Resistant
Ductile
Iron**

**Available
in 1½", 2"
2½" and 3"
Diameters**

**A Variety
of Lengths
up to 36"**

**Ductile
Iron
Threaded
Fittings
Also
Available**

How to Order:

Product # = 870 + Size

1½" = 15
2" = 20
2½" = 25
3" = 30

+ Length

Example: 2" x 6" = 87020-06

2" = 02
4" = 04
6" = 06
8" = 08
10" = 10
12" = 12
14" = 14
16" = 16
18" = 18
20" = 20
24" = 24
30" = 30
36" = 36



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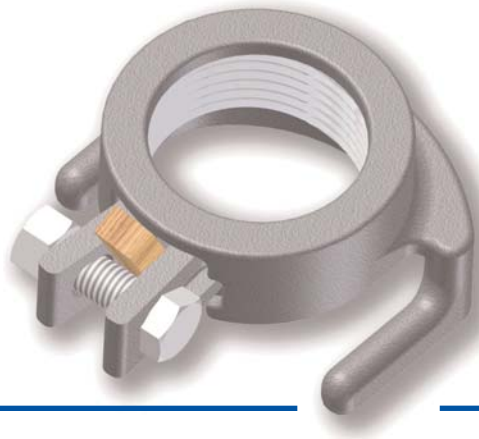
FITTINGS

Product Sheet

KNUCKLE JOINT RESTRAINT

1 1/2", 2", 2 1/2", 3" and 4"

**For HARCO
Push-On
Ductile Iron
Fittings for
IPS-PVC Pipe**



The Knuckle Joint Restraint by HARCO provides an easy to use, economical option for thrust restraint of HARCO small diameter push-on ductile iron fittings for IPS-PVC pipe.

The unique, two-piece design handles as one piece and permits a one-bolt actuation. The restraint is mounted on the fittings so that the bolt is accessed from the top, making for ease of

installation and inspection. Mechanical serrations in the grip ring assure proper gripping of the pipe. No restraint rods or bolts are required.

Once the Knuckle Restraint is mounted, simply push home the beveled PVC pipe, having applied pipe lube to the gasket and pipe spigot. Tighten the bolt that clamps the grip ring onto the pipe and the joint is securely restrained.

**DUCTILE
IRON**

*Easy to
Install*

*Handled as
One Unit*

*One-Bolt
Actuation*

*Machined
Grip ring
Serrations*

Economical



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PF128-080610

Knuckle Joint Restraint

for 1½", 2", 2½", 3" and 4"

HARCO Push-On Ductile Iron Fittings

Product Sheet

Product Information

KNUCKLE JOINT RESTRAINT		
SIZE	PART NUMBER	WEIGHT
1½	60-100-01	2.4
2	60-100-02	2.6
2½	60-100-25	3.4
3	60-100-03	4.3
4	60-100-04	5.7



Material

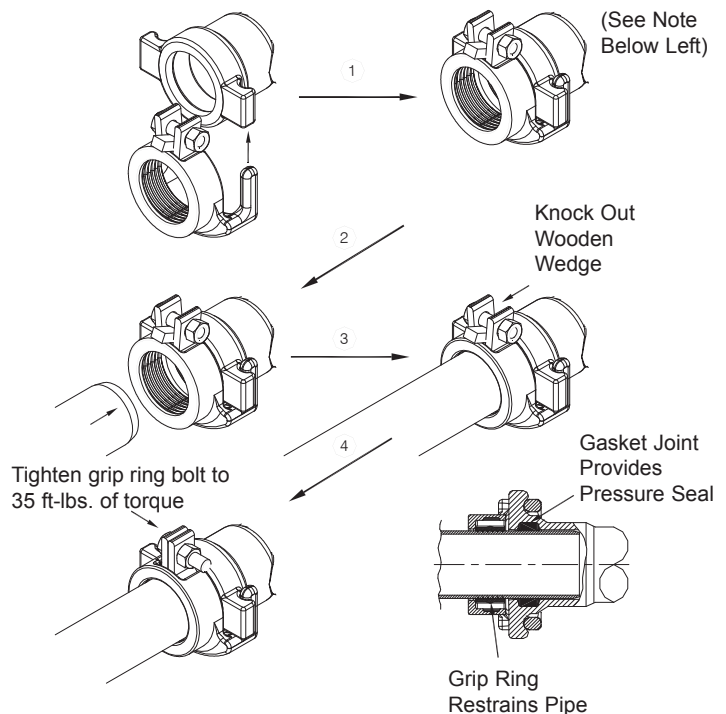
Housing – Ductile Iron, ASTM A536
Grip ring – Ductile Iron, ASTM A536
Bolt and nut – Type 304 Stainless Steel

Suggested Specifications

Joint Restraint shall be knuckle type as manufactured by HARCO (Harrington Corporation) of Lynchburg, Virginia. The grip ring shall be one piece residing within a ductile iron housing having machined serrations and shall be activated by one bolt. Housing and grip ring shall be of ductile iron to ASTM A536. Bolt and nut shall be Type 304 stainless steel.

NOTE (May 2004): Earlier versions of ears on HARCO bells varied slightly in thickness. If fingers on knuckle do not easily slide over ears, back of ears can be ground to provide clearance.

Installation



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PF128-080610

HARCO

FITTINGS

Product Sheet

Clam Shell Fitting to Pipe Restraint, Style D



**DUCTILE
IRON**

Restraints

Eliminate Concrete Thrust Blocks

With HARCO fitting to pipe restraints as well as pipe to pipe restraints and valve restraints, underground gasketed piping can be installed without the use of concrete thrust blocks. Joint restraint is especially useful for bridge crossings, stream crossings, unstable soils, fill areas, and places where concrete thrust blocks are awkward.

How Joint Restraint Works

Joint restraint systems tie lengths of pipe to a fitting, relying on the friction of the soil on the pipe to resist fitting thrust forces. There are times when additional lengths of pipe are required to hold the fitting. The pipe to pipe restraint is for this purpose. A simple restrained length calculation program allows a user to input the variables from his application and identify the joint restraint design required for his job. See website for Joint Restraint Link Calculator.

The HARCO Difference

HARCO pipe grip rings are machined to ensure sharp, consistent serrations, and roundness. This allows perfect gripping of the pipe every time. Long term performance is guaranteed. On larger fittings, forces rise considerably. With HARCO Style D Restraint there is no danger of "cocking" that can reduce the life of the pipe.

AVAILABLE IN SIZES 4" thru 12"

PART NUMBER	SIZES
820411	4"
820611	6"
820811	8"
821011	10"
821211	12"

*Eliminates
Concrete
Thrust
Blocks*

*Machined
Grip Rings
Perform
Long Term*

*Ease of
Installation
with Fewer
Parts*

*Engineered
for
Durability*



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PF143-082311

FITTING TO PIPE RESTRAINT (Clam Shell)

Product Sheet

ASSEMBLY INSTRUCTIONS FOR FITTING TO PIPE RESTRAINT

Tools Required: (2) 12" adjustable wrenches.

Note: Exact configurations may vary from those depicted.

ITEMS TO BE ASSEMBLED:

A - (1) Clamshell grip ring (two halves)

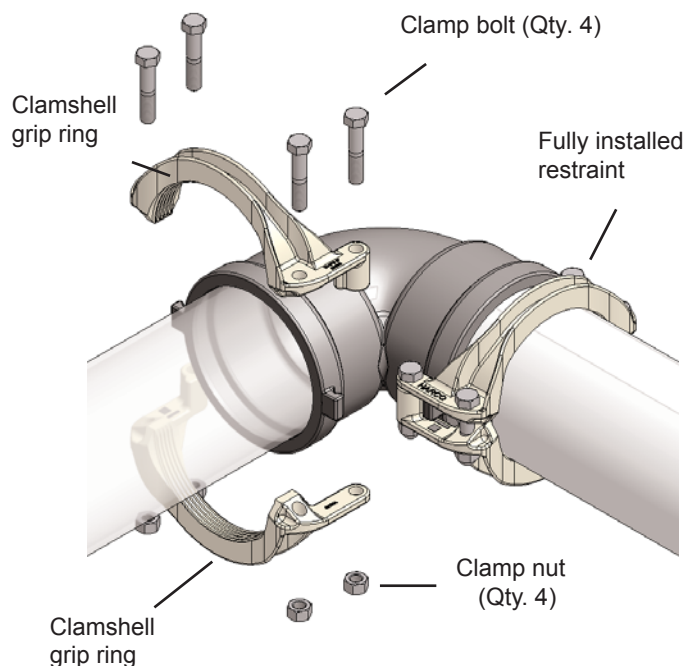
B - (4) Bolts and (4) nuts.

TOOLS REQUIRED: (2) Box end wrenches or (1) Box end wrench and a socket on a ratchet .

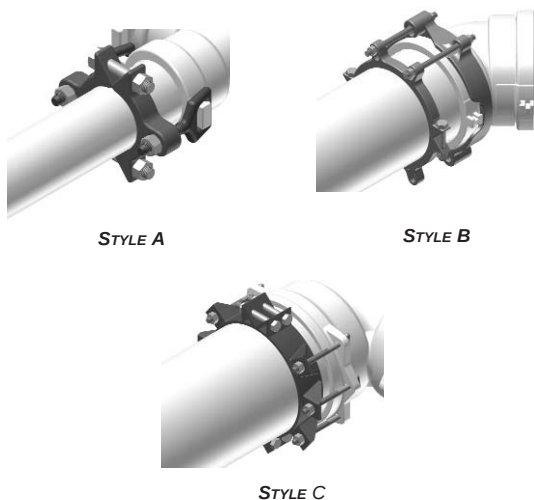
STEP 1. Lube pipe and gasket, insert beveled spigot pipe end into HARCO ductile iron fitting bell.

STEP 2. Assemble HARCO clamshell grip ring one half from the bottom, the other from the top. Bring the two halves together capturing the lugs on the fitting bell.

STEP 3. Insert bolts from the top through holes in grip ring, tighten nuts evenly to 100 ft-lb. of torque.



Other Styles Available



Suggested Specifications

Fitting to pipe restraints shall meet the requirements of Unibell B-13-94. Grip ring serrations shall be machined. As cast serrations are not permitted. Restraint rods, bolts and nuts shall be of ductile iron to ASTM A563 or low alloy steel to AWWA/ANSI C111/A21.11. All fitting to pipe restraints shall be manufactured by HARCO Fittings, Lynchburg, Virginia.



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PF143-082311

HARCO

FITTINGS

Product Sheet

FITTING TO PIPE RESTRAINT



**DUCTILE
IRON**

*Eliminates
Concrete
Thrust
Blocks*

Engineered for Durability

Eliminate Concrete Thrust Blocks

With HARCO Fitting to Pipe Restraints as well as Pipe to Pipe Restraints and Valve Restraints, underground gasketed piping can be installed without the use of concrete thrust blocks. Joint Restraint is especially useful for bridge crossings, stream crossings, unstable soils, fill areas, and places where concrete thrust blocks are awkward. Consult HARCO for a simple restrained pipe length calculation utility.

How Joint Restraint Works

Joint restraint systems tie lengths of pipe to a fitting, relying on the friction of the soil on the pipe to resist fitting thrust forces. There are times when additional lengths of pipe are required to hold the fitting. The Pipe to Pipe restraint is for this purpose. A simple restrained length calculation program allows a

user to input the variables from his application and identify the joint restraint design required for his job.

The HARCO Difference

HARCO pipe grip rings are machined to ensure sharp, consistent serrations, and roundness. This allows perfect gripping of the pipe every time. Long term performance is guaranteed. The use of threaded restraint rods allowing adjustment for dimensional variations ensures that forces are distributed for even pull on the pipe and fitting. There is no danger of "cocking" that can reduce the life of the pipe. With larger fittings, forces rise considerably. HARCO's use of multiple restraint rods allows for good distribution of thrust forces about the pipe and assurance of long term pipe performance.

*Machined
Grip Rings
Perform
Long Term*

*Threaded
Restraint
Rods for
"Even Pull"*



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PF131-111404

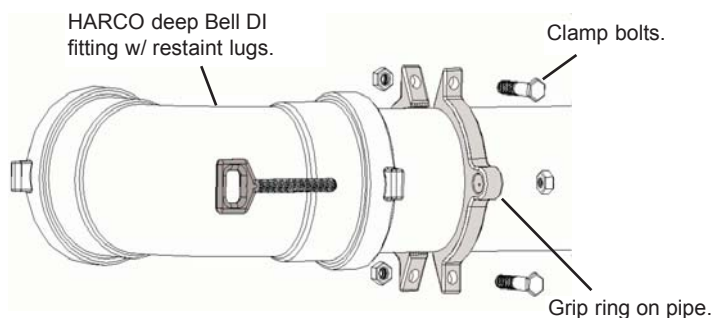
FITTING TO PIPE RESTRAINT

Product Sheet

ASSEMBLY INSTRUCTIONS FOR FITTING TO PIPE RESTRAINT

Tools Required: (2) 12" adjustable wrenches.

Note: Exact configurations may vary from those depicted.



2" - 8" SYSTEMS

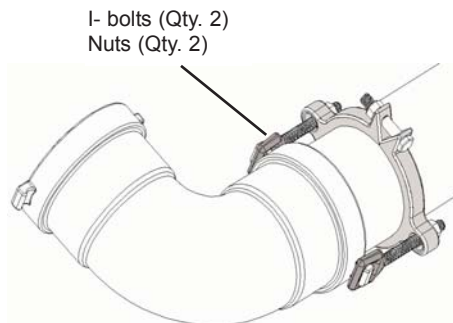
Step 1: Insert beveled spigot pipe end into HARCO ductile iron fitting bell.

Step 2: Assemble grip ring on pipe so that restraint rods will engage. Tighten clamp bolts & nuts to 100 ft.lb. torque pad to pad.

Step 3: Slide I-bolts through slots in grip rings and around fitting lugs. Tighten nuts evenly to 5 ft.-lb. of torque for a snug fit.

Ordering Information

SIZE	PART NUMBER	STYLE	WEIGHT
2"	820110	A	4
2.5"	820210	A	4
3"	820310	A	5
4"	820410	A	8
6"	820610	A	10
8"	820810	A	15
10"	821010	B	51
12"	821210	B	66
14"	821210	C	50
16"	821210	C	55



10" & 12" SYSTEMS

Step 1: Insert beveled spigot pipe end into HARCO ductile iron fitting bell.

Step 2: Assemble fitting back-up ring just behind gasket groove shoulder of HARCO DI bell.

Step 3: Assemble grip ring on pipe approximately 12" away from bell end making sure restraint rod holes are aligned. Tighten clamp bolts & nuts to 100 ft.-lb. torque pad to pad. Lugs on HARCO ductile iron fittings are not utilized to connect 10" and 12" joint restraints to fitting.

Step 4: Install threaded restraint rods, and tighten nuts evenly to 5-lb. of torque for a snug fit.

Suggested Specifications

Fitting to Pipe Restraints shall meet the requirements of UNI-B-13-94. Grip ring serrations shall be machined. As cast serrations are not permitted. Restraint rods, bolts and nuts shall be of ductile iron to ASTM A563 or low alloy steel to AWWA/ANSI C111/A21.11. Fitting to Pipe Restraint shall be supplied by The Harrington Corporation, Lynchburg, VA.



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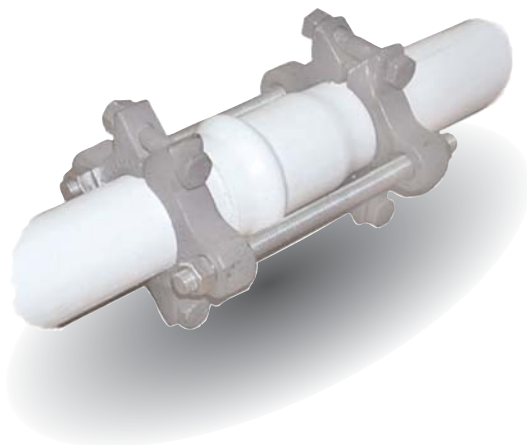
PF131-111404

HARCO

FITTINGS

Product Sheet

PIPE TO PIPE RESTRAINT



**DUCTILE
IRON**

*Eliminates
Concrete
Thrust
Blocks*

*Machined
Grip Rings
Perform
Long Term*

*Threaded
Restraint
Rods for
“Even Pull”*

Engineered for Durability

Eliminate Concrete Thrust Blocks

With HARCO Fitting to Pipe Restraints as well as Pipe to Pipe Restraints and Valve Restraints, underground gasketed piping can be installed without the use of concrete thrust blocks. Joint Restraint is especially useful for bridge crossings, stream crossings, unstable soils, fill areas, and places where concrete thrust blocks are awkward. Consult HARCO for a simple restrained pipe length calculation utility.

How Joint Restraint Works

Joint restraint systems tie lengths of pipe to a fitting, relying on the friction of the soil on the pipe to resist fitting thrust forces. There are times when additional lengths of pipe are required to hold the fitting. The Pipe to Pipe restraint is for this purpose. A simple restrained length calculation program allows a

user to input the variables from his application and identify the joint restraint design required for his job.

The HARCO Difference

HARCO pipe grip rings are machined to ensure sharp, consistent serrations, and roundness. This allows perfect gripping of the pipe every time. Long term performance is guaranteed. The use of threaded restraint rods allowing adjustment for dimensional variations ensures that forces are distributed for even pull on the pipe and fitting. There is no danger of “cocking” that can reduce the life of the pipe. With larger fittings, forces rise considerably. HARCO’s use of multiple restraint rods allow for good distribution of thrust forces about the pipe and again, assurance of long term pipe performance.



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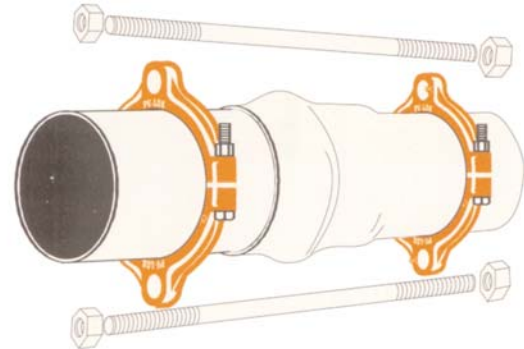
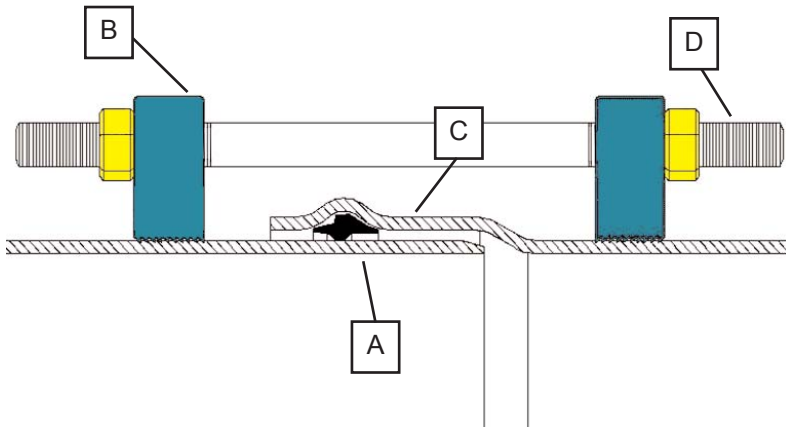
PIPE TO PIPE RESTRAINT

Product Sheet

ASSEMBLY INSTRUCTIONS FOR FITTING TO PIPE RESTRAINT SYSTEMS

Tools Required: (2) 12" adjustable wrenches.

Note: Exact configurations may vary from those depicted.



Ordering Information

SIZE	PART NUMBER	WEIGHT	NUMBER RESTRAINT RODS
2"	820115	7	2
2.5"	820215	7	2
3"	820615	10	2
4"	820415	14	2
6"	820615	18	2
8"	820815	26	2
10"	821015	47	4
12"	821215	52	4
14"	821415	105	6
16"	821615	115	6

Suggested Specifications

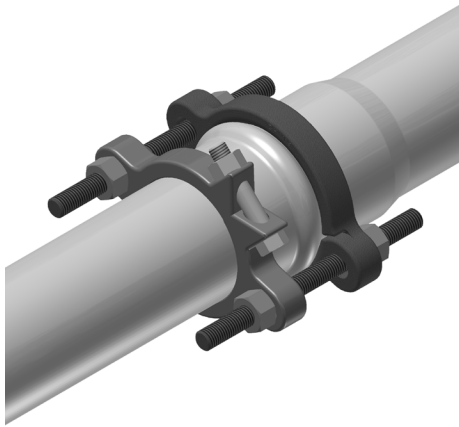
Pipe to Pipe Restraints shall meet the requirements of UNI-B-13-94. Grip ring serrations shall be machined. As cast serrations are not permitted. Restraint rods, bolts and nuts shall be of low alloy steel to AWWA/ANSI C111/A21.11. Pipe to Pipe Restraints shall be supplied by The Harrington Corporation of Lynchburg, VA.



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PIPE TO PIPE RESTRAINT STYLE B

**IPS PVC
PRESSURE**

***Eliminates
Concrete Thrust
Blocks***

Engineered for Durability

Eliminate Concrete Thrust Blocks

With HARCO Pipe to Pipe Restraints as well as Pipe to Pipe Restraints and Valve Restraints, underground gasketed piping can be installed without the use of concrete thrust blocks. Joint Restraint is especially useful for bridge crossings, stream crossings, unstable soils, fill areas, and places where concrete thrust blocks are awkward. Consult HARCO for a simple restrained pipe length calculation utility.

How Joint Restraints Work

Joint restraint systems tie lengths of pipe to a fitting, relying on the friction of the soil on the pipe to resist fitting thrust forces. There are times when additional lengths of pipe are required to hold the fitting. The Pipe to Pipe restraint is for this purpose. A simple restrained length

calculation program allows a user to input the variables from his application and identify the joint restraint design required for his job.

The HARCO Difference

HARCO pipe grip rings are machined to ensure sharp, consistent serrations, and roundness. This allows perfect gripping of the pipe every time. Long term performance is guaranteed. The use of threaded restraint rods allowing adjustment for dimensional variations ensures that forces are distributed for even pull on the pipe and fitting. There is no danger of “cocking” that can reduce the life of the pipe.

***Machined Grip
Rings Perform
Long Term***

***Threaded
Restraint Rods
for “Even Pull”***



PIPE TO PIPE RESTRAINT STYLE B

ITEMS TO BE ASSEMBLED:

- A - (1) Plain end PVC pipe.
- B - (1) Bell End PVC Pipe
- C - (1) HARCO Grip Rings (FIGURE 1)
- D - (1) HARCO Pipe Bell Backing Ring (FIGURE 2)
- E - (2) Corten Threaded Restraining Rods with (4) Nuts (FIGURE 3)

STEP 1: Mark and assemble plain-end PVC pipe into bell according to pipe manufacture's recommendations.

STEP 2: Assemble the HARCO grip rings on the spigot pipe, approx. 2" inches behind the insertion mark on the pipe. Tighten the side clamping bolts to recommended torque 100 ft. lbs (pad to pad).

STEP 3: Assemble HARCO Pipe bell backing ring around pipe bell socket immediately behind the gasket.

STEP 4: Insert the threaded rods (E) provided and snug the retaining nuts against the restrainer ears (against the flat surface). Do not over-tighten retaining nuts, approximately one turn with a wrench.



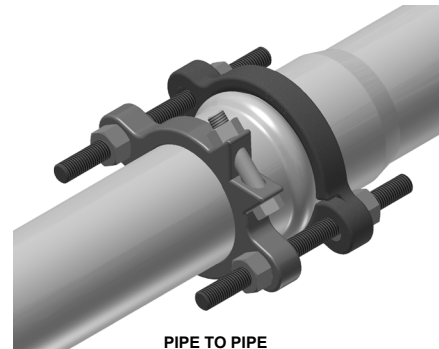
FIGURE 1
(1) GRIP RING WITH
BOLTS & NUTS



FIGURE 2
BELL
BACKING
RING



FIGURE 3
(2) ROD & NUT



PIPE TO PIPE
RESTRAINT ASSEMBLY

Ordering Information

SIZE	PART NUMBER	STYLE	WEIGHT
3"	820316	B	8
4"	820416	B	12
6"	820616	B	16
8"	820816	B	34

Suggested Specifications

Pipe to Pipe Restraints shall meet the requirements of UNI-B-13-94. Grip ring serrations shall be machined, as cast serrations are not permitted. Restraint rods, bolts and nuts shall be of low alloy steel to AWWA/ANSI C111/A21.11. Pipe to Pipe Restraints shall be supplied by The Harrington Corporation of Lynchburg, VA.

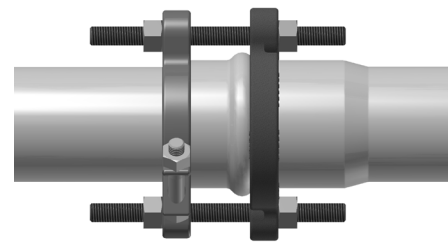


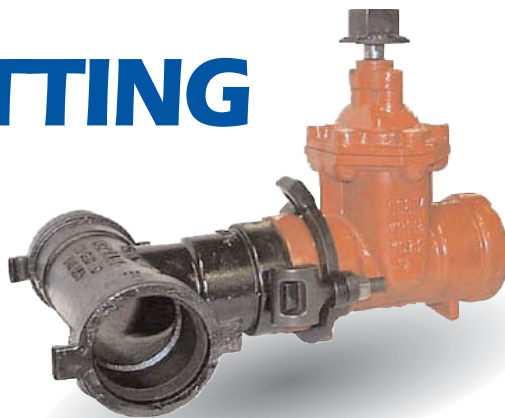
FIGURE 4
RESTRAINT ASSEMBLY



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VALVE TO FITTING RESTRAINT



**DUCTILE
IRON**

***Eliminates
Concrete
Thrust
Blocking
of Valve***

***Clamps
Valve
Directly, to
Fitting***

***Fits Most
Push-On
Valves for
IPS-PVC
Pipe***

Engineered for Durability

Eliminate Concrete Thrust Blocks

With the HARCO Valve to Fitting Restraint System you can eliminate concrete thrust blocking of valves. This dramatically speeds the installation and allows for later access to the valve. When the valve is restrained directly to the Tee, simple concrete thrust blocking of the Tee provides for all thrust restraint. Alternatively, joint restraint of the fitting to the pipe can be accomplished with HARCO's other joint restraint products.

Stock Just One Size of Rings...

One size fits all. An easy thing to say but not an easy thing to do, especially when you are talking about restraining rings for push-on valves. Manufacturers such as American Flow Control/Waterous, AVK, Clow, Kennedy, Matco-Norca (10RT, 100RT and 200RTD), M&H and Nibco make push-on valves for use with IPS-

PVC pipe. The challenge is to find one ring that fits all the various combinations of feet and stiffeners that these manufacturers employ. With the HARCO system, you need to stock just one item to work with the valve manufacturer of your choice.

The HARCO Difference

HARCO's design clamps directly to the valve preventing movement, unlike other valve restraints. HARCO's back-up ring fits over the valve behind the bell and is connected via threaded rod to the fitting. Other valve restraint systems provide restraint bars that span the valve connecting the fitting to an *as cast* serration grip ring. The valve is not directly restrained and the *as cast* serrations provide inconsistent gripping of the pipe.



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PF106-110504

VALVE TO FITTING RESTRAINT SYSTEM

Product Sheet

Valve to Fitting Assembly Instructions

Items to be assembled:

- A - (1) Valve back-up rings consisting of two halves "TOP" (has small notch), "BOTTOM" (has large slot.)
- B - (2) HARCO I-Bolts with two low alloy nuts.
- C - (1) Push-on joint valve.
- D - (1) HARCO fitting with lugs.

Notes:

- HARCO recommends all assembly be done prior to placement in the ditch, although assembly in the ditch is possible.
- Not all valve brands and models require all slots provided on split rings.
- I-Bolt is custom length for valve to fitting restraint assembly.

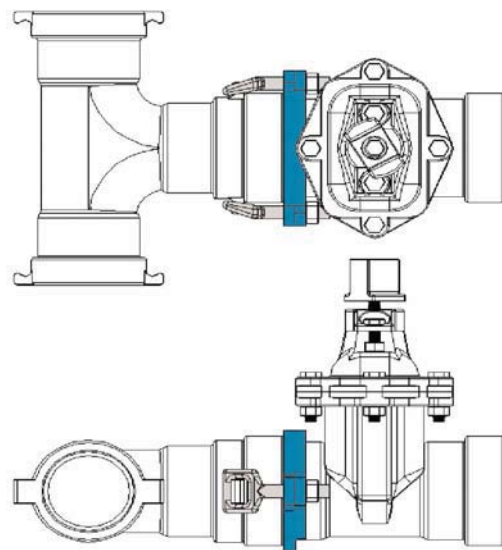
Step 1: Cut IPS-PVC pipe to a length which allows valve and HARCO fitting bells to contact flush against one another (pre-measuring valve and fitting bell depths is required).

Step 2: Insert pipe into valve bell first, then install HARCO fitting onto opposite end, making sure bell ends contact each other as shown.

Step 3: Assemble valve back-up ring around socket of bell so it seats against the valve "gasket race." The "BOTTOM" ring half is installed on the bottom of the valve, while the other half goes on from the top side.

Step 4: Slide HARCO I-Bolt through ring holes on either side, then hook the I-bolts over lugs on the HARCO fitting. Thread low alloy nuts on to I-Bolts and tighten until bells are snug.

Step 5: Concrete thrust block fitting as required.



Ordering Information

SIZE	PART NUMBER	WEIGHT
3"	820320	5
4"	820420	7
6"	820620	8
8"	820820	11

Completed Installation



Suggested Specifications

Valve to fitting restraint shall consist of a ductile iron (ASTM A536) valve back-up ring that fits behind the bell of the valve and threaded rod ending in an eyebolt and nuts that fit onto the lugs of the fitting. The bolts and nuts shall be made from either a low alloy steel as per AWWA/ANSI C111/A21.1 or ductile iron to ASTM A536. All valve restraint is to be supplied by the Harrington Corporation of Lynchburg, Virginia.



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PF106-110504

HARCO

FITTINGS

Product Sheet

FITTING TO VALVE TO PIPE RESTRAINT



**DUCTILE
IRON**

*Restrains
Valve
Directly to
Fitting and
Pipe*

Engineered for Durability

Eliminate Concrete Thrust Blocks

With the HARCO Fitting to Valve to Pipe Restraint you can eliminate concrete thrust blocking of valves and support the use of fitting joint restraint. This dramatically speeds the installation and allows for later access to the valve. In combination with fitting restraints and pipe bell restraints using the principles of mechanical joint restraint, concrete thrust blocking of the Tee and valve can be eliminated. Consult HARCO for a simple restrained pipe length calculation utility.

One Size Fits All

The Harco Valve to Pipe restraint fits push-on valves for IPS-PVC pipe made by American Flow Control/Waterous, AVK, Clow, Kennedy, Matco-Norca, M&H and Nibco.

New Design with fewer Parts

HARCO's Valve to Pipe Restraint now has fewer parts and allows for easier installation of the grip rings and ductile iron restraint rods from the side.

Proper Thrust Force Transfer

HARCO's design transfers valve thrust forces directly to the grip rings unlike other valve restraints that apply forces to the ends of the pipe risking a failure. Harco grip rings have machined serration which have the exact form required to grip the pipe perfectly, ensuring long-term performance. As cast serrations provide inconsistent gripping of the pipe and questionable long-term performance.

The HARCO Difference

Standards and testing are a major advantage to HARCO. The grip ring design used by HARCO has been tested to comply with the industry standard for PVC pipe joint restraint, Uni-B-13-94, passing all three tests: the quick burst test, the 1,000-hour test and the one million cycle test.

*Machined
Grip Rings
Perform
Long Term*

*Fits
Push-On
Valves for
IPS-PVC
Pipe*



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PF133-040116

FITTING TO VALVE TO PIPE RESTRAINT

Product Sheet

Fitting to Valve to Pipe Assembly Instructions

Items to be assembled:

A - (1) Grip Rings w/ Clamp Bolts & Nuts.

B - 2" - 8" include (2) Restraint Rod & Nut

10" & 12" includes (2) Restraint Rod & Nut, (2) T-bolts & Nut

C - (1) Push-On Joint Valve.

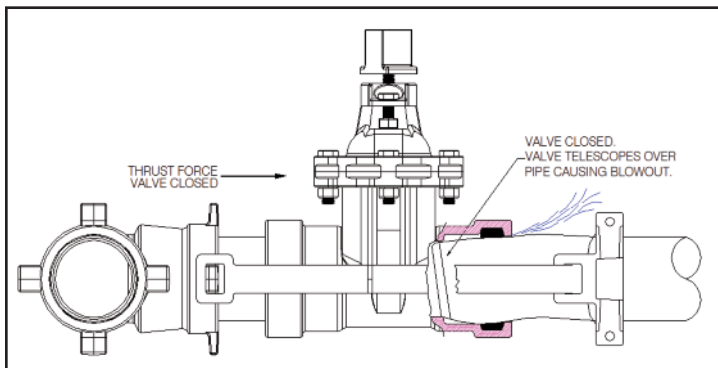
D - (1) Short PVC Pipe (Available from HARCO Part # 82xx23)

Notes:

Step 1: Cut and bevel short piece of pipe 1/2" shorter then combined length of fitting and valve bells. Install pipe in fitting then install valve onto pipe pushing valve bell flush onto fitting bell.

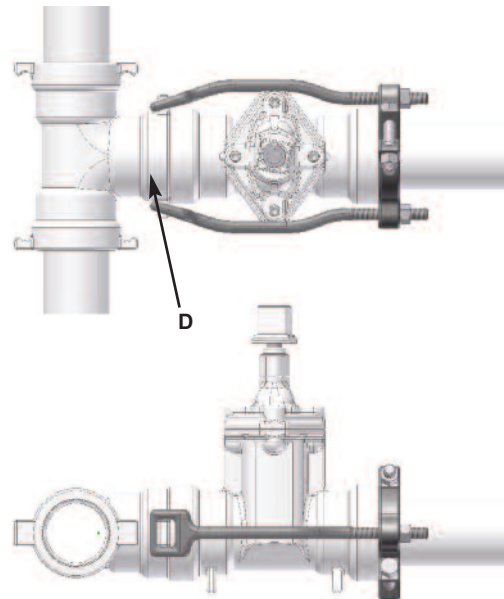
Step 2: Assemble HARCO grip ring on pipe with the rings flush against valve bells. (as shown in diagram) After being sure of the alignment of the restraint bolt holes, tighten grip ring clamp bolts to 100 ft-lbs. of torque. For sizes up to 8" "start" the restraint rods in the grip ring before the grip ring is put in place and tightened.

Step 3: Slide restraint rods over lugs and tighten restraint rod nuts evenly to 5 ft-lbs. of torque.



Warning:

If grip rings are not installed flush against valve bells, the thrust force from valve closure may cause the valve to force itself over end of PVC pipe resulting in failure of gasket seal, causing a leak.



SIZE	PART NUMBER	WT.	STYLE
2"	820121	7	A
2½"	820221	8	A
3"	820322	8	A
4"	820422	11	A
6"	820622	15	A
8"	820822	23	A
10"	821021	48	C
12"	821221	63	C



Suggested Specifications

Fitting to Valve to Pipe restraint shall consist of ductile iron (ASTM A536) grip rings with machined serrations and ductile iron restraint rods. The ring that grips the pipe shall meet the requirements of Uni-B-13-94. The restraint rods / nuts shall be made from low alloy steel to AWWA/ANSI C111/A21.1 or ductile iron to ASTM A536. All valve restraint is to be supplied by the Harrington Corporation of Lynchburg, Virginia.



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PF133-040116



VALVE TO PIPE RESTRAINT STYLE A

Versatile Application, Triple-Tested STRENGTH

Eliminate Concrete Thrust Blocks

With the HARCO Valve to Pipe Restraint System, you can eliminate concrete thrust blocks. This dramatically speeds installation and allows for later access to the valve. Consult HARCO for a simple restrained pipe length calculation utility for use with this product.

Stock Just One Size of Rings...

One size fits all. An easy thing to say but not an easy thing to do, especially when you are talking about restraining rings for push-on valves. Manufacturers such as American Flow Control/ Waterous, AVK, Clow, Kennedy, Matco-Norca (10RT and 100RT), M&H and Nibco make push-on valves for use with IPS-PVC pipe. The challenge is to find one ring that fits all the various combinations of feet and stiffeners that these manufacturers employ. With the HARCO system, you need to stock just one item to work with the valve manufacturer of your choice.

What's Holding the Valve in Place?

HARCO's design clamps directly to the valve preventing movement, unlike other valve restraints that make no contact with the valve. In combination with a split ring with machined serrations that bites into the pipe, HARCO's backup ring fits over the valve behind the bell and is connected via threaded rod to the grip ring. Machined serrations have the exact dimensions required to grip the pipe perfectly, ensuring long-term performance. As cast serrations provide inconsistent gripping of the pipe and questionable long-term performance.

Note: Depending on the application additional pipe to pipe restraints may be required.

The HARCO Difference

Standards and testing are a major advantage to HARCO. The grip ring used by HARCO has been tested to comply with the industry standard for PVC pipe joint restraint, Uni-B-13-94.

DUCTILE IRON

***Eliminates
Concrete
Thrust
Blocks***

***Clamps
Valve
Directly to
the Pipe,
Preventing
Movement***

***Fits Most
Makes of
Push-On
Valves for
IPS-PVC
Pipe***



VALVE TO PIPE RESTRAINT STYLE A

Valve to Pipe Assembly Instructions

Items to be assembled:

- A - (2) Grip rings with clamp bolts and nuts
- B - (2) Split rings consisting of two halves "TOP" (has small notch), "BOTTOM" (has large notch)
- C - (4) T-Bolts and nuts
- D - (1) Push joint valve

Step 1: Install valve in system with pipe ends homed to pipe stops.

Step 2: Assemble split ring around socket of bell so it seats up against the backside of valve gasket O.D. The "BOTTOM" ring half is installed on the bottom of the valve, while the other half goes on from the top side.

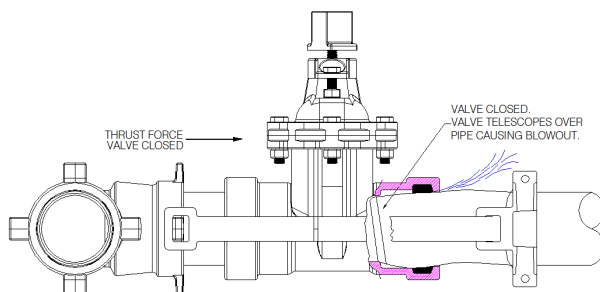
Step 3: Clamp grip rings on pipe with the rings flush against valve bells (as shown in diagram). After being sure of the alignment of the restraint bolt holes, tighten grip ring clamp bolts to 100 foot-lbs. of torque.

Step 4: Slide T-Bolt through ring holes, from clamp ring side, thread on Corten nuts tighten evenly to 5 foot-lbs. of torque for a snug fit.

Step 5: Joint restrain pipe joints up and down stream as required.

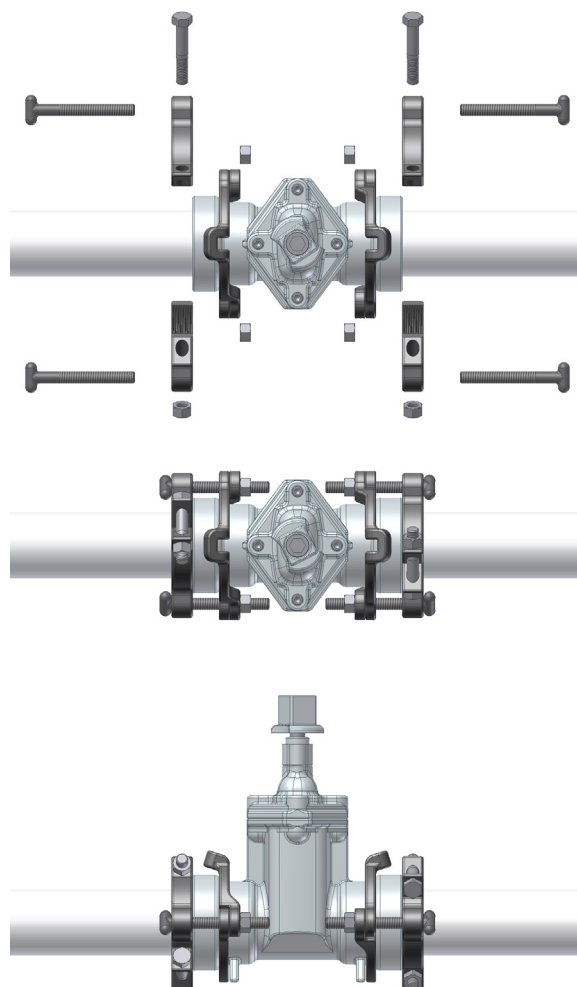
WARNING:

If grip rings are not installed flush against valve bells, the thrust force from valve closure may cause the valve to force itself over end of PVC pipe resulting in failure of gasket seal, causing a leak.



Suggested Specifications

Valve to pipe restraint shall consist of a ductile iron (ASTM A536) split ring that fits behind the bell of the valve and a ductile iron split ring with machined serrations that grips the pipe. The ring that grips the pipe shall meet all the requirements of Uni-B-13-94. The back up ring and the grip ring shall be connected with threaded rod and nuts made from low alloy steel AWWA/ANSI C111/A21.1 or ductile iron to ASTM A536. All valve restraint is to be supplied by the Harrington Corporation of Lynchburg, Virginia.



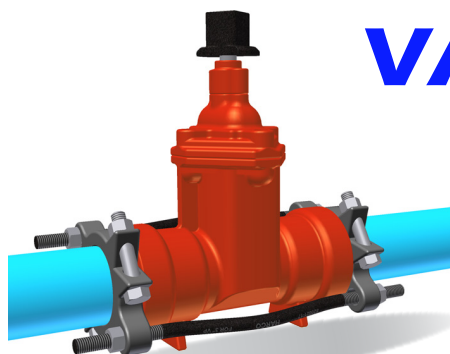
Ordering Information

SIZE	PART NUMBER	STYLE	WEIGHT
3"	820325	A	10
4"	820425	A	14
6"	820625	A	18
8"	820825	A	26



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www.harcofittings.com



VALVE TO PIPE RESTRAINT STYLE B

**DUCTILE
IRON**

Engineered for Durability

Eliminate Concrete Thrust Blocks

With the HARCO Valve to Pipe Restraint System, you can eliminate concrete thrust blocks. This dramatically speeds installation and allows for later access to the valve. Consult HARCO for a simple restrained pipe length calculation utility for use with this product.

One Size Fits All

The Harco Valve to Pipe restraint fits push-on valves for IPS-PVC pipe made by American Flow Control/Waterous, AVK, Clow, Kennedy, Matco-Norca, M&H and Nibco.

New Design with Fewer Parts

HARCO's Valve to Pipe Restraint now has fewer parts and allows for easier installation of the grip rings and ductile iron restraint rods from the side.

Proper Thrust Force Transfer

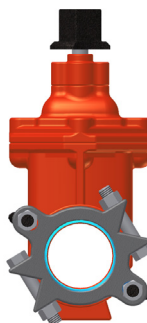
HARCO's design transfers valve thrust forces directly to the grip rings unlike other valve restraints that apply forces to the ends of the pipe risking a failure. Harco grip rings have machined serrations

which have the exact form required to grip the pipe perfectly, ensuring long-term performance. As cast serrations provide inconsistent gripping of the pipe and questionable long-term performance.

Note: Depending on the application additional pipe to pipe restraints may be required.

The HARCO Difference

Standards and testing are a major advantage to HARCO. The grip ring design used by HARCO has been tested to comply with the industry standard for PVC pipe joint restraint, Uni-B-13-94.



Easy Access

***Eliminates
Concrete Thrust
Blocks***

***Restrains Valve
Directly to the
Pipe***

***Machined Grip
Rings Perform
Long Term***

***Fits
Push-On Valves
for IPS-PVC
Pipe***



VALVE TO PIPE RESTRAINT STYLE B

Valve to Pipe Assembly Instructions

Items to be assembled:

- A - (2) Grip Rings w/ Clamp Bolts & Nuts.
- B - 2" - 8" include (2) Restraint Rod & (4) Nut
10" & 12" includes (4) Restraint Rod & Nut, (4) Nut
- C - (1) Push-On Valve.

Step 1:

Install valve in system with pipe ends homed to pipe stops.

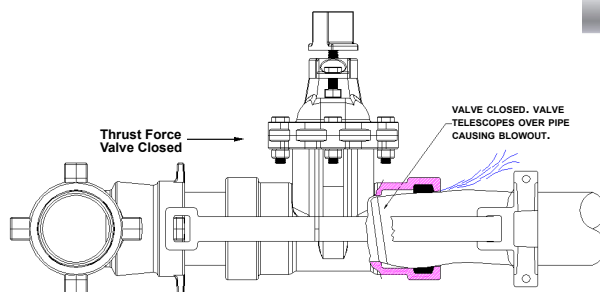
Step 2: Pre-install restraint rods through grip ring restraint holes, before installing grip rings on pipe. Thread nuts on each end of both threaded rods down approximately 1" to allow for loose fit during positioning of grip ring on pipe.

Step 3: Clamp grip rings on pipe with the rings flush against valve bells. (as shown in diagram) Tighten grip ring clamp bolts to 100 ft-lbs. of torque.

Step 4: Tighten restraint rod nuts evenly on 5/8" threaded rod to 5 ft-lbs. of torque.

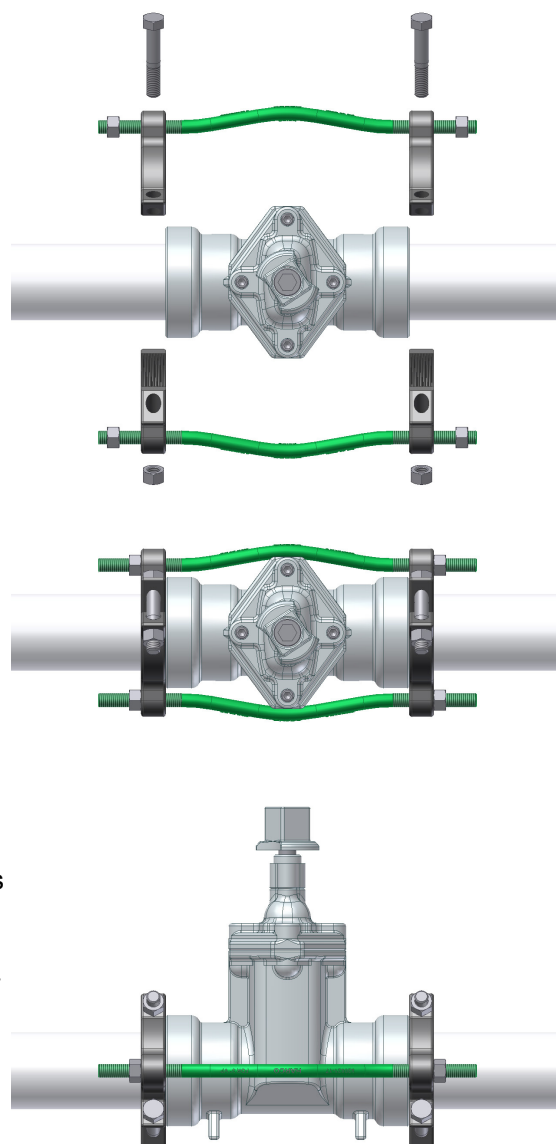
WARNING:

If grip rings are not installed flush against valve bells, the thrust force from valve closure may cause the valve to force itself over end of PVC pipe resulting in failure of gasket seal, causing a leak.



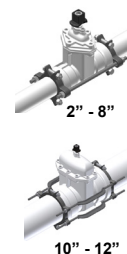
Suggested Specifications

Valve to pipe restraint shall consist of a ductile iron (ASTM A536) split ring that fits behind the bell of the valve and a ductile iron split ring with machined serrations that grips the pipe. The ring that grips the pipe shall meet all the requirements of Uni-B-13-94. The back up ring and the grip ring shall be connected with threaded rod and nuts made from low alloy steel AWWA/ANSI C111/A21.1 or ductile iron to ASTM A536. All valve restraint is to be supplied by the Harrington Corporation of Lynchburg, Virginia.



Ordering Information

SIZE	PART NUMBER	STYLE	WEIGHT
2"	820125	B	7
2½"	820225	B	7
3"	820326	B	13
4"	820426	B	17
6"	820626	B	22
8"	820826	B	33
10"	821025	B	47
12"	821225	B	52



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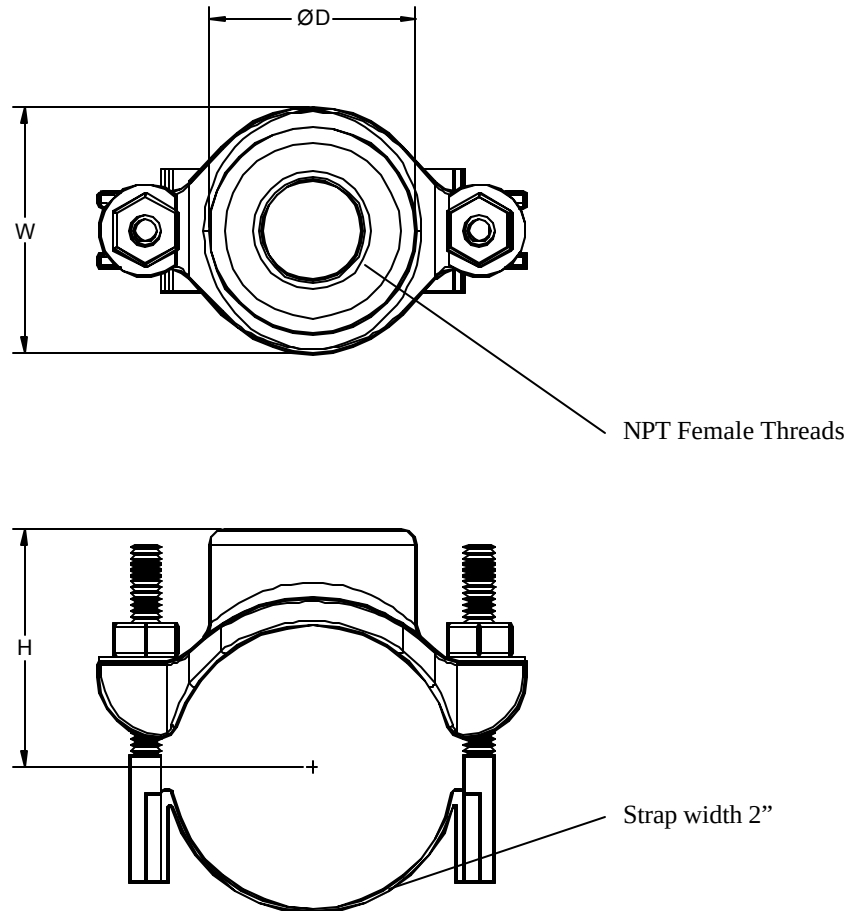
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HARCO DUCTILE IRON SADDLES



Size	Part No.	NPT Size	D	W	H	Pipe O.D.	Weight
3 x 1-1/2	803803	1-1/2	3.4	4.0	3.4	3.500	3
3 x 2	803804	2	3.4	4.0	3.4	3.500	3
4 x 1-1/2	804803	1-1/2	3.4	4.0	3.9	4.500	3
4 x 2	804804	2	3.4	4.0	3.9	4.500	3
6 x 1 ½	806803	1-1/2	3.4	4.0	4.8	6.625	4
6 x 2	806804	2	3.4	4.0	4.8	6.625	4
8 x 1-1/2	808803	1-1/2	3.4	4.0	5.8	8.625	5
8 x 2	808804	2	3.4	4.0	5.8	8.625	5
10 x 1-1/2	810803	1-1/2	3.4	4.0	7.0	10.750	6
10 x 2	810804	2	3.4	4.0	7.0	10.750	6
12 x 1-1/2	812803	1-1/2	3.4	4.0	8.0	12.750	7
12 x 2	812804	2	3.4	4.0	8.0	12.750	7

1" NPT Outlets also available

Material Specification:

Casting – Ductile Iron, meets or exceeds ASTM A536

Gaskets – Virgin SBR, meets or exceeds ASTM F477

Strap – Stainless Steel, meets or exceeds ASTM A240

Bolts, Nuts, & Washers – Stainless Steel, meets or exceeds ASTM A240

Note: All dimensions in inches.

PVC-IPS FITTINGS

PVC Fittings for IPS Pipe.	.70
PVC Pressure Repair Coupling	.72
PVC ACME Service Tee.	.74
PVC Pressure Fittings Price List.	.75





PVC FITTINGS FOR IPS PIPE

**IPS PVC
PRESSURE**

**1 1/2" Thru 8"
Sizes**

Engineered for Durability

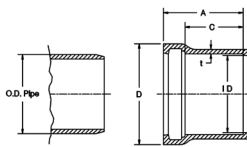
HARCO Class 200 PVC Fittings

HARCO Class 200 Pressure Pipe Fittings will fit all IPS Pipe (Iron Pipe Size). IPS Pipe is available in SDR 21, Class 200; SDR 26, Class 160; Schedule 40 and Schedule 80. HARCO offers a wide selection of sizes 1 1/2" thru 8", and a full complement of reducers, reducing tees, and adapters. HARCO's large inventory assures you of fast and complete orders.

SUGGESTED SPECIFICATION

All fittings for Iron Pipe Size pipe shall be manufactured in one piece of injection molded PVC compound meeting ASTM D1784. Fittings shall be Class 200 and conform to requirements of DR 21. Fittings shall be designed to withstand a minimum of 630 psi quick burst pressure at 73 degrees F., tested in accordance with ASTM D1599. Bell shall be gasketed joint conforming to ASTM D3139 with gaskets conforming to ASTM F477. Push Joint Ductile Iron fittings shall be allowed as alternative when PVC sizes are not available.

STANDARD JOINT DIMENSIONS - IN INCHES



NOMINAL DIAMETER	O. D. PIPE	A	C	D	T	ID
1 1/2	1.900	3.168	2.418	1.938	0.107	1.720
2	2.375	3.273	2.523	2.413	0.133	2.149
2 1/2	2.875	3.383	2.633	2.913	0.158	2.601
3	3.500	3.520	2.770	3.538	0.191	3.166
4	4.500	4.103	2.990	4.558	0.246	4.072
6	6.625	4.571	3.458	6.683	0.358	5.993
8	8.625	5.161	3.898	8.708	0.463	7.805

High Strength

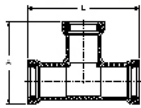
Easy Installation

All PVC System

**High Flow
Capacity**

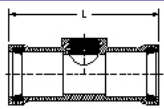


TEE (GxGxG)



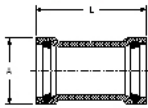
SIZE	PART #	STYLE	A	L	WT
1½ x 1½	112-150	M	6	9.1	1
2 x 1½	112-215	M	6.1	9.1	1.3
2 x 2	112-220	M	6.1	9.1	1.4
2½ x 1½	112-251	A	8.4	9.9	1.4
2½ x 2	112-252	M	6.8	9.9	2
2½ x 2½	112-255	M	6.8	9.9	1.7
3 x 1½	112-315	A	9.4	10.9	2.5
3 x 2	112-320	M	7.7	11.4	2.8
3 x 2½	112-325	M	8	11.9	3.1
3 x 3	112-330	M	7.7	10.9	2.8
4 x 2	112-420	M	8.6	13.1	4.3
4 x 2½	112-425	M	8.5	13.1	4.9
4 x 3	112-430	M	8.8	13.1	4.9
4 x 4	112-440	M	9.3	13.1	5.6
5 x 5	112-550	M	11	14.8	10
6 x 2	112-620	A	12.2	11.6	2.8
6 x 3	112-630	M	11.5	12.5	3
6 x 4	112-640	M	11.8	16.3	11
6 x 6	112-660	M	11.5	16.4	12.3
8 x 4	112-840	M	13.9	19.5	18.7
8 x 6	112-860	M	14.4	19.5	19.3
8 x 8	112-880	M	14.9	19.5	21.3

SERVICE TEE (GxGxIPT) (Tapered NPT)



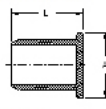
SIZE	PART #	STYLE	L	WT
1½ x ¾	151-153	FB	8.5	0.8
1½ x 1	151-154	M	8.5	0.8
1½ x 1½	151-155	Fab	10.9	0.8
2 x ¾	151-202	HB	9.2	1.2
2 x ¾	151-203	M	9.2	1.2
2 x 1	151-204	M	9.2	1.2
2 x 1½	151-205	M	9.2	1.2
2 x 1½	151-206	M	9.2	1.2
2½ x ¾	151-252	HB	9.9	1.5
2½ x ¾	151-253	HB	9.9	1.5
2½ x 1	151-254	M	9.9	1.5
2½ x 1½	151-255	M	9.9	1.5
2½ x 1½	151-256	M	9.9	1.5
2½ x 2	151-258	M	9.9	1.5
3 x ¾	151-302	HB	11	2.5
3 x ¾	151-303	HB	11	2.5
3 x 1	151-304	M	11	2.5
3 x 1½	151-305	M	11	2.5
3 x 1½	151-306	M	11	2.5
3 x 2	151-308	M	11	2.5
4 x ¾	151-402	HB	10.7	3.1
4 x ¾	151-403	HB	10.7	3.1
4 x 1	151-404	M	10.7	3.1
4 x 1½	151-405	M	10.7	3.1
4 x 1½	151-406	M	10.7	3.1
4 x 2	151-408	M	10.7	3.1
6 x ¾	151-602	HB	9.3	5.8
6 x ¾	151-603	HB	9.3	5.8
6 x 1	151-604	HB	9.3	5.8
6 x 1½	151-605	HB	9.3	5.8
6 x 1½	151-606	M	9.3	5.8
6 x 2	151-608	M	11.5	5.8

REPAIR COUPLING (GxG) KNOCK-ON STYLE (No



SIZE	PART #	STYLE	A	L	WT
1½	109-015	M	2.8	6.5	0.5
2	109-020	M	3.3	7.8	0.7
2½	109-025	M	3.8	8.4	0.9
3	109-030	M	4.5	9	1.3
4	109-040	M	5.9	10.6	2.7
5	109-050	M	7	11.2	4.1
6	109-060	M	8.3	11.6	5.6
8	109-080	M	10.4	11.1	10.3
10	109-100	C	11.5	11.5	14
12	109-120	C	12	12	22

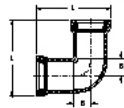
PLUG (Spigot)



Poured concrete thrust blocks only

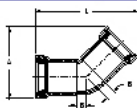
SIZE	PART #	STYLE	A	L	WT
1½	144-015	Fab	2.7	5.2	0.2
2	144-020	M	3	2.7	0.2
2½	144-025	Fab	3.4	5.3	0.8
3	144-030	M	3.8	3.5	0.4
4	144-040	M	5	3.5	0.4
6	144-060	M	6.8	5.4	2.3
8	144-080	M	8.9	6.4	3.8

90° BEND (GxG)



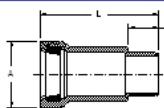
SIZE	PART #	STYLE	B	L	WT
1½	118-015	M	1	4.8	0.6
2	118-020	M	1.3	6.2	0.8
2½	118-025	M	1.6	6.8	1.3
3	118-030	M	2	7.7	1.8
4	118-040	M	2.5	9.5	3.8
5	118-050	Fab			3.8
6	118-060	M	3.6	12.3	9
8	118-080	M	4.5	14.9	16.3

45° BEND (GxG)



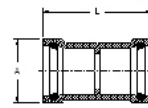
SIZE	PART #	STYLE	A	B	L	WT
1½	122-015	Fab	5.8	0.9	9.1	0.9
2	122-020	M	5.3	0.6	7.8	0.8
2½	122-025	M	6.1	0.7	8.3	1.1
3	122-030	M	6.6	0.9	9.1	1.6
4	122-040	M	8.4	1.1	11	3.4
6	122-060	M	11.3	1.6	13.6	7.8
8	122-080	M	13.8	2	15.8	13.3

SPIGOT x GASKET ADAPTER



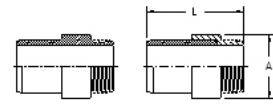
SIZE	PART #	STYLE	A	B	L	WT
1½	130-015	M	2.7	1.1	4.5	0.3
2	130-020	M	3.3	1.4	4.9	0.5
2½	130-025	M	3.8	2	5.3	0.7
3	130-030	M	4.5	2	5.8	0.9
4	130-040	M	5.9	2.3	6.4	1.7
5	130-050	M	7	3	9.1	3
6	130-060	M	8.3	3	8	3.8

LINE COUPLING (GxG) (w/ Stop)



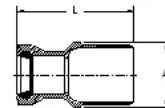
SIZE	PART #	STYLE	A	L	WT
1½	108-015	M	2.8	6.5	0.5
2	108-020	M	3.3	6.7	0.7
2½	108-025	M	3.8	7	0.9
3	108-030	M	4.5	7.2	1.3
4	108-040	M	5.9	10.6	2.7
6	108-060	M	8.3	9.3	5.6
8	108-080	M	10.4	11.1	10.3
10	108-100	C	11.5	11.5	14
12	108-120	C	12	12	22

PE (Plain End) x MALE NPT ADAPTER



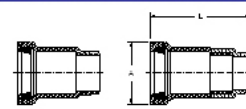
SIZE	PART #	STYLE	A	L	WT
1½	133-015	Fab	2.2	5.2	0.3
2	133-020	M	2.6	4.1	0.3
2½	133-025	Fab	3.3	6.3	0.8
3	133-030	Fab	4	6.9	1.3
4	133-040	Fab	5	7.5	2
6	133-060	Fab	7.3	9.8	5.3

REDUCER S.E.B. (SxG)



SIZE	PART #	STYLE	A	L	WT
2 x 1½	116-215	M	2.8	7	0.5
2½ x 2	116-252	M	3.4	7	0.8
3 x 2	116-320	M	3.7	7.9	0.9
3 x 2½	116-325	M	4.2	7.4	1.3
4 x 2	116-420	M	4.7	10	1.5
4 x 2½	116-425	M	5	8.3	1.8
4 x 3	116-430	M	4.7	10.1	1.9
5 x 4	116-540	M	5.8	7.8	3
6 x 3	116-630	M	7	9	3.5
6 x 4	116-640	M	6.9	8	2.7
6 x 5	116-650	Fab	7	10	4.9
8 x 6	116-860	M	9	9.3	5.8

GASKET x MALE NPT ADAPTER



Size on size and reducing sizes of these adapters also available in HARCO Ductile Iron. Do not use joint restraint.

SIZE	PART #	STYLE	A	L	WT
1½	131-015	M	2.8	4.3	0.5
2	131-020	M	3.3	4.6	0.5
2½	131-025	M	3.8	4.8	1.2
3	131-030	M	4.5	5	1.5
4	131-040	Fab	5.9	8.5	2.8
5	131-050	M			3
6	131-060	Fab	8.3	10.9	10.3

Style Legend:

A - Assembled using one piece molded fitting with MIPT x Gasketed adapter or Spigot adapter for branch or Bell.

C - Manufactured by Certain-Teed Corporation

M - One piece molded

FB - Flo style one piece molded, reduced by use of flush style thread x thread bushing

HB - Harco style one piece molded, reduced by use of flush style thread x thread bushing

Fab - Fabricated using SCH-40 PVC fittings with HARCO Spigot adapters (or pipe) solvent welded together.

OTHER SIZES AVAILABLE
PLEASE SEE PRICE LIST P0611



THE HARRINGTON CORPORATION
P.O. Box 10335 • Lynchburg, VA 24506-0335
Phone: (434) 845-7094 Fax: (434) 845-8562

sales@harcofittings.com
www.harcofittings.com

HARCO

FITTINGS

Product Sheet

PVC Pressure Repair Coupling



IPS PVC
PRESSURE

Gasketed
Joint

Knock-On
Style for
Quick
Installation

No Threads
No Bolts
No Glue

Makes PVC
Pipe Repairs
Easy!

After
Installation,
Water
Pressure
Can Resume
Immediately

HARCO Knock-On Style Gasketed Fitting

Make PVC Pipe Repairs Easy!

The Harco "Knock-On" repair coupling is the best repair coupling available on the market today. Harco's unique gasket design allows for travel in both directions, making it as easy to slide the coupling back onto the existing pipe as it was to slide it onto the repair section.

The square face bell design allows for a larger object, such as a bar or wood block, to be placed against the fitting in order to knock the repair coupling into place. All Harco repair couplings are pressure rated to 200 p.s.i. and, with no bolts, nothing to tighten to engage the gasket, no glue and no set time before backfilling can begin, the repair coupling is completed as soon as it is installed. You can immediately turn the water pressure back on and resume normal operations.

The combination of all these features makes the Harco "Knock-On" repair coupling the

simplest and quickest repair coupling on the market today. When the water is turned off time is of the utmost importance, so use Harco repair couplings and get your system running again immediately.

Product Data

SIZE	PART NUMBER	CTN. QTY.	CTN. WT.
1½	109-015	24	12
2	109-020	24	19
2½	109-025	24	27
3	109-030	24	38
4	109-040	12	40
5	109-050	6	26
6	109-060	6	40
8	109-080	4	53
10	109-100	1	14
12	109-120	1	22

10" and 12" manufactured by Certain-Teed Corporation.



HARRINGTON CORPORATION • P.O. BOX 10335 • LYNCHBURG, VIRGINIA 24506

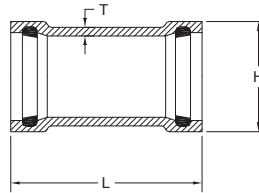
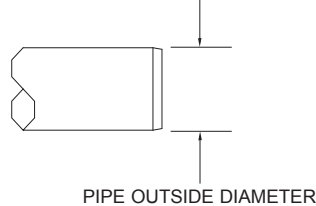
PHONE: 434-845-7094 • FAX: 434-845-8562 • E-MAIL: sales@harcofittings.com • WEB: www.harcofittings.com

PF103-111610

PVC Pressure Repair Coupling

Product Sheet

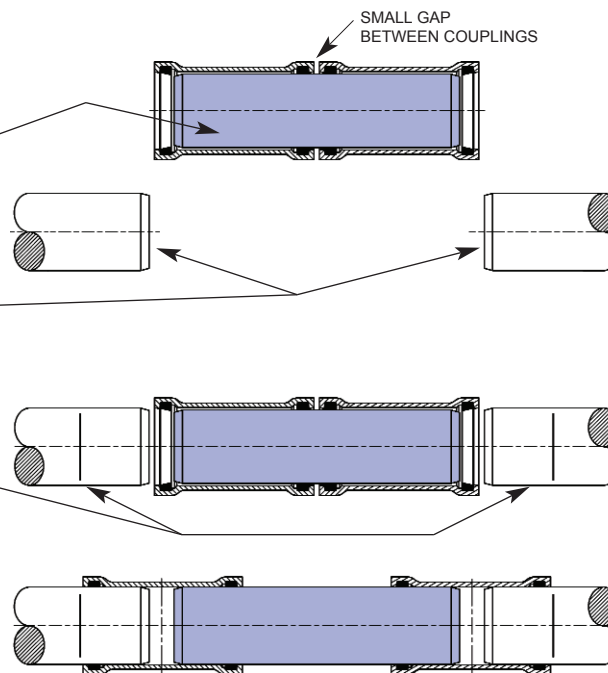
Weights and Dimensions



SIZE	PRODUCT #	H	L	T	WEIGHT	PIPE O.D.
1½	109-015	2.8	6.5	.107	0.5	1.900
2	109-020	3.3	7.8	.133	0.7	2.375
2½	109-025	3.8	8.4	.158	0.9	2.875
3	109-030	4.5	9.0	.191	1.3	3.500
4	109-040	5.9	10.6	.246	2.7	4.500
5	109-050	6.9	11.2	.300	4.1	5.560
6	109-060	8.3	11.6	.358	5.6	6.625
8	109-080	10.5	11.1	.463	10.3	8.625
10	109-100	12.4	11.5	.725	14.0	10.750
12	109-120	14.6	12.0	.835	22.0	12.750

Installation Instructions

1. Cut out and remove damaged section of pipe as required.
2. Cut and bevel new pipe to fit the gap of the repair section, accounting for the overhang of the gasket race of the repair coupling as shown.
3. Using generous amounts of pipe lube, install repair couplings on pipe section as shown.
4. Bevel ends of pipe in ground. Apply pipe lube to pipe ends and coupling gaskets.
5. Mark pipe to use as guide to center coupling over joint.
6. Align and slide repair couplings over the original pipe to marks centering the couplings over the cut.



NOTES:

- Gap between ends of pipe will have no effect on system performance.
- In systems using mechanical joint restraint or glue joint fittings, care must be taken with repairs in the restrained lengths to see that proper thrust restraint is maintained.

**IPS PVC
PRESSURE**

**Gasketed
Joint**

**Knock-On
Style for
Quick
Installation**

**No Threads
No Bolts
No Glue**

**Makes PVC
Pipe Repairs
Easy!**

**After
Installation,
Water
Pressure
Can Resume
Immediately**



HARRINGTON CORPORATION • P.O. BOX 10335 • LYNCHBURG, VIRGINIA 24506

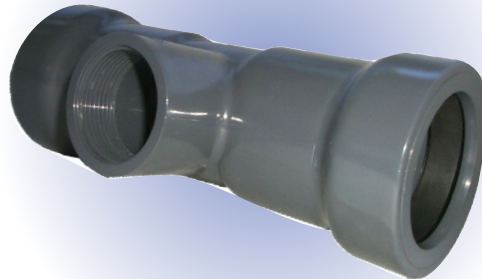
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PF103-111610

HARCO

FITTINGS

PVC ACME SERVICE TEE



**PVC
PRESSURE**

**315 psi Long
Term
Pressure
Rating**

**Gasketed
Mainline
Bells**

**Straight
Thread,
O-Ring Seal
Branch
Outlet**

**Faster
Installation**

**No Teflon
Tape or
Paste**

**Eliminates
Split Threads**

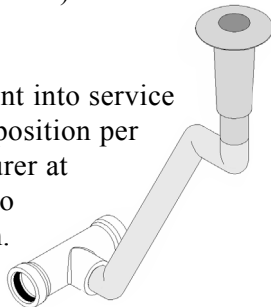
Gasket x Gasket x Acme, O-Ring

Application

For use with swing joints having compatible inlet (threads and O-ring for Rainbird/Toro/Hunter Acme standard).

Installation

Fully thread swing joint into service tee. Back off to final position per swing joint manufacturer at least $\frac{1}{4}$ rotation, but no more than $1\frac{1}{4}$ rotation.



HARCO gasketed swing joint tee with O-ring seal outlet.

Swing joint supplied by others.

Straight (non-tapered) Acme thread connections.

O-ring pressure seal.

Suggested Specifications

Service tees for swing joints shall be push-on gasketed and molded in one piece as manufactured by The Harrington Corporation of Lynchburg, Virginia. Branch outlets shall have a straight thread and an O-ring sealing surface compatible with the O-ring joint inlet of the mating swing joint. Fittings shall meet the requirements of a 315 psi long term pressure rating per ASTM D3139, per ASTM F1970, and per the methods of AWWA C907.

Product Information

SIZE	PART NUMBER	CTN. QTY.	CTN. WT.
2 x 1	153-204	16	17
2 x 1 $\frac{1}{4}$	153-205	16	17
2 x 1 $\frac{1}{2}$	153-206	16	17
2 $\frac{1}{2}$ x 1	153-254	16	29
2 $\frac{1}{2}$ x 1 $\frac{1}{4}$	153-255	16	29
2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	153-256	16	24
3 x 1	153-304	16	42
3 x 1 $\frac{1}{4}$	153-305	16	42
3 x 1 $\frac{1}{2}$	153-306	16	42

Outlet fits all brands of single O-Ring ACME inlet swing joints. 2", 2 $\frac{1}{2}$ ", 3" and 4" ACME service tees available in HARCO Ductile Iron.



HARRINGTON CORPORATION • P.O. BOX 10335 • LYNCHBURG, VIRGINIA 24506

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PF107-071304

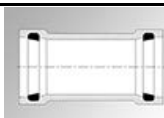
HARCO PRICE LIST

PVC Gasketed Fittings for PVC IPS Pressure Pipe

Short Form Specifications - PVC fittings shall be gasketed push joint for IPS diameter PVC pipe. Fittings shall be pressure rated 200 psi and SDR 21. PVC material shall be cell class 12454 per ASTM D1784. Joints shall be 200 psi rated complying with ASTM D3139 and NSF 14 listed. Gaskets shall be SBR per ASTM F477. Fittings shall be NSF61 listed for potable water use.

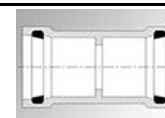
FREIGHT — F.O.B. Lynchburg, Virginia

REPAIR COUPLING (No Stop) Knock-On Style (G x G)



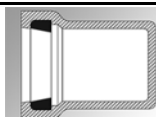
SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	109-015	24	12	M	\$17.80
2	109-020	24	19	M	\$19.53
2½	109-025	24	26	M	\$21.48
3	109-030	24	38	M	\$26.87
4	109-040	12	40	M	\$48.34
5	109-050	6	26	M	\$78.93
6	109-060	6	41	M	\$84.96
8	109-080	4	39	M	\$175.00
10	109-100	1	14	C	\$324.08
12	109-120	1	22	C	\$478.57

LINE COUPLING (With Stop) (G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	108-015	24	127	M	\$16.14
2	108-020	24	17	M	\$16.45
2½	108-025	24	22	M	\$17.80
3	108-030	24	38	M	\$22.49
4	108-040	12	39	M	\$40.96
6	108-060	6	42	M	\$62.45
8	108-080	6	62	M	\$135.99
10	108-100	1	11	C	\$180.09
12	108-120	1	17	C	\$235.13

CAP (Gasket)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	149-015	1	0.5	Fab	\$18.81
2	149-020	12	6	M	\$20.80
2½	149-025	1	1	Fab	\$32.27
3	149-030	1	1.4	Fab	\$34.58
4	149-040	1	3	Fab	\$71.20
5	149-050	1	4	Fab	\$126.96
6	149-060	1	7	Fab	\$162.24

PLUG (Spigot)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	144-015	1	0.2	Fab	\$15.49
2	144-020	12	2	M	\$15.49
2½	144-025	12	9	M	\$15.79
3	144-030	12	5	M	\$20.19
4	144-040	12	10	M	\$43.02
6	144-060	12	28	M	\$61.12
8	144-080	4	15	M	\$103.75

- These fittings are for use with PVC pipe made to ASTM D2241, ASTM D1785, ASTM D2665 and any other PVC pipe made to IPS diameters.

- The fitting bodies and gaskets are made in the United States from raw materials made in the United States.

STYLE LEGEND:

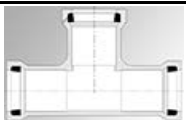
C	Machined from extruded stock as manufactured by Certain-Teed Corp
Fab	Fabricated using Sch40 PVC fitting with HARCO Spigot Adapters (or pipe) solvent-welded together (See pressure rating warning on Page 5)
M	One-Piece Molded

HARCO PRICE LIST

PVC Gasketed Fittings for PVC IPS Pressure Pipe

TEE

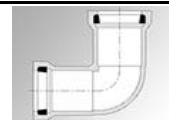
(G x G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½ x 1½	112-150	12	12	M	\$40.66
2 x 1½	112-215	12	15	M	\$48.04
2 x 2	112-220	12	18	M	\$48.04
2½ x 1½	112-251	1	3	A	\$53.40
2½ x 2	112-252	12	21	M	\$53.40
2½ x 2½	112-255	12	22	M	\$53.40
3 x 1½	112-315	1	3	A	\$56.43
3 x 2	112-320	12	32	M	\$56.43
3 x 2½	112-325	12	38	M	\$56.43
3 x 3	112-330	12	34	M	\$56.43
4 x 2	112-420	12	56	M	\$86.98
4 x 2½	112-425	12	57	M	\$86.98
4 x 3	112-430	12	59	M	\$86.98
4 x 4	112-440	21	67	M	\$88.57
5 x 5	112-550	2	22	Fab	\$194.80
6 x 2	112-620	1	7	A	\$194.80
6 x 3	112-630	4	33	M	\$194.80
6 x 4	112-640	4	43	M	\$194.80
6 x 6	112-660	4	48	M	\$194.80
8 x 4	112-840	2	37	M	\$328.78
8 x 6	112-860	2	39	M	\$336.50
8 x 8	112-880	2	43	M	\$344.21

90° BEND

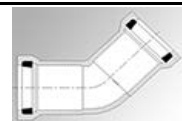
(G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	118-015	12	7	M	\$35.58
2	118-020	12	10	M	\$25.55
2½	118-025	12	15	M	\$29.21
3	118-030	12	22	M	\$36.95
4	118-040	12	46	M	\$63.13
5	118-050	12	46	Fab	\$115.88
6	118-060	4	36	M	\$115.88
8	118-080	4	64	M	\$226.01

45° BEND

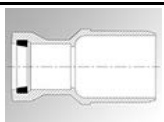
(G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	122-015	1	0.9	Fab	\$35.58
2	122-020	12	10	M	\$25.55
2½	122-025	12	14	M	\$29.21
3	122-030	12	20	M	\$36.95
4	122-040	12	41	M	\$63.13
6	122-060	4	33	M	\$115.88
8	122-080	4	53	M	\$226.01

REDUCER - SEB

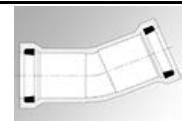
(S x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
2 x 1½	116-215	12	8	M	\$22.82
2½ x 2	116-252	12	10	M	\$26.22
3 x 2	116-320	12	12	M	\$31.26
3 x 2½	116-325	12	16	M	\$32.92
4 x 2	116-420	12	18	M	\$36.28
4 x 2½	116-425	12	22	M	\$37.99
4 x 3	116-430	12	23	M	\$37.99
5 x 4	116-540	1	4	Fab	\$77.22
6 x 3	116-630	4	14	M	\$68.52
6 x 4	116-640	12	33	M	\$104.47
6 x 5	116-650	1	4	M	\$125.25
8 x 6	116-860	4	22	M	\$177.35

22½° BEND

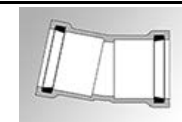
(G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
2	124-020	1	1	Fab	\$89.30
3	124-030	1	3	Fab	\$123.63
4	124-040	1	5	Fab	\$165.74
6	124-060	1	11	Fab	\$217.11

11¼° BEND

(G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
2	126-020	1	1	Fab	\$70.12
3	126-030	1	3	Fab	\$103.42
4	126-040	1	5	Fab	\$127.05
6	126-060	1	11	Fab	\$202.20

STYLE LEGEND:

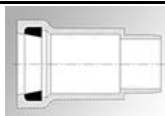
A	Assembled using one-piece molded fitting with MIPT x Gasket Adapter or Spigot Adapter for branch or bell
Fab	Fabricated using Sch40 PVC fitting with HARCO Spigot Adapters (or pipe) solvent-welded together (See pressure rating warning on Page 5)
M	One-Piece Molded

HARCO PRICE LIST

PVC Gasketed Fittings for PVC IPS Pressure Pipe

GASKET x SPIGOT ADAPTER

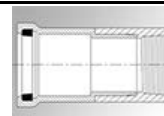
(G x S)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	130-015	12	4	M	\$18.47
2	130-020	12	6	M	\$18.81
2½	130-025	12	9	M	\$21.48
3	130-030	12	13	M	\$26.53
4	130-040	1	2	M	\$47.39
5	130-050	1	3	M	\$69.19
6	130-060	1	4	M	\$69.19

GASKET x FEMALE NPT ADAPTER

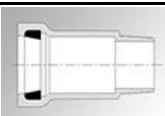
(G x FNPT)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	132-015	1	0.5	Fab	\$19.53
2	132-020	1	0.7	Fab	\$21.48
2½	132-025	1	1.2	Fab	\$27.53
3	132-030	1	1.5	Fab	\$40.29
4	132-040	1	3	Fab	\$53.07
5	132-050	1	5	Fab	\$100.76
6	132-060	1	6	Fab	\$145.74

GASKET x MALE NPT ADAPTER

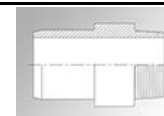
(G x MNPT)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	131-015	12	6	M	\$23.19
2	131-020	12	6	M	\$25.22
2½	131-025	12	14	M	\$29.86
3	131-030	12	18	M	\$38.63
4	131-040	6	17	Fab	\$62.13
5	131-050	6	17	Fab	\$121.28
6	131-060	6	41	Fab	\$121.28

PLAIN END x MALE NPT ADAPTER

(PE x MNPT)

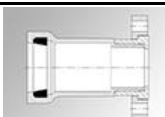


SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	133-015	12	3	Fab	\$12.74
2	133-020	12	3	M	\$17.12
2½	133-025	12	9	Fab	\$17.80
3	133-030	12	15	Fab	\$22.49
4	133-040	6	12	Fab	\$33.25
6	133-060	4	21	Fab	\$70.20

1½" - 4" adapters are also available in HARCO Ductile Iron

GASKET x FLANGE ADAPTER

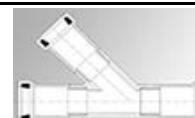
(G x F)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	154-015	1	0.8	Fab	\$35.27
2	154-020	1	1.2	Fab	\$33.60
2½	154-025	1	1.7	Fab	\$71.20
3	154-030	1	2.4	Fab	\$68.52
4	154-040	1	6	Fab	\$146.76
6	154-060	1	12	Fab	\$233.09
8	154-080	1	20	Fab	\$329.82

NON-PRESSURE WYE

(G x G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
3 x 3	101-0303	1	5	Fab	\$75.08
4 x 3	101-0403	4	15	M	\$95.24
4 x 4	101-0404	4	18.6	M	\$150.12
6 x 3	101-0603	4	27	M	\$166.19

STYLE LEGEND:

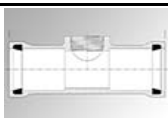
Fab	Fabricated using Sch40 PVC fitting with HARCO Spigot Adapters (or pipe) solvent-welded together (See pressure rating warning on Page 5)
M	One-Piece Molded

HARCO PRICE LIST

PVC Gasketed Fittings for PVC IPS Pressure Pipe

SERVICE TEE

Tapered NPT Thread
(G x G x FNPT)

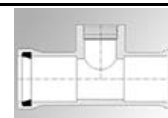


SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½ x ¾	151-153	1	0.9	HB	\$36.03
1½ x 1	151-154	1	0.9	HB	\$36.03
1½ x 1¼	151-155	1	0.9	M	\$36.03
2 x ½	151-202	12	16	HB	\$28.09
2 x ¾	151-203	12	18	M	\$28.09
2 x 1	151-204	12	18	M	\$28.09
2 x 1¼	151-205	12	20	M	\$28.09
2 x 1½	151-206	12	20	M	\$28.09
2½ x ½	151-252	12	20	HB	\$37.55
2½ x ¾	151-253	12	20	HB	\$37.55
2½ x 1	151-254	12	27	M	\$37.55
2½ x 1¼	151-255	12	26	M	\$37.55
2½ x 1½	151-256	12	28	M	\$37.55
2½ x 2	151-258	12	25	M	\$37.55
3 x ½	151-302	12	36	HB	\$50.39
3 x ¾	151-303	12	33	HB	\$50.39
3 x 1	151-304	12	32	M	\$50.39
3 x 1¼	151-305	12	31	M	\$50.39
3 x 1½	151-306	12	31	M	\$50.39
3 x 2	151-308	12	30	M	\$56.49
4 x ½	151-402	8	32	HB	\$65.33
4 x ¾	151-403	8	32	HB	\$65.33
4 x 1	151-404	8	31	M	\$65.33
4 x 1¼	151-405	8	31	M	\$65.33
4 x 1½	151-406	8	31	M	\$65.33
4 x 2	151-408	8	30	M	\$65.33
6 x ½	151-602	6	45	HB	\$83.97
6 x ¾	151-603	6	37	HB	\$83.97
6 x 1	151-604	6	37	HB	\$83.97
6 x 1¼	151-605	6	43	M	\$83.97
6 x 1½	151-606	6	43	M	\$83.97
6 x 2	151-608	6	42	M	\$83.97

Last digit of Part Number denotes tap size in ¼" increments.
8", 10" and 12" Service Tees available in HARCO Ductile Iron.

ACME SERVICE TEE

315psi Pressure Rated
(G x G x ACME)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
2 x 1	153-204	16	17	M	\$28.09
2 x 1¼	153-205	16	17	M	\$28.09
2 x 1½	153-206	16	17	M	\$28.09
2½ x 1	153-254	16	35	M	\$37.55
2½ x 1¼	153-255	16	29	M	\$37.55
2½ x 1½	153-256	16	24	M	\$37.55
3 x 1	153-304	16	44	M	\$50.39
3 x 1¼	153-305	16	43	M	\$50.39
3 x 1½	153-306	16	42	M	\$50.39

Outlet fits all brands of single O-Ring ACME inlet swing joints.
2", 2½", 3" and 4" ACME service tees and ACME x NPT adapters are available in HARCO Ductile Iron.

ACME S/O TAPT CAP

315psi Pressure Rated
(H x ACME)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
2 x 1½	147-206	16	13	M	\$11.57
2½ x 1½	147-256	16	19	M	\$17.72

STYLE LEGEND:

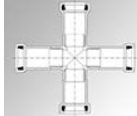
HB	One-Piece Molded, with outlet reduced by use of thread x thread bushing
M	One-Piece Molded

HARCO PRICE LIST

PVC Gasketed Fittings for PVC IPS Pressure Pipe

CROSS

(G x G x G x G)



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	172-015	1	1.7	Fab	\$71.86
2	172-020	1	2.6	Fab	\$87.35
2½	172-025	1	4	Fab	\$128.96
3	172-030	1	5.3	Fab	\$142.75
4	172-040	1	7	Fab	\$322.40

WARNING: Frequent or severe cyclical pressure surges (WATER HAMMER) can destroy PVC fittings. Where such conditions may exist, HARCO DEEP BELL DUCTILE IRON FITTINGS for IPS size PVC pipe should be considered. HARCO DEEP BELL DUCTILE IRON FITTINGS for IPS diameters are available in sizes 1½" through 12".

Fab Style: These fittings use Sch 40 PVC fittings. Sch 40 PVC fittings do not have a long term pressure rating. See section 6.3.2 of ASTM D2466. Use of these fittings in pressure systems is at user's risk.

NOTE: The use of anything but properly designed and installed thrust blocks will reduce the life of plastic fittings. Thrust blocks must be of poured concrete only and sized for the soil conditions. Joint restraint products are available.

REPLACEMENT HARCO PRESSURE GASKET



SIZE	PART NUMBER	CTN QTY	CTN WT	STYLE	PRICE
1½	195-015	1	0.1	M	\$4.04
2	195-020	1	0.1	M	\$4.39
2½	195-025	1	0.1	M	\$5.72
3	195-030	1	0.1	M	\$8.04
4	195-040	1	0.2	M	\$11.40
6	195-060	1	0.3	M	\$15.12
8	195-080	1	0.3	M	\$18.47

Nitrile gaskets available for oil resistance; call for prices and availability

STYLE LEGEND:

Fab	Fabricated using Sch40 PVC fitting with HARCO Spigot Adapters (or pipe) solvent-welded together (See pressure rating warning on Page 5)
M	One-Piece Molded

PVC DRAIN BASINS

Fabricated Drainage Products Brochure	.81
Fabricated Drainage Products Price List	.85

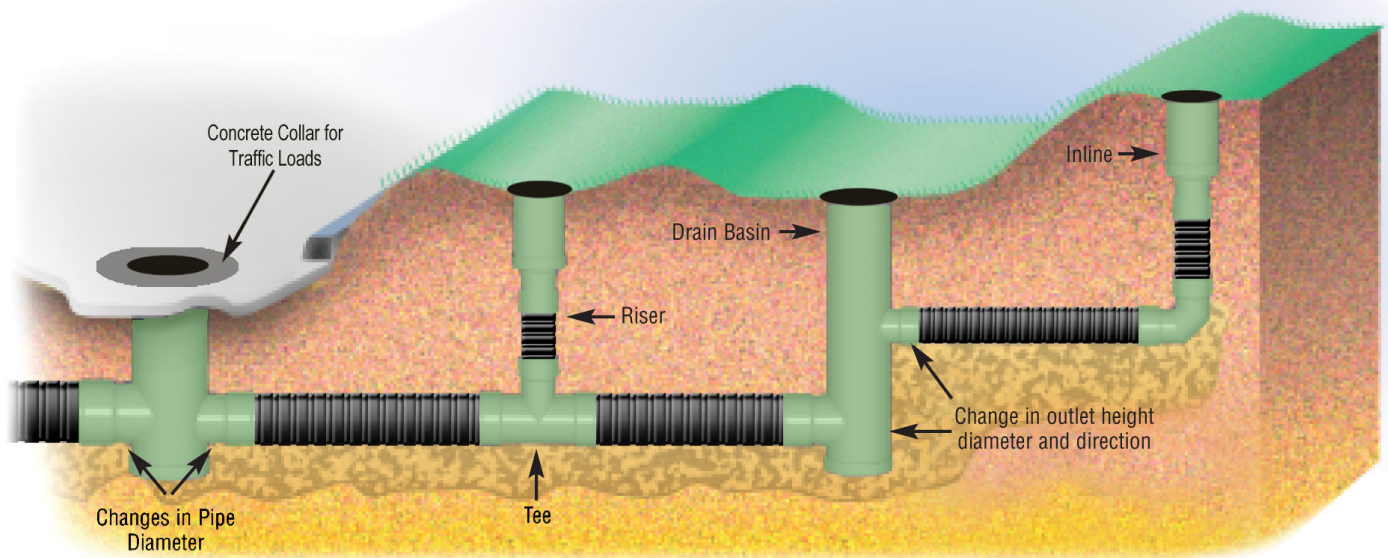




Fabricated Drainage Products



Complete Drainage System



Inline Drains are used...

- At the beginning of a drain line
- To add a new water inlet to an existing drain line using a riser pipe and tee
- As a cleanout access / inspection port for drainage system

Drain Basins are used...

- As a junction box when drainage system inlets / outlets change diameter, change pipe type, change elevation, change direction, and allows for multiple inlets or outlets in one structure
- For a water inlet and sediment collection point entering a drainage system

HARCO Surface Drainage Structures are the perfect choice for:

- Commercial Developments
- Schools and Sports Complexes
- Roadways and Highways
- Parking lots
- Government Installations
- Parks and Recreation Areas
- Industrial Parks
- Golf Courses
- Residential Developments

Economical and Durable

HARCO surface drainage structures, including drain basins and inline drains, are manufactured from PVC pipe stock utilizing a thermo-molding process to ensure consistent watertight seal throughout the structure body and the outlet stubs. The raw material used to manufacture this PVC pipe stock shall conform to ASTM D1784 cell class 12454. These heavy-duty PVC structures are abrasion resistant and virtually immune to most types of corrosion.

Inlet / Outlet Adapters

The outlet stubs for HARCO surface drainage structures are manufactured from PVC pipe stock utilizing a thermo-molding process to ensure a tight pipe-to-structure fit that can meet or exceed the pressure requirements of the ASTM D3212 standard for connections joining drainage pipes utilizing flexible elastomeric seals conforming to ASTM F477.

HARCO can provide connections to most corrugated and smooth-wall plastic pipe types/brands.

Made to Order

Every drainage system is different. Whether small or large, your drainage system may require adapting to multiple pipe types and diameters, changes in direction and elevation.

HARCO Drain Basins are custom-built in a timely manner for each project, ensuring you can meet the design and timeline requirements for your project.

HARCO plastic drainage structures should be installed following ASTM D2321 installation guidelines accepted for backfill, compaction and installation of plastic drainage pipes.



Special Use Structures/Field Tap

Snout Drainage Structure

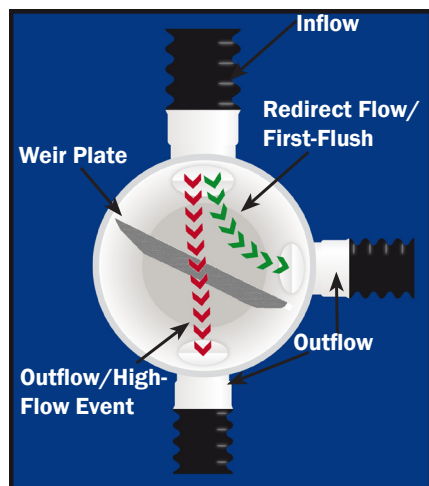
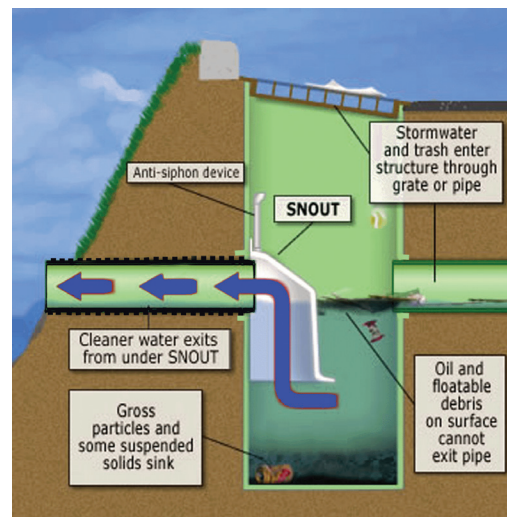
The HARCO Snout-equipped Drainage Structure is a custom drain basin with a plastic composite hood attached to the wall of the drain basin covering the outlet.

This simple yet effective cover prevents floating debris, oils, and sediment from exiting the basin where it remains trapped and can easily be removed.

The placement of the Snout cover over the basin outlet forces water to exit the basin outlet from the clear zone of water below the floating debris or oils, and creates environment conducive for many contaminants and debris to settle to the bottom of the basin as well.

The HARCO Snout Drainage Structure represents a cost-effective method for capture and retention of storm water pollutants.

Snouts are factory-installed and available for 18", 24", and 30" diameter HARCO drain basins.



Weir Drainage Structure

The HARCO Weir-equipped Drainage Structure is a custom drain basin with a stainless steel weir installed at the factory by HARCO, made to customer specifications.

Weir Drainage Structures are perfect for diverting water to preferred outlet within a HARCO drain basin, and also to restrict the flow of water.

These weir-equipped HARCO drain basins are widely utilized at the entrance and / or the exit of an underground storm water treatment system or an underground storm water retention / detention system.

These custom stainless steel weirs are available for 24", 30", and 36" diameter HARCO drain basins.

The customer is responsible for determining weir orientation, weir height, and orifice details for each custom weir drainage structure.

HARCO Field Tap

The HARCO Field Tap allows you the flexibility to add an inlet or outlet to your HARCO drain basin in-the-field when that unexpected additional line is identified, or if the exact location of that line was not able to be determined prior to basin installation.

HARCO Field Taps are available in 4" through 18" diameters. For installation, a drain basin 2 sizes larger than the HARCO Field Tap outlet is required.

Examples:

- 8" HARCO Field Tap requires a 12" basin
- 12" HARCO Field Tap requires a 18" basin
- 18" HARCO Field Tap requires a 30" basin

Kit Includes:

- An adhesive-backed cutting template
- Hole Gasket
- Bell x spigot adaptor (made to fit pipe you are connecting to)

Equipment Needed:

- Standard drill / bits
- Jigsaw
- Pipe lubricant



HARCO Grates and Covers

HARCO grates and covers are designed specifically to fit HARCO surface drainage structures. These castings are manufactured from metal conforming to ASTM A536 grade 80-55-06 for ductile iron.

HARCO provides a wide selection of ductile iron castings including:

- Light duty drop-in grates for non-traffic / turf applications – designed primarily to fit 6" – 30" corrugated plastic pipes
- Light duty domed / beehive grates fits 6" – 30" structures (6", 8" and 10" domed grates are one-piece, 12"–30" are grate and frame sets)
- Round H10 load rated grate and frame assemblies for parking lots, pedestrian, and medium duty loads (.5 inch vane spacing conforms to ADA requirements) fits 8" – 30" structures (8" and 10" are 1-piece grates that are light duty only)
- Round H25 load rated grate and frame assemblies for traffic or heavy duty applications fits 12" – 36" structures
- Round H25 load rated solid cover and frame assemblies for maintenance access or heavy duty applications – fits 12" – 36" structures
- Square hinged H10 and H25 load rated grates and frames and solid covers and frames fit 12" and 15" structures
- H25 load rated 2'x2' square Traffic grate and frame assemblies, and 2' x 2' Curb Inlet grate, frame, and hood assemblies fits 12" – 30" structures
- H25 load rated 2'x3' rectangular Traffic grate and frame assemblies, and 2'x3' Curb Inlet grate, frame, and hood assemblies fits 18" – 36" structures

Light Duty Drop-In Grate



Light Duty Domed/Beehive Grate



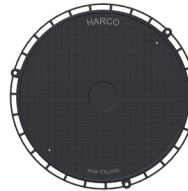
Round H25 Load Rated Grate



Round H10 Load Rated Grate



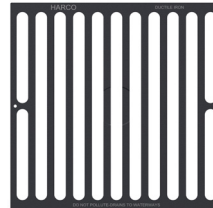
Round H25 Load Rated Solid Cover



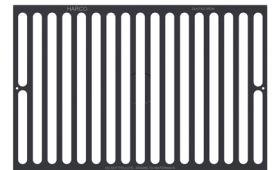
Square-Hinged Grates/Covers



2' x 2' Square Traffic Grate



2' x 3' Rectangular Traffic Grate



Curb Inlet Grate Assembly



THE HARRINGTON CORPORATION
P.O. Box 10335 ♦ Lynchburg, VA 24506-0335
Phone: (434) 845-7094 Fax: (434) 845-8562

customerservice@harcofittings.com
www.harcofittings.com

PF161-061316

HARCO PRICE LIST

FABRICATED DRAINAGE PRODUCTS

CUSTOM DRAIN BASIN

With Round Grate

1, 2, 3, 4, 5



BASIN DIAMETER	OUTLET SIZE	PART NUMBER	LIST PRICE
(Overall Height 5' or Less)			
8"	4" - 8"	92-1008	\$350.00
10"	4" - 10"	92-1010	\$480.00
12"	4" - 12"	92-1012 *	\$703.00
15"	4" - 15"	92-1015 *	\$1,007.00
18"	4" - 18"	92-1018	\$1,180.00
24"	4" - 24"	92-1024	\$1,480.00
30"	4" - 30"	92-1030	\$2,385.00
36"	4" - 30"	92-1036	Call
(Overall Height >5' to 10')			
8"	4" - 8"	92-1108	\$425.00
10"	4" - 10"	92-1110	\$591.00
12"	4" - 12"	92-1112 *	\$905.00
15"	4" - 15"	92-1115 *	\$1,149.00
18"	4" - 18"	92-1118	\$1,327.00
24"	4" - 24"	92-1124	\$1,657.00
30"	4" - 30"	92-1130	\$2,909.00
36"	4" - 30"	92-1136	Call

* Optional Round or Square-Hinged Grate

INLINE DRAIN

With Round Grate

1, 2, 4, 5



INLINE DIAMETER	OUTLET SIZE	PART NUMBER	LIST PRICE
6"	4' - 6"	93-aa06xx	\$93.00
8"	4" - 8"	93-aa08xx	\$107.00
10"	4" - 10"	93-aa10xx	\$135.00
12"	4" - 12"	93-aa12xx *	\$428.00
15"	4" - 15"	93-aa15xx *	\$505.00
18"	4" - 18"	93-aa18xx	\$613.00
24"	4" - 24"	93-aa24xx	\$1,141.00
30"	4" - 30"	93-aa30xx	\$1,379.00
36"	4" - 36"	93-aa36xx	Call

* Optional Round or Square-Hinged Grate

" xx " = Outlet Diameter Size (e.g. 04, 06, 08, 10, 12, etc.)

" aa " = Outlet Type Code:

10 - HDPE Hub
20 - F949
24 - SDR35 Swr Hub
25 - SDR35 Swr Gsk
26 - SDR26 Swr Hub
27 - SDR26 Swr Gsk
34 - C900 Hub
36 - C900 Gsk
40 - IPS Hub
42 - IPS Gsk

Ex. 12" Inline Drain for HDPE hub with 8" outlet - Part #93-101208

NOTES:

- Prices include H10 pedestrian, H25 standard, H25 solid round cover / grate with frame for 12" diameter or larger structures, or one-piece light duty grate or cover for 8" and 10" diameter structures. (H10 pedestrian grates available 12" through 30" only).
- Additional charges for substituting Domed Grate and/or adding locking options, see adders Page 3. Call for Bronze Grate price adder.
- Basins taller than 8'-0" (96") are provided in 2 pieces and require field assembly.
- Prices include F477 pipe gaskets when connecting to corrugated HDPE pipe 4" thru 30" diameters.
- Pipe lube is required for all gasketed pipe connections to HARCO drain basins and inline drains. Pipe lube is not supplied by HARCO. Customer should acquire required pipe lube from local supply house or the pipe manufacturer.

Terms and Conditions:

Freight Policy

For HARCO Products shown on this price sheet: Freight prepaid on orders \$2500 net price and over, F.O.B. HARCO facility, delivered within the continental U.S.

Return Policy

- Due to the fact that HARCO drainage structures are custom made, they are Non-cancelable and Non-returnable.
- All return requests of grates must be pre-approved by HARCO management.
- A 25% restocking fee applies to approved returns.
- All return freight to be paid by customer.

HARCO PRICE LIST

FABRICATED DRAINAGE PRODUCTS

CUSTOM DRAIN BASIN			
With 2x2 Square Traffic Grate		1, 2, 4, 5	
BASIN SIZE	OUTLET SIZE	PART NUMBER	
(Overall Height 5' or Less)			
12"	4" - 12"	92-1212	\$764.00
15"	4" - 15"	92-1215	\$1,066.00
18"	4" - 18"	92-1218	\$1,245.00
24"	4" - 24"	92-1224	\$1,543.00
30"	4" - 30"	92-1230	\$2,446.00
(Overall Height >5' to 10')			
12"	4" - 12"	92-1312	\$967.00
15"	4" - 15"	92-1315	\$1,198.00
18"	4" - 18"	92-1318	\$1,392.00
24"	4" - 24"	92-1324	\$1,719.00
30"	4" - 30"	92-1330	\$2,971.00

CUSTOM DRAIN BASIN			
With 2x2 Square Curb Inlet Grate			
1, 2, 3, 4, 5			
BASIN SIZE	OUTLET SIZE	PART NUMBER	LIST PRICE
(Overall Height 5' or Less)			
12"	4" - 12"	92-1612	\$1,566.00
15"	4" - 15"	92-1615	\$1,693.00
18"	4" - 18"	92-1618	\$1,907.00
24"	4" - 24"	92-1624	\$2,174.00
30"	4" - 30"	92-1630	\$2,939.00
(Overall Height >5' to 10')			
12"	4" - 12"	92-1712	\$1,667.00
15"	4" - 15"	92-1715	\$1,907.00
18"	4" - 18"	92-1718	\$2,146.00
24"	4" - 24"	92-1724	\$2,463.00
30"	4" - 30"	92-1730	\$3,180.00

CUSTOM DRAIN BASIN			
With 2x3 Rectangular Traffic Grate			
1, 2, 4, 5			
BASIN SIZE	OUTLET SIZE	PART NUMBER	LIST PRICE
(Overall Height 5' or Less)			
18"	4" - 18"	92-1418	\$1,308.00
24"	4" - 24"	92-1424	\$1,606.00
30"	4" - 30"	92-1430	\$2,507.00
36"	4" - 30"	92-1436	Call
(Overall Height >5' to 10')			
18"	4" - 18"	92-1518	\$1,454.00
24"	4" - 24"	92-1524	\$1,781.00
30"	4" - 30"	92-1530	\$3,037.00
36"	4" - 30"	92-1536	Call

CUSTOM DRAIN BASIN			
With 2x3 Rectangular Curb Inlet Grate			
1, 2, 3, 4, 5			
BASIN SIZE	OUTLET SIZE	PART NUMBER	LIST PRICE
(Overall Height 5' or Less)			
18"	4" - 18"	92-1818	\$2,066.00
24"	4" - 24"	92-1824	\$2,382.00
30"	4" - 30"	92-1830	\$3,124.00
36"	4" 30"	92-1836	Call
(Overall Height >5' to 10')			
18"	4" - 18"	92-1918	\$2,347.00
24"	4" - 24"	92-1924	\$2,704.00
30"	4" - 30"	92-1930	\$3,312.00
36"	4" - 30"	92-1936	Call

NOTES:

1. Locking Grate Charges / Options, see Page 3.
2. Basins taller than 8'-0" (96") are provided in 2 pieces and require field assembly.
3. Choice of Standard, Diagonal or High Flow Grate where available.
4. Prices include F477 pipe gaskets when connecting to corrugated HDPE pipe 4" thru 30" diameters.
5. Pipe lube is required for all gasketed pipe connections to HARCO drain basins and inline drains. Pipe lube is not supplied by HARCO. Customer should acquire required pipe lube from local supply house or the pipe manufacturer.

HARCO PRICE LIST

FABRICATED DRAINAGE PRODUCTS

CUSTOM DRAIN BASIN

With Weir

(24", 30" & 36" Diameter Structures)



Call for Pricing

CUSTOM DRAIN BASIN

With Snout

(18", 24" & 30" Diameter Structures)



Call for Pricing

DROP-IN ROUND GRATE

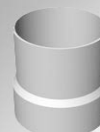


SIZE	PART NUMBER	LIST PRICE
6"	94-3806	\$48.00
8"	94-3808	\$54.00
10"	94-3810	\$71.00
12"	94-3812	\$94.00
15"	94-3815	\$145.00
18"	94-3818	\$190.00
24"	94-3824	\$331.00
30"	94-3830	\$570.00

These Ductile Iron grates are for light duty turf and landscape applications only

RISER SECTIONS

Used to add height to existing structure



SIZE	PART NUMBER	LIST PRICE
8"	92-3008x	\$25.00
10"	92-3010x	\$26.00
12"	92-3012x	\$46.00
15"	92-3015x	\$49.00
18"	92-3018x	\$56.00
24"	92-3024x	\$71.00
30"	92-3030x	\$144.00
36"	92-3036x	Call

" x " = Height in Feet; Ex. 12" Riser x two feet tall: Part #92-30122

DOMED GRATE LIST PRICE SURCHARGE



SIZE	PART NUMBER	LIST PRICE
6"	94-7206	\$25.00
8"	94-7208	\$30.00
10"	94-7210	\$35.00
12"	94-7212	\$51.00
15"	94-7215	\$101.00
18"	94-7218	\$185.00
24"	94-7224	\$226.00
30"	94-7230	\$447.00

When substituting Domed Grate for standard grate, add the Domed Grate list price surcharge to the Drain Basin or Inline Drain list price prior to discount

LOCKING GRATE LIST PRICE SURCHARGE

GRATE OPTION	PART NUMBER	LIST PRICE
1-Piece Drop-in Grate	94-51	\$30.00
Round and Square-Hinged Grate/Frame	94-50	\$80.00
Traffic and Curb Inlet Grate/Frame	94-52	\$250.00

When including the Locking Grate option, add the Locking Grate list price surcharge to the Drain Basin or Inline Drain list price prior to discount

HARCO PRICE LIST

FABRICATED DRAINAGE PRODUCTS

Minimum Angle Chart

Use for 8" - 36" Standard Drain Basins, 8" - 30" Curb Inlet Structures and Traffic Structures

Does not apply to basins with a Snout, Weir, or Branch Adders

Adaptor Size	Basin Size							
	8"	10"	12"	15"	18"	24"	30"	36"
4" - 4"	70	55	50	42	35	25	24	21
4" - 6"	75	70	55	47	40	29	25	23
4" - 8"	100	80	65	55	45	35	28	26
4" - 10"		95	75	62	52	40	32	28
4" - 12"			85	70	55	45	40	30
4" - 15"				80	65	51	44	33
4" - 18"					76	60	50	36
4" - 24"						75	62	41
4" - 30"							75	45
6" - 6"	90	75	65	55	44	33	30	26
6" - 8"	115	85	75	63	51	39	34	29
6" - 10"		105	85	70	55	43	38	32
6" - 12"			95	75	63	48	45	34
6" - 15"				86	72	56	48	37
6" - 18"					84	63	55	40
6" - 24"						77	66	46
6" - 30"							75	51
8" - 8"	165	90	80	70	55	44	35	32
8" - 10"		115	88	76	63	48	45	35
8" - 12"			102	83	70	52	48	38
8" - 15"				95	78	60	55	41
8" - 18"					90	70	60	45
8" - 24"						82	70	51
8" - 30"							80	57
10" - 10"		160	90	82	70	53	48	38
10" - 12"			115	85	75	58	50	41
10" - 15"				103	85	65	58	45
10" - 18"					97	72	65	49
10" - 24"						88	75	56
10" - 30"							85	62
12" - 12"			150	90	82	64	56	44
12" - 15"				112	87	69	60	48
12" - 18"					102	78	68	53
12" - 24"						92	80	60
12" - 30"							90	67
15" - 15"				150	90	77	69	53
15" - 18"					110	84	75	58
15" - 24"						98	85	66
15" - 30"							96	73
18" - 18"					150	90	78	63
18" - 24"						108	88	72
18" - 30"							100	82
24" - 24"						150	90	81
24" - 30"							115	91
30" - 30"							150	101

HARRINGTON CORPORATION • PO BOX 10335 • LYNCHBURG, VA 24506-0335

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PVC SCH 40 AND SCH 80 FITTINGS

Fabricated Schedule 40 DWV SWB Fittings Price List90

Fabricated Schedule 80 DWV SWB Fittings Price List97



HARCO PRICE LIST

Fabricated Schedule 40 DWV Solvent Weld Bell Fittings

Short Form Specifications - DWV Fabricated Fittings - HARCO Schedule 40 DWV fabricated fittings are tested and certified to meet or exceed all performance specifications of ASTM F-1866. Schedule 40 fittings fabricated from Schedule 40 PVC pipe, meet or exceed all performance specifications of ASTM D-1785. The basic material used in the manufacture of the pipe conforms to ASTM D-1784 with a cell classification of 12454 Type 1, Grade 1

SIZE	PART #		PRICE
WYE Hub x Hub x Hub			
6 x 4	40-010604		\$101.76
6 x 6	40-010606		\$133.88
8 x 4	40-010804		\$140.79
8 x 6	40-010806		\$179.11
8 x 8	40-010808		\$235.24
10 x 4	40-011004		\$260.85
10 x 6	40-011006		\$338.38
10 x 8	40-011008		\$400.42
10 x 10	40-011010		\$457.94
12 x 4	40-011204		\$404.01
12 x 6	40-011206		\$441.11
12 x 8	40-011208		\$523.86
12 x 10	40-011210		\$586.65
12 x 12	40-011212		\$743.90
14 x 4	40-011404	NR	\$864.39
14 x 6	40-011406	NR	\$943.41
14 x 8	40-011408	NR	\$987.64
14 x 10	40-011410	NR	\$1,085.21
14 x 12	40-011412	NR	\$1,311.44
14 x 14	40-011414	NR	\$1,426.23
16 x 4	40-011604	NR	\$1,009.95
16 x 6	40-011606	NR	\$1,111.47
16 x 8	40-011608	NR	\$1,179.43
16 x 10	40-011610	NR	\$1,374.58
16 x 12	40-011612	NR	\$1,420.83
16 x 14	40-011614	NR	\$1,522.96
16 x 16	40-011616	NR	\$1,642.01
18 x 4	40-011804	NR	\$1,331.74
18 x 6	40-011806	NR	\$1,387.77
18 x 8	40-011808	NR	\$1,443.77
18 x 10	40-011810	NR	\$1,555.67
18 x 12	40-011812	NR	\$1,611.54
18 x 14	40-011814	NR	\$1,667.54
18 x 16	40-011816	NR	\$1,813.04
18 x 18	40-011818	NR	\$1,913.73
20 x 4	40-012004	NR	\$1,598.07
20 x 6	40-012006	NR	\$1,665.34
20 x 8	40-012008	NR	\$1,732.52
20 x 10	40-012010	NR	\$1,866.70
20 x 12	40-012012	NR	\$1,933.89
20 x 14	40-012014	NR	\$1,688.25
20 x 16	40-012016	NR	\$2,175.65
20 x 18	40-012018	NR	\$2,296.53
20 x 20	40-012020	NR	\$2,367.01
24 x 4	40-012404	NR	\$2,660.97
24 x 6	40-012406	NR	\$3,115.49
24 x 8	40-012408	NR	\$3,371.34
24 x 10	40-012410	NR	\$3,409.66
24 x 12	40-012412	NR	\$3,484.68
24 x 14	40-012414	NR	\$3,511.33
24 x 16	40-012416	NR	\$3,517.62
24 x 18	40-012418	NR	\$4,991.89
24 x 20	40-012420	NR	\$5,488.69
24 x 24	40-012424	NR	\$6,049.50

SIZE	PART #		PRICE
TEE - STRAIGHT Hub x Hub x Hub			
6 x 4	40-100604		\$106.10
6 x 6	40-100606		\$112.99
8 x 4	40-100804		\$116.74
8 x 6	40-100806		\$150.76
8 x 8	40-100808		\$188.59
10 x 4	40-101004		\$237.39
10 x 6	40-101006		\$292.10
10 x 8	40-101008		\$327.71
10 x 10	40-101010		\$369.77
12 x 4	40-101204		\$320.99
12 x 6	40-101206		\$366.52
12 x 8	40-101208		\$419.21
12 x 10	40-101210		\$500.22
12 x 12	40-101212		\$614.73
14 x 4	40-101404	NR	\$728.81
14 x 6	40-101406	NR	\$830.27
14 x 8	40-101408	NR	\$874.70
14 x 10	40-101410	NR	\$1,004.22
14 x 12	40-101412	NR	\$1,198.97
14 x 14	40-101414	NR	\$1,312.82
16 x 4	40-101604	NR	\$896.76
16 x 6	40-101606	NR	\$1,001.58
16 x 8	40-101608	NR	\$1,066.94
16 x 10	40-101610	NR	\$1,261.48
16 x 12	40-101612	NR	\$1,307.71
16 x 14	40-101614	NR	\$1,409.96
16 x 16	40-101616	NR	\$1,529.96
18 x 4	40-101804	NR	\$1,219.76
18 x 6	40-101806	NR	\$1,303.50
18 x 8	40-101808	NR	\$1,362.57
18 x 10	40-101810	NR	\$1,411.45
18 x 12	40-101812	NR	\$1,422.53
18 x 14	40-101814	NR	\$1,467.15
18 x 16	40-101816	NR	\$1,525.78
18 x 18	40-101818	NR	\$1,950.33
20 x 4	40-102004	NR	\$1,463.83
20 x 6	40-102006	NR	\$1,564.52
20 x 8	40-102008	NR	\$1,631.75
20 x 10	40-102010	NR	\$1,698.91
20 x 12	40-102012	NR	\$1,712.27
20 x 14	40-102014	NR	\$1,765.92
20 x 16	40-102016	NR	\$1,830.87
20 x 18	40-102018	NR	\$2,340.37
20 x 20	40-102020	NR	\$2,421.80
24 x 4	40-102404	NR	\$2,663.47
24 x 6	40-102406	NR	\$3,284.76
24 x 8	40-102408	NR	\$3,375.56
24 x 10	40-102410	NR	\$3,409.66
24 x 12	40-102412	NR	\$3,484.68
24 x 14	40-102414	NR	\$3,511.33
24 x 16	40-102416	NR	\$3,517.86
24 x 18	40-102418	NR	\$4,844.15
24 x 20	40-102420	NR	\$5,685.32
24 x 24	40-102424	NR	\$6,768.73

SIZE	PART #		PRICE
SANITARY TEE Hub x Hub x Hub			
6 x 4	40-050604		\$128.92
8 x 4	40-050804		\$250.52
8 x 6	40-050806		\$504.59
8 x 8	40-050808		\$398.97
8 x 10	40-051010		\$1,054.95
8 x 12	40-051212		\$1,531.49
8 x 14	40-051414	NR	\$2,387.40
8 x 16	40-051616	NR	\$2,803.35
8 x 18	40-051818	NR	\$3,075.18
8 x 20	40-052020	NR	\$4,059.22
8 x 24	40-052424	NR	\$9,139.11
10 x 4	40-051004		\$408.83
10 x 6	40-051006		\$500.33
10 x 8	40-051008		\$675.22
12 x 4	40-051204		\$519.47
12 x 6	40-051206		\$539.60
12 x 8	40-051208		\$748.98
12 x 10	40-051210		\$1,264.41
14 x 4	40-051404	NR	\$897.09
14 x 6	40-051406	NR	\$1,130.92
14 x 8	40-051408	NR	\$1,273.61
14 x 10	40-051410	NR	\$1,882.19
14 x 12	40-051412	NR	\$2,221.10
16 x 4	40-051604	NR	\$1,146.91
16 x 6	40-051606	NR	\$1,213.73
16 x 8	40-051608	NR	\$1,476.62
16 x 10	40-051610	NR	\$2,096.25
16 x 12	40-051612	NR	\$2,250.26
16 x 14	40-051614	NR	\$2,438.29
18 x 4	40-051804	NR	\$1,493.19
18 x 6	40-051806	NR	\$1,574.24
18 x 8	40-051808	NR	\$1,655.40
18 x 10	40-051810	NR	\$2,100.40
18 x 12	40-051812	NR	\$2,310.44
18 x 14	40-051814	NR	\$2,541.46
18 x 16	40-051816	NR	\$2,795.62
20 x 4	40-052004	NR	\$1,791.71
20 x 6	40-052006	NR	\$1,889.13
20 x 8	40-052008	NR	\$1,986.50
20 x 10	40-052010	NR	\$2,520.41
20 x 12	40-052012	NR	\$2,772.47
20 x 14	40-052014	NR	\$3,049.72
20 x 16	40-052016	NR	\$3,354.69
20 x 18	40-052018	NR	\$3,690.17
24 x 4	40-052404	NR	\$3,278.44
24 x 6	40-052406	NR	\$3,468.43
24 x 8	40-052408	NR	\$3,584.16
24 x 10	40-052410	NR	\$4,630.16
24 x 12	40-052412	NR	\$5,185.80
24 x 14	40-052414	NR	\$5,808.13
24 x 16	40-052416	NR	\$6,505.09
24 x 18	40-052418	NR	\$7,285.64
24 x 20	40-052420	NR	\$8,159.93

NR = Non-Returnable Item

Contact Customer Service for price and availability on items not listed.

HARCO PRICE LIST

Fabricated Schedule 40 DWV Solvent Weld Bell Fittings

SIZE	PART #		PRICE
CLEANOUT TEE w/ PLUG Hub x Hub x FIPT w/Plug			
6 x 4	40-880604		\$138.13
6 x 6	40-880606		\$207.25
8 x 4	40-880804		\$153.61
8 x 6	40-880806		\$225.68
8 x 8	40-880808		\$543.15
10 x 4	40-881004		\$403.44
10 x 6	40-881006		\$547.45
10 x 8	40-881008		\$852.49
10 x 10	40-881010		\$869.65
12 x 4	40-881204		\$521.81
12 x 6	40-881206		\$670.07
12 x 8	40-881208		\$933.99
12 x 12	40-881212		\$1,032.70
14 x 4	40-881404	NR	\$982.03
14 x 6	40-881406	NR	\$1,177.51
14 x 8	40-881408	NR	\$1,472.12
16 x 4	40-881604	NR	\$1,095.72
16 x 6	40-881606	NR	\$1,311.87
16 x 8	40-881608	NR	\$1,614.58

SIZE	PART #		PRICE
COMBO TEE-WYE Hub x Hub x Hub			
6 x 4	40-770604		\$185.37
6 x 6	40-770606		\$256.64
8 x 4	40-770804		\$267.15
8 x 6	40-770806		\$476.18
8 x 8	40-770808		\$440.76
10 x 4	40-771004		\$341.94
10 x 6	40-771006		\$430.01
10 x 8	40-771008		\$535.26
10 x 10	40-771010		\$973.39
12 x 4	40-771204		\$531.78
12 x 6	40-771206		\$552.40
12 x 8	40-771208		\$512.31
12 x 10	40-771210		\$998.02
12 x 12	40-771212		\$1,133.24
14 x 4	40-771404	NR	\$909.44
14 x 6	40-771406	NR	\$1,034.73
14 x 8	40-771408	NR	\$1,138.41
14 x 10	40-771410	NR	\$1,347.24
14 x 12	40-771412	NR	\$1,589.86
14 x 14	40-771414	NR	\$1,708.94
16 x 4	40-771604	NR	\$1,184.43
16 x 6	40-771606	NR	\$1,205.37
16 x 8	40-771608	NR	\$1,324.98
16 x 10	40-771610	NR	\$1,500.54
16 x 12	40-771612	NR	\$1,610.75
16 x 14	40-771614	NR	\$1,745.39
16 x 16	40-771616	NR	\$2,006.65
18 x 4	40-771804	NR	\$1,528.61
18 x 6	40-771806	NR	\$1,611.66
18 x 8	40-771808	NR	\$1,694.69
18 x 10	40-771810	NR	\$2,150.30
18 x 12	40-771812	NR	\$2,365.33
18 x 14	40-771814	NR	\$2,601.86
18 x 16	40-771816	NR	\$2,862.05
18 x 18	40-771818	NR	\$3,148.27
20 x 4	40-772004	NR	\$1,933.99
20 x 6	40-772006	NR	\$2,033.67
20 x 8	40-772008	NR	\$2,580.29
20 x 10	40-772010	NR	\$2,838.32
20 x 12	40-772012	NR	\$3,122.14
20 x 14	40-772014	NR	\$3,434.36
20 x 16	40-772016	NR	\$3,777.84
20 x 18	40-772018	NR	\$3,148.27
20 x 20	40-772020	NR	\$4,155.63
24 x 4	40-772404	NR	\$3,356.61
24 x 6	40-772406	NR	\$3,550.70
24 x 8	40-772408	NR	\$3,669.18
24 x 10	40-772410	NR	\$4,740.13
24 x 12	40-772412	NR	\$5,308.94
24 x 14	40-772414	NR	\$5,946.06
24 x 16	40-772416	NR	\$6,659.57
24 x 18	40-772418	NR	\$7,458.68
24 x 20	40-772420	NR	\$8,353.77
24 x 24	40-772424	NR	\$9,356.16

SIZE	PART #		PRICE
CROSS (DBL TEE) Hub x Hub x Hub x Hub			
6 x 4	40-720604		\$100.95
6 x 6	40-720606		\$135.54
8 x 4	40-720804		\$155.14
8 x 6	40-720806		\$209.03
8 x 8	40-720808		\$277.59
10 x 4	40-721004		\$373.85
10 x 6	40-721006		\$391.40
10 x 8	40-721008		\$534.34
10 x 10	40-721010		\$636.17
12 x 4	40-721204		\$407.05
12 x 6	40-721206		\$477.39
12 x 8	40-721208		\$554.65
12 x 10	40-721210		\$689.97
12 x 12	40-721212		\$749.57
14 x 4	40-721404	NR	\$1,025.46
14 x 6	40-721406	NR	\$1,153.49
14 x 8	40-721408	NR	\$1,295.94
14 x 10	40-721410	NR	\$1,326.07
14 x 12	40-721412	NR	\$1,402.80
14 x 14	40-721414	NR	\$1,476.64
16 x 4	40-721604	NR	\$1,227.14
16 x 6	40-721606	NR	\$1,404.73
16 x 8	40-721608	NR	\$1,645.61
16 x 10	40-721610	NR	\$1,910.21
16 x 12	40-721612	NR	\$2,013.89
16 x 14	40-721614	NR	\$2,112.41
16 x 16	40-721616	NR	\$2,185.94
18 x 4	40-721804	NR	\$1,513.25
18 x 6	40-721806	NR	\$1,588.64
18 x 8	40-721808	NR	\$1,736.74
18 x 10	40-721810	NR	\$1,799.05
18 x 12	40-721812	NR	\$1,871.09
18 x 14	40-721814	NR	\$1,909.74
18 x 16	40-721816	NR	\$1,987.30
18 x 18	40-721818	NR	\$2,084.98
20 x 4	40-722004	NR	\$1,643.82
20 x 6	40-722006	NR	\$1,776.79
20 x 8	40-722008	NR	\$1,897.65
20 x 10	40-722010	NR	\$1,994.29
20 x 12	40-722012	NR	\$2,084.98
20 x 14	40-722014	NR	\$2,223.99
20 x 16	40-722016	NR	\$2,350.86
20 x 18	40-722018	NR	\$2,501.95
20 x 20	40-722020	NR	\$2,648.85
24 x 4	40-722404	NR	\$2,689.14
24 x 6	40-722406	NR	\$3,143.76
24 x 8	40-722408	NR	\$3,388.25
24 x 10	40-722410	NR	\$3,437.98
24 x 12	40-722412	NR	\$3,526.92
24 x 14	40-722414	NR	\$3,556.45
24 x 16	40-722416	NR	\$3,562.54
24 x 18	40-722418	NR	\$5,068.39
24 x 20	40-722420	NR	\$5,549.72
24 x 24	40-722424	NR	\$6,128.38

NR = Non-Returnable Item

Contact Customer Service for price and availability on items not listed.

HARCO PRICE LIST

Fabricated Schedule 40 DWV Solvent Weld Bell Fittings

SIZE	PART #		PRICE
DOUBLE WYE Hub x Hub x Hub x Hub			
6 x 4	40-040604		\$133.90
6 x 6	40-040606		\$163.34
8 x 4	40-040804		\$187.07
8 x 6	40-040806		\$245.92
8 x 8	40-040808		\$315.69
10 x 4	40-041004		\$317.16
10 x 6	40-041006		\$401.27
10 x 8	40-041008		\$560.03
10 x 10	40-041010		\$636.53
12 x 4	40-041204		\$401.86
12 x 6	40-041206		\$512.93
12 x 8	40-041208		\$607.54
12 x 10	40-041210		\$887.47
12 x 12	40-041212		\$914.49
14 x 4	40-041404	NR	\$812.35
14 x 6	40-041406	NR	\$827.92
14 x 8	40-041408	NR	\$883.32
14 x 10	40-041410	NR	\$1,151.46
14 x 12	40-041412	NR	\$1,198.92
14 x 14	40-041414	NR	\$1,342.05
16 x 4	40-041604	NR	\$1,180.64
16 x 6	40-041606	NR	\$1,082.73
16 x 8	40-041608	NR	\$1,178.41
16 x 10	40-041610	NR	\$1,342.98
16 x 12	40-041612	NR	\$1,452.78
16 x 14	40-041614	NR	\$1,534.38
16 x 16	40-041616	NR	\$1,600.04
18 x 4	40-041804	NR	\$1,513.25
18 x 6	40-041806	NR	\$1,588.64
18 x 8	40-041808	NR	\$1,737.60
18 x 10	40-041810	NR	\$1,799.05
18 x 12	40-041812	NR	\$1,871.09
18 x 14	40-041814	NR	\$1,909.74
18 x 16	40-041816	NR	\$1,987.30
18 x 18	40-041818	NR	\$2,084.45
20 x 4	40-042004	NR	\$1,643.82
20 x 6	40-042006	NR	\$1,776.79
20 x 8	40-042008	NR	\$1,897.65
20 x 10	40-042010	NR	\$1,994.29
20 x 12	40-042012	NR	\$2,084.98
20 x 14	40-042014	NR	\$2,223.99
20 x 16	40-042016	NR	\$2,350.86
20 x 18	40-042018	NR	\$2,501.95
20 x 20	40-042020	NR	\$2,648.85
24 x 4	40-042404	NR	\$2,689.14
24 x 6	40-042406	NR	\$3,143.71
24 x 8	40-042408	NR	\$3,388.25
24 x 10	40-042410	NR	\$3,437.98
24 x 12	40-042412	NR	\$3,526.92
24 x 14	40-042414	NR	\$3,556.40
24 x 16	40-042416	NR	\$3,562.54
24 x 18	40-042418	NR	\$5,068.39
24 x 20	40-042420	NR	\$5,549.72
24 x 24	40-042424	NR	\$6,128.38

SIZE	PART #		PRICE
DOUBLE TEE - WYE Hub x Hub x Hub x Hub			
6 x 4	40-790604	NR	\$289.66
8 x 4	40-790804	NR	\$417.45
8 x 6	40-790806	NR	\$515.25
8 x 8	40-790808	NR	\$739.25
10 x 4	40-791004	NR	\$603.85
10 x 6	40-791006	NR	\$738.89
10 x 8	40-791008	NR	\$997.33
10 x 10	40-791010	NR	\$1,409.77
12 x 4	40-791204	NR	\$767.16
12 x 6	40-791206	NR	\$797.00
12 x 8	40-791208	NR	\$1,106.17
12 x 10	40-791210	NR	\$1,689.69
12 x 12	40-791212	NR	\$2,046.64
14 x 4	40-791404	NR	\$1,324.85
14 x 6	40-791406	NR	\$1,670.57
14 x 8	40-791408	NR	\$1,880.95
14 x 10	40-791410	NR	\$2,515.25
14 x 12	40-791412	NR	\$2,968.15
14 x 14	40-791414	NR	\$3,190.40
16 x 4	40-791604	NR	\$1,693.91
16 x 6	40-791606	NR	\$1,792.50
16 x 8	40-791608	NR	\$2,180.72
16 x 10	40-791610	NR	\$2,801.34
16 x 12	40-791612	NR	\$3,007.12
16 x 14	40-791614	NR	\$3,258.36
16 x 16	40-791616	NR	\$3,746.22
18 x 4	40-791804	NR	\$2,205.14
18 x 6	40-791806	NR	\$2,324.96
18 x 8	40-791808	NR	\$2,444.80
18 x 10	40-791810	NR	\$2,766.88
18 x 12	40-791812	NR	\$3,087.54
18 x 14	40-791814	NR	\$3,396.28
18 x 16	40-791816	NR	\$3,735.90
18 x 18	40-791818	NR	\$4,109.47
20 x 4	40-792004	NR	\$2,646.15
20 x 6	40-792006	NR	\$2,789.96
20 x 8	40-792008	NR	\$2,933.77
20 x 10	40-792010	NR	\$3,368.16
20 x 12	40-792012	NR	\$3,704.96
20 x 14	40-792014	NR	\$4,075.49
20 x 16	40-792016	NR	\$4,483.02
20 x 18	40-792018	NR	\$4,931.35
20 x 20	40-792020	NR	\$5,424.52
24 x 4	40-792404	NR	\$4,842.22
24 x 6	40-792406	NR	\$5,122.33
24 x 8	40-792408	NR	\$5,293.24
24 x 10	40-792410	NR	\$6,187.48
24 x 12	40-792412	NR	\$6,930.03
24 x 14	40-792414	NR	\$7,761.59
24 x 16	40-792416	NR	\$8,692.97
24 x 18	40-792418	NR	\$9,736.15
24 x 20	40-792420	NR	\$10,904.46
24 x 24	40-792424	NR	\$12,213.03

NR = Non-Returnable Item

Contact Customer Service for price and availability on items not listed.

HARCO PRICE LIST

Fabricated Schedule 40 DWV Solvent Weld Bell Fittings

SIZE	PART #		PRICE
1/4 ELBOW - 90 Hub x Hub			
6	40-1806		\$80.02
8	40-1808		\$167.27
10	40-1810		\$302.65
12	40-1812		\$466.13
14	40-1814	NR	\$755.42
16	40-1816	NR	\$1,132.75
18	40-1818	NR	\$1,402.06
20	40-1820	NR	\$2,036.83
24	40-1824	NR	\$2,820.87

SIZE	PART #		PRICE
1/8 ELBOW - 45 Hub x Hub			
6	40-2206		\$71.92
8	40-2208		\$150.22
10	40-2210		\$253.96
12	40-2212		\$349.46
14	40-2214	NR	\$712.76
16	40-2216	NR	\$770.90
18	40-2218	NR	\$1,049.87
20	40-2220	NR	\$1,610.37
24	40-2224	NR	\$2,313.73

SIZE	PART #		PRICE
1/12 ELBOW - 30 Hub x Hub			
6	40-2406	NR	\$87.45
8	40-2408	NR	\$146.54
10	40-2410	NR	\$243.33
12	40-2412	NR	\$389.35
14	40-2414	NR	\$623.15
16	40-2416	NR	\$770.89
18	40-2418	NR	\$919.93
20	40-2420	NR	\$1,663.73
24	40-2424	NR	\$2,395.49

SIZE	PART #		PRICE
1/4 ELBOW - 90 STREET Hub x Spigot			
6	40-1906		\$96.41
8	40-1908		\$149.74
10	40-1910		\$302.98
12	40-1912		\$466.13
14	40-1914	NR	\$755.42
16	40-1916	NR	\$1,119.26
18	40-1918	NR	\$1,388.97
20	40-1920	NR	\$2,036.83
24	40-1924	NR	\$2,820.87

SIZE	PART #		PRICE
1/8 ELBOW - STREET 45 Hub x Spigot			
6	40-2306		\$151.00
8	40-2308		\$163.06
10	40-2310		\$254.18
12	40-2312		\$389.50
14	40-2314	NR	\$695.87
16	40-2316	NR	\$770.90
18	40-2318	NR	\$1,038.40
20	40-2320	NR	\$1,610.37
24	40-2324	NR	\$2,313.73

SIZE	PART #		PRICE
1/12 ELBOW - STREET 30 Hub x Spigot			
6	40-2506	NR	\$84.76
8	40-2508	NR	\$164.16
10	40-2510	NR	\$263.79
12	40-2512	NR	\$364.12
14	40-2514	NR	\$712.77
16	40-2516	NR	\$770.89
18	40-2518	NR	\$919.93
20	40-2520	NR	\$1,663.73
24	40-2524	NR	\$2,395.49

SIZE	PART #		PRICE
1/16 ELBOW - 22 1/2 Hub x Hub			
6	40-2606		\$103.21
8	40-2608		\$158.30
10	40-2610		\$243.34
12	40-2612		\$389.34
14	40-2614	NR	\$623.15
16	40-2616	NR	\$770.90
18	40-2618	NR	\$919.93
20	40-2620	NR	\$1,663.73
24	40-2624	NR	\$2,395.49

SIZE	PART #		PRICE
1/32 ELBOW - 11 1/4 Hub x Hub			
6	40-2806		\$101.10
8	40-2808		\$170.87
10	40-2810		\$354.33
12	40-2812		\$481.30
14	40-2814	NR	\$684.61
16	40-2816	NR	\$813.10
18	40-2818	NR	\$942.69
20	40-2820	NR	\$1,589.45
24	40-2824	NR	\$2,225.75

SIZE	PART #		PRICE
1/16 ELBOW - STREET 22 1/2 Hub x Spigot			
6	40-2706		\$99.96
8	40-2708		\$177.32
10	40-2710		\$263.80
12	40-2712		\$364.12
14	40-2714	NR	\$712.76
16	40-2716	NR	\$770.90
18	40-2718	NR	\$919.93
20	40-2720	NR	\$1,663.73
24	40-2724	NR	\$2,395.49

SIZE	PART #		PRICE
1/32 ELBOW - STREET 11 1/4 Hub x Spigot			
6	40-2906		\$98.70
8	40-2908		\$191.66
10	40-2910		\$263.79
12	40-2912		\$364.12
14	40-2914	NR	\$712.76
16	40-2916	NR	\$770.90
18	40-2918	NR	\$920.53
20	40-2920	NR	\$1,663.73
24	40-2924	NR	\$2,395.49

NR = Non-Returnable Item

Contact Customer Service for price and availability on items not listed.

HARCO PRICE LIST

Fabricated Schedule 40 DWV Solvent Weld Bell Fittings

SIZE	PART #		PRICE
STOP COUPLING Hub x Hub			
6	40-0806		\$44.60
8	40-0808		\$81.04
10	40-0810		\$111.71
12	40-0812		\$190.26
14	40-0814	NR	\$293.29
16	40-0816	NR	\$327.13
18	40-0818	NR	\$536.37
20	40-0820	NR	\$805.78
24	40-0824	NR	\$906.55

SIZE	PART #		PRICE
REPAIR COUPLING Hub x Hub			
6	40-0906		\$86.60
8	40-0908		\$73.61
10	40-0910		\$111.71
12	40-0912		\$194.10
14	40-0914	NR	\$281.36
16	40-0916	NR	\$313.76
18	40-0918	NR	\$514.44
20	40-0920	NR	\$772.76
24	40-0924	NR	\$869.37

SIZE	PART #		PRICE
PLUG Spigot			
6	40-4406		\$65.87
8	40-4408		\$110.81
10	40-4410		\$161.91
12	40-4412		\$203.01
14	40-4414	NR	\$391.71
16	40-4416	NR	\$513.40
18	40-4418	NR	\$566.35
20	40-4420	NR	\$917.15
24	40-4424	NR	\$1,379.07

SIZE	PART #		PRICE
CAP Hub x Cap			
8	40-4908		\$158.80
10	40-4910		\$163.02
12	40-4912		\$206.23
14	40-4914	NR	\$344.10
16	40-4916	NR	\$440.50
18	40-4918	NR	\$509.46
20	40-4920	NR	\$1,117.97
24	40-4924	NR	\$1,276.03

SIZE	PART #		PRICE
CLEANOUT ADAPTER Hub x FIPT			
8	40-5908		\$151.04
10	40-5910		\$485.06
12	40-5912		\$703.72

SIZE	PART #		PRICE
CLEANOUT ADAPTER Spigot x FIPT			
8	40-6008		\$170.32
10	40-6010		\$452.56
12	40-6012		\$657.41

SIZE	PART #		PRICE
THREAD PLUG MIPT			
8	40-6308		\$114.88
10	40-6310		\$152.81
12	40-6312		\$228.40

SIZE	PART #		PRICE
INCREASER COUPLING Hub x Hub			
4 x 6	40-150406		\$67.44
4 x 8	40-150408		\$110.16
4 x 10	40-150410		\$179.20
4 x 12	40-150412		\$200.17
4 x 14	40-150414	NR	\$390.35
4 x 16	40-150416	NR	\$465.58
4 x 18	40-150418	NR	\$833.77
4 x 20	40-150420	NR	\$1,000.62
4 x 24	40-150424	NR	\$1,828.63
6 x 8	40-150608		\$99.70
6 x 10	40-150610		\$285.47
6 x 12	40-150612		\$317.48
6 x 14	40-150614	NR	\$395.79
6 x 16	40-150616	NR	\$480.18
6 x 18	40-150618	NR	\$878.50
6 x 20	40-150620	NR	\$1,054.18
6 x 24	40-150624	NR	\$1,840.63
8 x 10	40-150810		\$190.52
8 x 12	40-150812		\$290.95
8 x 14	40-150814	NR	\$445.90
8 x 16	40-150816	NR	\$553.21
8 x 18	40-150818	NR	\$946.18
8 x 20	40-150820	NR	\$1,082.75
8 x 24	40-150824	NR	\$1,861.59
10 x 12	40-151012		\$316.67
10 x 14	40-151014	NR	\$591.79
10 x 16	40-151016	NR	\$621.29
10 x 18	40-151018	NR	\$1,012.81
10 x 20	40-151020	NR	\$1,107.95
10 x 24	40-151024	NR	\$1,888.57
12 x 14	40-151214	NR	\$525.49
12 x 16	40-151216	NR	\$618.19
12 x 18	40-151218	NR	\$1,029.57
12 x 20	40-151220	NR	\$1,123.04
12 x 24	40-151224	NR	\$1,918.49
14 x 16	40-151416	NR	\$630.68
14 x 18	40-151418	NR	\$1,068.58
14 x 20	40-151420	NR	\$1,138.17
14 x 24	40-151424	NR	\$1,984.51
16 x 18	40-151618	NR	\$755.42
16 x 20	40-151620	NR	\$1,153.28
16 x 24	40-151624	NR	\$2,014.47
18 x 20	40-151820	NR	\$1,289.79
18 x 24	40-151824	NR	\$2,083.48
20 x 24	40-152024	NR	\$2,437.06

NR = Non-Returnable Item

Contact Customer Service for price and availability on items not listed.

HARCO PRICE LIST

Fabricated Schedule 40 DWV Solvent Weld Bell Fittings

SIZE	PART #		PRICE
REDUCER BUSHING Spigot x Hub			
6 x 4	40-140604		\$67.98
8 x 4	40-140804		\$117.59
10 x 4	40-141004		\$146.26
12 x 4	40-141204		\$253.46
14 x 4	40-141404	NR	\$390.35
16 x 4	40-141604	NR	\$465.59
18 x 4	40-141804	NR	\$579.13
20 x 4	40-142004	NR	\$906.55
24 x 4	40-142404	NR	\$1,677.01
8 x 6	40-140806		\$121.68
10 x 6	40-141006		\$212.72
12 x 6	40-141206		\$316.48
14 x 6	40-141406	NR	\$395.08
16 x 6	40-141606	NR	\$479.41
18 x 6	40-141806	NR	\$591.80
20 x 6	40-142006	NR	\$932.93
24 x 6	40-142406	NR	\$1,711.71
10 x 8	40-141008		\$235.83
12 x 8	40-141208		\$325.67
14 x 8	40-141408	NR	\$445.90
16 x 8	40-141608	NR	\$553.20
18 x 8	40-141808	NR	\$604.38
20 x 8	40-142008	NR	\$946.77
24 x 8	40-142408	NR	\$1,735.68
12 x 10	40-141210		\$332.41
14 x 10	40-141410	NR	\$500.02
16 x 10	40-141610	NR	\$621.29
18 x 10	40-141810	NR	\$629.52
20 x 10	40-142010	NR	\$966.92
24 x 10	40-142410	NR	\$1,761.39
14 x 12	40-141412	NR	\$542.04
16 x 12	40-141612	NR	\$628.02
18 x 12	40-141812	NR	\$659.71
20 x 12	40-142012	NR	\$987.09
24 x 12	40-142412	NR	\$1,798.57
16 x 14	40-141614	NR	\$651.45
18 x 14	40-141814	NR	\$694.97
20 x 14	40-142014	NR	\$1,138.18
24 x 14	40-142414	NR	\$1,855.65
18 x 16	40-141816	NR	\$730.26
20 x 16	40-142016	NR	\$1,153.28
24 x 16	40-142416	NR	\$1,903.65
20 x 18	40-142018	NR	\$1,027.34
24 x 18	40-142418	NR	\$1,954.58
24 x 20	40-142420	NR	\$2,281.90

SIZE	PART #		PRICE
INCREASER ECCENTRIC Hub x Hub			
4 x 6	40-170406		\$49.78
4 x 8	40-170408		\$110.73
4 x 10	40-170410		\$179.20
4 x 12	40-170412		\$200.18
4 x 14	40-170414	NR	\$390.36
4 x 16	40-170416	NR	\$465.59
4 x 18	40-170418	NR	\$833.78
4 x 20	40-170420	NR	\$1,000.62
4 x 24	40-170424	NR	\$1,828.63
6 x 8	40-170608		\$95.06
6 x 10	40-170610		\$285.47
6 x 12	40-170612		\$317.48
6 x 14	40-170614	NR	\$395.79
6 x 16	40-170616	NR	\$480.14
6 x 18	40-170618	NR	\$878.52
6 x 20	40-170620	NR	\$1,054.17
6 x 24	40-170624	NR	\$1,840.63
8 x 10	40-170810		\$190.52
8 x 12	40-170812		\$290.95
8 x 14	40-170814	NR	\$445.92
8 x 16	40-170816	NR	\$553.22
8 x 18	40-170818	NR	\$946.21
8 x 20	40-170820	NR	\$1,082.75
8 x 24	40-170824	NR	\$1,861.57
10 x 12	40-171012		\$316.67
10 x 14	40-171014	NR	\$591.79
10 x 16	40-171016	NR	\$621.29
10 x 18	40-171018	NR	\$1,012.81
10 x 20	40-171020	NR	\$1,107.95
10 x 24	40-171024	NR	\$1,888.59
12 x 14	40-171214	NR	\$525.50
12 x 16	40-171216	NR	\$618.19
12 x 18	40-171218	NR	\$1,029.57
12 x 20	40-171220	NR	\$1,123.05
12 x 24	40-171224	NR	\$1,918.65
14 x 16	40-171416	NR	\$630.67
14 x 18	40-171418	NR	\$1,119.20
14 x 20	40-171420	NR	\$1,138.17
14 x 24	40-171424	NR	\$1,984.51
16 x 18	40-171618	NR	\$755.43
16 x 20	40-171620	NR	\$1,153.27
16 x 24	40-171624	NR	\$2,014.47
18 x 20	40-171820	NR	\$1,289.79
18 x 24	40-171824	NR	\$2,083.49
20 x 24	40-172024	NR	\$2,437.06

SIZE	PART #		PRICE
REDUCER ECCENTRIC Spigot x Hub			
6 x 4	40-160604		\$67.98
8 x 4	40-160804		\$117.63
10 x 4	40-161004		\$146.27
12 x 4	40-161204		\$253.44
14 x 4	40-161404	NR	\$390.36
16 x 4	40-161604	NR	\$465.59
18 x 4	40-161804	NR	\$579.13
20 x 4	40-162004	NR	\$906.55
24 x 4	40-162404	NR	\$1,677.02
8 x 6	40-160806		\$120.45
10 x 6	40-161006		\$212.75
12 x 6	40-161206		\$316.49
14 x 6	40-161406	NR	\$395.08
16 x 6	40-161606	NR	\$479.37
18 x 6	40-161806	NR	\$591.79
20 x 6	40-162006	NR	\$932.94
24 x 6	40-162406	NR	\$1,711.72
10 x 8	40-161008		\$235.82
12 x 8	40-161208		\$325.67
14 x 8	40-161408	NR	\$445.92
16 x 8	40-161608	NR	\$553.22
18 x 8	40-161808	NR	\$604.38
20 x 8	40-162008	NR	\$946.76
24 x 8	40-162408	NR	\$1,735.68
12 x 10	40-161210		\$332.41
14 x 10	40-161410	NR	\$500.02
16 x 10	40-161610	NR	\$621.29
18 x 10	40-161810	NR	\$629.54
20 x 10	40-162010	NR	\$966.93
24 x 10	40-162410	NR	\$1,761.40
14 x 12	40-161412	NR	\$542.04
16 x 12	40-161612	NR	\$628.02
18 x 12	40-161812	NR	\$659.73
20 x 12	40-162012	NR	\$987.12
24 x 12	40-162412	NR	\$1,798.58
16 x 14	40-161614	NR	\$651.48
18 x 14	40-161814	NR	\$694.97
20 x 14	40-162014	NR	\$1,138.17
24 x 14	40-162414	NR	\$1,855.66
18 x 16	40-161816	NR	\$730.27
20 x 16	40-162016	NR	\$1,153.27
24 x 16	40-162416	NR	\$1,903.66
20 x 18	40-162018	NR	\$1,231.71
24 x 18	40-162418	NR	\$1,954.58
24 x 20	40-162420	NR	\$2,281.90

NR = Non-Returnable Item

Contact Customer Service for price and availability on items not listed.

HARCO PRICE LIST

Fabricated Schedule 40 DWV Solvent Weld Bell Fittings

SIZE	PART #		PRICE
SADDLE WYE Saddle x Hub Includes SS Straps 			
6 x 4	40-540604	NR	\$57.68
8 x 4	40-540804	NR	\$81.54
8 x 6	40-540806	NR	\$83.96
10 x 4	40-541004	NR	\$102.77
10 x 6	40-541006	NR	\$119.74
10 x 8	40-541008	NR	\$268.95
12 x 4	40-541204	NR	\$123.99
12 x 6	40-541206	NR	\$144.16
12 x 8	40-541208	NR	\$378.76
12 x 10	40-541210	NR	\$453.52
14 x 4	40-541404	NR	\$138.24
14 x 6	40-541406	NR	\$157.51
14 x 8	40-541408	NR	\$387.71
14 x 10	40-541410	NR	\$462.48
14 x 12	40-541412	NR	\$471.23
16 x 4	40-541604	NR	\$147.32
16 x 6	40-541606	NR	\$168.10
16 x 8	40-541608	NR	\$396.56
16 x 10	40-541610	NR	\$471.23
16 x 12	40-541612	NR	\$480.10
16 x 14	40-541614	NR	\$488.94
18 x 4	40-541804	NR	\$221.13
18 x 6	40-541806	NR	\$233.52
18 x 8	40-541808	NR	\$517.91
18 x 10	40-541810	NR	\$577.91
18 x 12	40-541812	NR	\$693.15
18 x 14	40-541814	NR	\$744.39
18 x 16	40-541816	NR	\$826.07
20 x 4	40-542004	NR	\$226.07
20 x 6	40-542006	NR	\$246.60
20 x 8	40-542008	NR	\$517.91
20 x 10	40-542010	NR	\$577.91
20 x 12	40-542012	NR	\$693.15
20 x 14	40-542014	NR	\$744.39
20 x 16	40-542016	NR	\$826.07
20 x 18	40-542018	NR	\$872.88
24 x 4	40-542404	NR	\$230.40
24 x 6	40-542406	NR	\$250.91
24 x 8	40-542408	NR	\$522.32
24 x 10	40-542410	NR	\$582.40
24 x 12	40-542412	NR	\$697.55
24 x 14	40-542414	NR	\$748.77
24 x 16	40-542416	NR	\$840.53
24 x 18	40-542418	NR	\$917.10
24 x 20	40-542420	NR	\$1,032.42

SIZE	PART #		PRICE
SADDLE TEE Saddle x Hub Includes SS Straps 			
6 x 4	40-550604	NR	\$57.68
8 x 4	40-550804	NR	\$81.54
8 x 6	40-550806	NR	\$83.96
10 x 4	40-551004	NR	\$102.77
10 x 6	40-551006	NR	\$119.74
10 x 8	40-551008	NR	\$192.87
12 x 4	40-551204	NR	\$123.99
12 x 6	40-551206	NR	\$144.11
12 x 8	40-551208	NR	\$227.70
12 x 10	40-551210	NR	\$297.44
14 x 4	40-551404	NR	\$138.17
14 x 6	40-551406	NR	\$157.43
14 x 8	40-551408	NR	\$240.88
14 x 10	40-551410	NR	\$310.77
14 x 12	40-551412	NR	\$342.85
16 x 4	40-551604	NR	\$147.32
16 x 6	40-551606	NR	\$168.10
16 x 8	40-551608	NR	\$251.45
16 x 10	40-551610	NR	\$320.56
16 x 12	40-551612	NR	\$356.20
16 x 14	40-551614	NR	\$369.78
18 x 4	40-551804	NR	\$218.74
18 x 6	40-551806	NR	\$235.32
18 x 8	40-551808	NR	\$339.44
18 x 10	40-551810	NR	\$376.63
18 x 12	40-551812	NR	\$538.42
18 x 14	40-551814	NR	\$587.79
18 x 16	40-551816	NR	\$769.57
20 x 4	40-552004	NR	\$224.49
20 x 6	40-552006	NR	\$235.57
20 x 8	40-552008	NR	\$339.44
20 x 10	40-552010	NR	\$376.63
20 x 12	40-552012	NR	\$538.42
20 x 14	40-552014	NR	\$587.79
20 x 16	40-552016	NR	\$769.57
20 x 18	40-552018	NR	\$872.88
24 x 4	40-552404	NR	\$228.62
24 x 6	40-552406	NR	\$239.99
24 x 8	40-552408	NR	\$343.83
24 x 10	40-552410	NR	\$380.96
24 x 12	40-552412	NR	\$541.10
24 x 14	40-552414	NR	\$592.13
24 x 16	40-552416	NR	\$811.60
24 x 18	40-552418	NR	\$917.10
24 x 20	40-552420	NR	\$1,032.42

SIZE	PART #		PRICE
ADAPTER DWV Hub x Sewer Hub 			
6 x 6	40-3106		\$36.73
8 x 8	40-3108		\$103.51
10 x 10	40-3110		\$175.32
12 x 12	40-3112		\$204.65
15 x 16	40-311516	NR	\$614.50
18 x 18	40-3118	NR	\$1,008.46
24 x 24	40-3124	NR	\$1,682.46

SIZE	PART #		PRICE
ADAPTER DWV Hub x Sewer Spigot 			
8 x 8	40-3208		\$94.10
10 x 10	40-3210		\$159.38
12 x 12	40-3212		\$185.00

NR = Non-Returnable Item

Contact Customer Service for price and availability on items not listed.

PRICE LIST

Fabricated Schedule 80 DWV Solvent Weld Bell Fittings

Short Form Specifications - Schedule 80 DWV Drainage Fittings ASTM F-1866 Tested and Certified...HARCO

Schedule 80 DWV fabricated fittings are tested and certified to meet or exceed all performance specifications of ASTM F-1866. All Schedule 80 fittings fabricated from Schedule 80 pipe, meet or exceed all performance specifications of ASTM D-1785. The basic material used in the manufacture of the pipe conforms to ASTM D-1784 with a cell classification of 12454, type 1, Grade 1.

NR = Non- Returnable Item

Contact Customer Service for price and availability on items not listed.

SIZE	PART #	#/CS	PRICE	SIZE	PART #	#/CS	PRICE	SIZE	PART #	#/CS	PRICE
CLEANOUT ADAPTER Spigot x FIPT				REPAIR COUPLING Hub x Hub				ELBOW - 11 1/4 Hub x Hub			
											
8	80-536		\$225.47	8	80-497		\$171.74	8	80-457		\$229.81
10	80-537		\$620.18	10	80-498		\$250.18	10	80-458		\$443.24
12	80-538		\$857.45	12	80-499		\$288.35	12	80-459		\$595.38
CLEANOUT ADAPTER Hub x FIPT				14	80-500	NR	\$576.68	14	80-460	NR	\$911.48
				16	80-501	NR	\$685.60	16	80-461	NR	\$1,218.37
8	80-533		\$224.70	18	80-502	NR	\$868.76	18	80-462	NR	\$1,695.85
10	80-534		\$619.46	STOP COUPLING Hub x Hub							
12	80-535		\$855.01								N
THREADED PLUG MIPT				8	80-90		\$169.45	8	80-463		\$252.79
				10	80-91		\$250.18	10	80-464		\$448.11
8	80-117		\$217.14	12	80-92		\$288.35	12	80-465		\$654.92
10	80-119		\$299.75	14	80-143	NR	\$576.68	14	80-466	NR	\$1,002.63
12	80-118		\$367.54	16	80-503	NR	\$685.60	16	80-467	NR	\$1,340.20
THREADED PLUG Male Straight Thread				18	80-121	NR	\$868.76	18	80-468	NR	\$1,865.44
				CROSS Hub x Hub x Hub x Hub							
8	80-539		\$217.14	8 x 4	80-1	NR	\$370.22	8	80-51		\$243.59
10	80-540		\$299.75	8 x 6	80-2	NR	\$479.89	10	80-57		\$431.82
12	80-541		\$367.54	8 x 8	80-3	NR	\$598.52	12	80-63		\$631.10
14	80-542	NR	\$483.95	10 x 4	80-4	NR	\$697.64	14	80-469	NR	\$966.17
16	80-543	NR	\$655.98	10 x 6	80-5	NR	\$852.48	16	80-470	NR	\$1,291.47
18	80-544	NR	\$997.12	10 x 8	80-6	NR	\$1,124.98	18	80-471	NR	\$1,797.60
CLEANOUT ADAPTER Spigot x Female Straight Thread				10 x 10	80-7	NR	\$1,280.43				
				12 x 4	80-8	NR	\$928.57	8	80-52		\$243.09
8	80-521		\$387.23	12 x 6	80-9	NR	\$1,078.20	10	80-58		\$430.92
10	80-522		\$525.19	12 x 8	80-10	NR	\$1,287.96	12	80-64		\$629.79
12	80-523		\$654.37	12 x 10	80-11	NR	\$1,467.70	14	80-472	NR	\$964.17
14	80-524	NR	\$1,171.51	12 x 12	80-12	NR	\$1,804.34	16	80-473	NR	\$1,288.79
16	80-525	NR	\$1,744.92	14 x 4	80-361	NR	\$1,488.45	18	80-474	NR	\$1,793.87
18	80-526	NR	\$2,495.52	14 x 6	80-362	NR	\$1,670.51				
CLEANOUT ADAPTER Hub x FIPT				14 x 8	80-363	NR	\$1,921.41	8	80-475		\$210.68
				14 x 10	80-364	NR	\$2,300.76	10	80-476		\$385.99
8	80-527		\$400.79	14 x 12	80-365	NR	\$2,695.62	12	80-477		\$551.87
10	80-528		\$543.58	14 x 14	80-366	NR	\$3,208.33	14	80-478	NR	\$824.74
12	80-529		\$677.27	16 x 4	80-367	NR	\$1,896.05	16	80-479	NR	\$1,109.08
14	80-530	NR	\$1,212.50	16 x 6	80-368	NR	\$2,050.89	18	80-480	NR	\$1,427.33
16	80-531	NR	\$1,805.99	16 x 8	80-369	NR	\$2,402.39				
18	80-532	NR	\$2,582.83	16 x 10	80-370	NR	\$2,766.56	8	80-481		\$231.75
CAP Hub x Cap				16 x 12	80-371	NR	\$3,286.51	10	80-482		\$424.59
				16 x 14	80-372	NR	\$3,875.81	12	80-483		\$607.06
8	80-120		\$374.82	16 x 16	80-373	NR	\$4,067.38	14	80-484	NR	\$872.32
10	80-25		\$460.89	18 x 4	80-374	NR	\$2,228.58	16	80-485	NR	\$1,129.62
12	80-26		\$688.26	18 x 6	80-375	NR	\$2,409.82	18	80-486	NR	\$1,554.52
14	80-554		\$844.05	18 x 8	80-376	NR	\$2,835.75				
16	80-556		\$1,082.03	18 x 10	80-377	NR	\$3,256.05				
18	80-557		\$1,129.40	18 x 12	80-378	NR	\$3,876.91				
				18 x 14	80-379	NR	\$4,564.93				
				18 x 16	80-380	NR	\$4,764.90				
				18 x 18	80-381	NR	\$4,700.20				

SIZE	PART #	#/CS	PRICE
 ELBOW - 45 Hub x Hub			
8	80-53		\$243.48
10	80-59		\$445.97
12	80-65		\$637.63
14	80-487	NR	\$916.26
16	80-127	NR	\$1,186.51
18	80-488	NR	\$1,636.41
 ELBOW - 45 Hub x Spigot			
8	80-54		\$267.85
10	80-60		\$490.59
12	80-66		\$701.43
14	80-489	NR	\$1,007.93
16	80-490	NR	\$1,305.22
18	80-491	NR	\$1,816.80
 ELBOW - 90 Hub x Hub			
8	80-55		\$410.04
10	80-61		\$493.94
12	80-67		\$1,024.82
14	80-142	NR	\$1,507.76
16	80-492	NR	\$1,907.38
18	80-493	NR	\$2,612.17
 ELBOW - 90 Hub x Spigot			
8	80-56		\$411.22
10	80-62		\$486.31
12	80-68		\$1,025.09
14	80-494	NR	\$1,508.15
16	80-495	NR	\$1,875.72
18	80-496	NR	\$2,634.20
VAN STONE FLANGE Flange x Hub 8"-12" 100 psi w/plastic ring 14"-24" 100 psi w/metal ring			
8	80-570	NR	\$203.18
10	80-571	NR	\$260.58
12	80-572	NR	\$280.94
14	80-573	NR	\$1,739.68
16	80-574	NR	\$2,171.02
18	80-575	NR	\$2,629.33
PLUG Cap x Spigot			
8	80-87		\$279.98
10	80-88		\$355.55
12	80-89		\$566.50
14	80-551	NR	\$822.54
16	80-552	NR	\$982.05
18	80-553	NR	\$1,163.58
Increaser Coupling Hub x Hub			
4 x 8	80-69	NR	\$229.66
4 x 10	80-70	NR	\$445.57
4 x 12	80-71	NR	\$476.09
4 x 14	80-200	NR	\$600.66
4 x 16	80-201	NR	\$496.49
4 x 18	80-203	NR	\$1,054.88

SIZE	PART #	#/CS	PRICE
Increaser Coupling Hub x Hub			
6 x 8	80-72	NR	\$211.37
6 x 10	80-73	NR	\$478.40
6 x 12	80-74	NR	\$526.97
6 x 14	80-204	NR	\$667.43
6 x 16	80-205	NR	\$952.07
6 x 18	80-206	NR	\$1,110.41
8 x 10	80-75	NR	\$230.10
8 x 12	80-76	NR	\$554.71
8 x 14	80-207	NR	\$742.02
8 x 16	80-208	NR	\$792.25
8 x 18	80-209	NR	\$1,168.88
10 x 12	80-77	NR	\$340.72
10 x 14	80-210	NR	\$778.11
10 x 16	80-211	NR	\$785.44
10 x 18	80-212	NR	\$1,230.36
12 x 14	80-213	NR	\$497.45
12 x 16	80-214	NR	\$872.32
12 x 18	80-215	NR	\$1,295.09
14 x 16	80-216	NR	\$735.43
14 x 18	80-217	NR	\$1,910.74
16 X 18	80-218	NR	\$2,103.19
INC COUPLING ECCENTRIC Hub x Hub			
4 x 8	80-230	NR	\$243.38
4 x 10	80-231	NR	\$453.64
4 x 12	80-232	NR	\$531.54
4 x 14	80-233	NR	\$671.09
4 x 16	80-234	NR	\$796.33
4 x 18	80-235	NR	\$1,178.57
6 x 8	80-236	NR	\$215.35
6 x 10	80-237	NR	\$523.67
6 x 12	80-238	NR	\$536.92
6 x 14	80-239	NR	\$745.67
6 x 16	80-240	NR	\$838.22
6 x 18	80-241	NR	\$1,240.60
8 x 10	80-242	NR	\$323.50
8 x 12	80-243	NR	\$565.17
8 x 14	80-244	NR	\$828.47
8 x 16	80-245	NR	\$882.36
8 x 18	80-246	NR	\$1,305.91
10 x 12	80-247	NR	\$347.15
10 x 14	80-248	NR	\$872.07
10 x 16	80-249	NR	\$928.76
10 x 18	80-250	NR	\$1,374.62
12 x 14	80-251	NR	\$557.53
12 x 16	80-252	NR	\$977.69
12 x 18	80-253	NR	\$1,446.94
14 x 16	80-254	NR	\$824.26
14 x 18	80-255	NR	\$2,141.48
16 X 18	80-256	NR	\$1,811.49
REDUCER BUSHING Spigot x Hub			
8 x 4	80-78	NR	\$229.18
10 x 4	80-79	NR	\$444.31
12 x 4	80-80	NR	\$513.67
14 x 4	80-137	NR	\$597.54
16 x 4	80-219	NR	\$709.07
18 x 4	80-220	NR	\$1,049.39

SIZE	PART #	#/CS	PRICE
REDUCER BUSHING Spigot x Hub			
8 x 6	80-81	NR	\$210.93
10 x 6	80-82	NR	\$512.89
12 x 6	80-83	NR	\$525.88
14 x 6	80-221	NR	\$663.95
16 x 6	80-131	NR	\$746.37
18 x 6	80-222	NR	\$1,104.63
10 x 8	80-84	NR	\$252.71
12 x 8	80-85	NR	\$553.56
14 x 8	80-223	NR	\$737.70
16 x 8	80-136	NR	\$785.67
18 x 8	80-224	NR	\$1,162.80
12 x 10	80-86	NR	\$449.03
14 x 10	80-138	NR	\$776.50
16 x 10	80-135	NR	\$826.98
18 x 10	80-225	NR	\$1,223.96
14 x 12	80-226	NR	\$679.03
16 x 12	80-125	NR	\$870.51
18 x 12	80-227	NR	\$1,288.35
16 x 14	80-228	NR	\$816.10
18 x 14	80-229	NR	\$1,906.78
18 x 16	80-134	NR	\$2,102.66
REDUCER ECCENTRIC Spigot x Hub			
8 x 4	80-258		\$257.42
10 x 4	80-259		\$499.00
12 x 4	80-260	NR	\$531.54
14 x 4	80-261	NR	\$671.09
16 x 4	80-262	NR	\$796.33
18 x 4	80-263	NR	\$1,178.57
8 x 6	80-264	NR	\$236.88
10 x 6	80-265	NR	\$576.04
12 x 6	80-266	NR	\$590.61
14 x 6	80-267	NR	\$745.67
16 x 6	80-268	NR	\$838.22
18 x 6	80-269	NR	\$1,240.60
10 x 8	80-270	NR	\$381.65
12 x 8	80-271	NR	\$621.69
14 x 8	80-272	NR	\$828.47
16 x 8	80-273	NR	\$882.36
18 x 8	80-274	NR	\$1,305.91
12 x 10	80-275	NR	\$504.28
14 x 10	80-276	NR	\$872.07
16 x 10	80-277	NR	\$928.76
18 x 10	80-278	NR	\$1,374.62
14 x 12	80-279	NR	\$762.60
16 x 12	80-280	NR	\$977.69
18 x 12	80-281	NR	\$1,446.94
16 x 14	80-282	NR	\$916.57
18 x 14	80-283	NR	\$2,141.48
18 x 16	80-284	NR	\$1,936.42

SIZE	PART #	#/CS	PRICE
TEE Hub x Hub x Hub			
8 x 4	80-93	NR	\$197.90
8 x 6	80-94	NR	\$287.96
8 x 8	80-95	NR	\$464.16
10 x 4	80-96	NR	\$418.64
10 x 6	80-97	NR	\$511.57
10 x 8	80-98	NR	\$683.07
10 x 10	80-99	NR	\$765.26
12 x 4	80-100	NR	\$557.09
12 x 6	80-101	NR	\$648.21
12 x 8	80-102	NR	\$777.45
12 x 10	80-103	NR	\$877.14
12 x 12	80-104	NR	\$1,078.34
14 x 4	80-285	NR	\$917.48
14 x 6	80-286	NR	\$1,076.66
14 x 8	80-144	NR	\$1,289.94
14 x 10	80-287	NR	\$1,547.91
14 x 12	80-288	NR	\$1,561.03
14 x 14	80-139	NR	\$1,604.33
16 x 4	80-289	NR	\$1,137.64
16 x 6	80-290	NR	\$1,230.57
16 x 8	80-291	NR	\$1,441.46
16 x 10	80-292	NR	\$1,827.51
16 x 12	80-293	NR	\$2,046.00
16 x 14	80-294	NR	\$2,115.67
16 x 16	80-295	NR	Call
18 x 4	80-296	NR	\$1,577.31
18 x 6	80-297	NR	\$1,705.89
18 x 8	80-298	NR	\$1,998.08
18 x 10	80-299	NR	\$2,257.27
18 x 12	80-300	NR	\$2,515.98
18 x 14	80-301	NR	\$2,594.90
18 x 16	80-302	NR	\$3,243.59
18 x 18	80-303	NR	Call
SANITARY TEE Hub x Hub x Hub			
8 x 4	80-39	NR	\$391.43
8 x 6	80-40	NR	\$435.86
8 x 8	80-41	NR	\$968.40
10 x 4	80-42	NR	\$485.26
10 x 6	80-43	NR	\$614.64
10 x 8	80-44	NR	\$1,255.57
10 x 10	80-45	NR	\$1,664.22
12 x 4	80-46	NR	\$776.40
12 x 6	80-47	NR	\$869.37
12 x 8	80-48	NR	\$1,519.17
12 x 10	80-49	NR	\$1,903.96
12 x 12	80-50	NR	\$2,399.75
14 x 4	80-382	NR	\$1,197.77
14 x 6	80-383	NR	\$1,405.54
14 x 8	80-384	NR	\$2,005.06
14 x 10	80-385	NR	\$2,332.58
14 x 12	80-386	NR	\$2,743.12
14 x 14	80-387	NR	\$3,406.58
16 x 4	80-388	NR	\$2,244.07
16 x 6	80-389	NR	\$2,606.00
16 x 8	80-390	NR	\$2,723.09
16 x 10	80-391	NR	\$2,747.03
16 x 12	80-392	NR	\$3,195.20
16 x 14	80-393	NR	\$4,098.92
16 x 16	80-394	NR	\$4,570.00

SIZE	PART #	#/CS	PRICE
SANITARY TEE Hub x Hub x Hub			
18 x 4	80-395	NR	\$2,450.88
18 x 6	80-396	NR	\$2,584.05
18 x 8	80-397	NR	\$2,717.28
18 x 10	80-398	NR	\$2,949.66
18 x 12	80-399	NR	\$3,244.65
18 x 14	80-400	NR	\$3,569.10
18 x 16	80-401	NR	\$3,965.30
18 x 18	80-402	NR	\$4,361.80
DOUBLE TEE - WYE Hub x Hub x Hub x Hub			
8 x 4	80-582	NR	\$710.00
8 x 6	80-583	NR	\$786.53
8 x 8	80-584	NR	\$965.71
10 x 4	80-585	NR	\$870.91
10 x 6	80-586	NR	\$1,095.62
10 x 8	80-587	NR	\$1,432.64
10 x 10	80-588	NR	\$2,398.06
12 x 4	80-589	NR	\$1,376.54
12 x 6	80-590	NR	\$1,538.06
12 x 8	80-591	NR	\$1,826.03
12 x 10	80-592	NR	\$2,603.70
12 x 12	80-593	NR	\$3,010.42
14 x 4	80-594	NR	\$2,145.07
14 x 6	80-595	NR	\$2,441.03
14 x 8	80-596	NR	\$2,554.57
14 x 10	80-597	NR	\$3,543.62
14 x 12	80-598	NR	\$4,303.73
14 x 14	80-599	NR	\$4,603.48
16 x 4	80-600	NR	\$2,688.63
16 x 6	80-601	NR	\$2,843.55
16 x 8	80-602	NR	\$3,230.57
16 x 10	80-603	NR	\$3,346.17
16 x 12	80-604	NR	\$4,633.39
16 x 14	80-605	NR	\$5,020.56
16 x 16	80-606	NR	\$5,772.54
18 x 4	80-607	NR	\$4,543.80
18 x 6	80-608	NR	\$4,790.67
18 x 8	80-609	NR	\$5,037.67
18 x 10	80-610	NR	\$6,757.87
18 x 12	80-611	NR	\$7,433.62
18 x 14	80-612	NR	\$8,176.96
18 x 16	80-613	NR	\$8,994.67
18 x 18	80-614	NR	\$9,894.15
COMBO WYE Hub x Hub x Hub			
8 x 4	80-27	NR	\$331.30
8 x 6	80-28	NR	\$453.06
8 x 8	80-29	NR	\$626.62
10 x 4	80-30	NR	\$506.65
10 x 6	80-31	NR	\$641.76
10 x 8	80-32	NR	\$817.78
10 x 10	80-33	NR	\$1,806.59
12 x 4	80-34	NR	\$746.14
12 x 6	80-35	NR	\$772.20
12 x 8	80-36	NR	\$989.46
12 x 10	80-37	NR	\$2,066.78
12 x 12	80-38	NR	\$2,865.48

SIZE	PART #	#/CS	PRICE
COMBO WYE Hub x Hub x Hub			
14 x 4	80-340	NR	\$1,271.96
14 x 6	80-341	NR	\$1,443.18
14 x 8	80-342	NR	\$1,592.50
14 x 10	80-343	NR	\$2,565.84
14 x 12	80-344	NR	\$3,017.42
14 x 14	80-345	NR	\$3,747.24
16 x 4	80-346	NR	\$1,657.07
16 x 6	80-347	NR	\$1,694.85
16 x 8	80-348	NR	\$1,861.56
16 x 10	80-349	NR	\$3,021.75
16 x 12	80-350	NR	\$3,514.72
16 x 14	80-351	NR	\$4,508.82
16 x 16	80-352	NR	\$5,026.99
18 x 4	80-353	NR	\$2,146.12
18 x 6	80-354	NR	\$2,262.74
18 x 8	80-355	NR	\$2,379.40
18 x 10	80-356	NR	\$3,244.65
18 x 12	80-357	NR	\$3,569.10
18 x 14	80-358	NR	\$3,926.04
18 x 16	80-359	NR	\$4,318.62
18 x 18	80-360	NR	\$4,750.51
WYE Hub x Hub x Hub			
8 x 4	80-105	NR	\$311.02
8 x 6	80-106	NR	\$405.98
8 x 8	80-107	NR	\$498.55
10 x 4	80-108	NR	\$550.93
10 x 6	80-109	NR	\$646.81
10 x 8	80-110	NR	\$758.18
10 x 10	80-111	NR	\$890.90
12 x 4	80-112	NR	\$889.62
12 x 6	80-113	NR	\$970.50
12 x 8	80-114	NR	\$1,078.36
12 x 10	80-115	NR	\$948.41
12 x 12	80-116	NR	\$1,347.89
14 x 4	80-304	NR	\$1,416.18
14 x 6	80-305	NR	\$1,551.16
14 x 8	80-306	NR	\$1,718.55
14 x 10	80-307	NR	\$1,794.42
14 x 12	80-308	NR	\$1,901.80
14 x 14	80-309	NR	\$2,047.11
16 x 4	80-310	NR	\$1,693.51
16 x 6	80-128	NR	\$1,822.65
16 x 8	80-132	NR	\$1,920.69
16 x 10	80-130	NR	\$2,102.70
16 x 12	80-124	NR	\$2,333.05
16 x 14	80-311	NR	\$2,511.67
16 x 16	80-312	NR	\$2,661.12
18 x 4	80-313	NR	\$2,317.28
18 x 6	80-314	NR	\$2,414.76
18 x 8	80-315	NR	\$2,512.23
18 x 10	80-133	NR	\$2,706.95
18 x 12	80-316	NR	\$2,804.20
18 x 14	80-317	NR	\$2,901.68
18 x 16	80-318	NR	\$3,407.13
18 x 18	80-319	NR	\$3,629.66

SIZE	PART #	#/CS	PRICE
DOUBLE WYE Hub x Hub x Hub			
8 x 4	80-13	NR	\$331.05
8 x 6	80-14	NR	\$472.22
8 x 8	80-15	NR	\$547.52
10 x 4	80-16	NR	\$580.95
10 x 6	80-17	NR	\$714.27
10 x 8	80-18	NR	\$863.93
10 x 10	80-19	NR	\$1,002.50
12 x 4	80-20	NR	\$931.81
12 x 6	80-21	NR	\$1,092.08
12 x 8	80-22	NR	\$1,335.58
12 x 10	80-23	NR	\$1,506.43
12 x 12	80-24	NR	\$1,631.23
14 x 4	80-320	NR	\$1,683.84
14 x 6	80-321	NR	\$1,723.57
14 x 8	80-322	NR	\$2,298.75
14 x 10	80-323	NR	\$1,917.66
14 x 12	80-324	NR	\$2,153.56
14 x 14	80-325	NR	\$2,274.62
16 x 4	80-326	NR	\$1,917.68
16 x 6	80-327	NR	\$2,025.25
16 x 8	80-328	NR	\$2,229.32
16 x 10	80-329	NR	\$2,529.85
16 x 12	80-123	NR	\$2,731.61
16 x 14	80-330	NR	\$2,915.59
16 x 16	80-331	NR	\$3,040.26
18 x 4	80-332	NR	\$2,669.51
18 x 6	80-333	NR	\$2,825.27
18 x 8	80-334	NR	\$3,097.58
18 x 10	80-335	NR	\$3,532.56
18 x 12	80-336	NR	\$3,785.68
18 x 14	80-337	NR	\$4,047.83
18 x 16	80-338	NR	\$4,400.86
18 x 18	80-339	NR	\$4,495.44

SIZE	PART #	#/CS	PRICE
TRUE WYE Hub x Hub x Hub			
8	80-576	NR	\$1,092.73
10	80-577	NR	\$1,658.55
12	80-578	NR	\$2,305.52
14	80-579	NR	\$3,638.32
16	80-580	NR	\$4,823.60
18	80-581	NR	\$6,774.53

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UNIVERSAL TRANSITION COUPLING

The Universal Connection



Engineered for Durability

Distributor in the United States for



The connection you can trust.

INTRODUCTION

HARCO Fittings is a distributor of Philmac Universal Transition Coupling (UTC®) fittings for the United States. Philmac is a global leader in the design and manufacture of plastic compression fittings that provide the ultimate in pipe connection flexibility. Australia-based Philmac was founded in 1929 and became part of the Aliaxis Group in Belgium in 2003.

The UTC® products are especially designed for connecting pipes that are made from a variety of different materials, such as polyethylene, galvanized steel, PVC, copper, ABS, lead, and stainless steel.

In addition to winning an Australian Design Award in 1999 for innovation in product development, the UTC® has been embraced by water utilities in Australia, the UK, Europe, and North America.

The entire range of UTC® fittings is fully approved for potable water, meeting NSF and CSA standards.

HARCO Fittings was founded in 1966 and is based in Lynchburg, Virginia with company warehouses in Winter Haven, Florida; Dallas, Texas; and Phoenix, Arizona. HARCO has developed next generation fittings including the first compact DI MJ fittings and the first injection molded gasketed PVC fittings in the USA for IPS size PVC water pipe, SDR 35 PVC sewer pipe, and C900 PVC water pipe. HARCO has developed numerous pipe fitting and valve innovations for the irrigation industry including swivel connection systems, knuckle restraints, clamshell restraints, and a line of DI isolation valves.

BENEFITS

Complete Flexibility

Universal Design: The Philmac UTC® is designed to accommodate a range of different diameters on most pipe material (including copper, PE, PVC, lead, steel, galvanized steel, ABS, and stainless steel).

Large Seal: The large seal in the Philmac UTC® is particularly suited to out-of-round and pitted pipes.

Fast and Easy Installation

Slide & Tighten™ technology: The Philmac UTC® incorporates all the benefits of Philmac's Slide & Tighten™ technology.

Simply witness mark the pipe against the flange on the fitting, and then insert the pipe to the correct depth. The nut can then be tightened using a wrench. The UTC® is fully installed when the nut can no longer be tightened with reasonable force.

No special tools are required and the Philmac UTC® is supplied ready to use.

Easy Disassembly: The design of the UTC® allows the pipe to be removed easily from the fitting once the nut is backed off.

Complete Coverage

The Philmac UTC® range is comprehensive: Configurations include "No Stop" Repair Couplings and Reducer Couplings. Inquire for other configurations.

Complete Security

Dynamic Sealing Method: Tightening the nut compresses the seal into position. During assembly, the pipe does not have to engage the seal, so there is no risk of seal damage or roll outs.

* Pipes at the top end of the fitting tolerance may incur minimum resistance.

No Loose Components: The Philmac UTC® is fully contained with no loose components. There is no need to disassemble and separately handle a loose split ring, seal ring, or nut. All that is required is the insertion of the pipe and tightening of the nut.

Approvals: The Philmac UTC® holds a number of potable water approvals including NSF in the USA. The fittings are manufactured to the highest standards in accordance with the company's ISO 9001:2000 Quality Endorsed status.

High Performance Materials

Made from advanced thermoplastic materials: The Philmac UTC® is manufactured from lightweight, high performance polypropylene and acetal with outstanding impact, UV, chemical, and corrosion resistance. The UTC® split ring contains hard stainless steel grippers which provide superior end load resistance. Seals are nitrile rubber.

High Performance Materials

Rated to 200 PSI: The Philmac UTC® is pressure rated 200 psi at 73°F and 150 psi at 100°F to meet the needs of high pressure systems.

Suggested Specification

Fittings shall be Polypropylene Compression Fittings that without disassembly or modification will fit a range of pipes including polyethylene, PEX, PVC, copper, steel, stainless steel, ABS, and lead. Fittings shall be long term rated for 200 psi at 73°F and 150 psi at 100°F per ISO 14236 and shall be rated as "High Pressure" per AWWA C800. Fittings shall comply with NSF 61 and shall be "listed" by NSF. "Bodies" and "Spacers" shall be Polypropylene. Fitting "Compression Nuts" shall be Acetal or Polypropylene. "Split Ring" shall be of Acetal with Stainless Steel grippers. Joint seal activation shall be accomplished solely by actuation of the Compression Nut. Joint "Seals" shall not "interfere" with pipe insertion. No beveling or lubrication of pipe shall be required. Fitting components shall not require disassembly prior to assembly on to pipe. Fittings shall be "UTC" with "Slide & Tighten" capability as manufactured by Philmac Pty Ltd. and as sold by The Harrington Corporation (Harco) of Lynchburg, VA (434) 845-7094.

CAUTION: Philmac does not recommend or warrant the use of UTC® Compression Fittings "inside the building" or for "hot water" applications.



INSTALLATION INSTRUCTIONS



- 1. Cut pipe to length**
Cut pipe square and to length using the flange on the central body as a guide. Ensure end of connecting pipe is undamaged and clean.



- 2. Prepare fitting**
To ensure adequate insertion depth, witness mark the pipe to the back of the flange. A marker pen can be used or use of a thumb is suitable.



- 3. Pipe Insertion**
Ensure the nut is backed off and 3 threads are showing. (Pipes at the top end of the fitting tolerance may require 5 threads showing.) Insert pipe to the correct depth.



- 4. Nut tightening**
Tighten the nut firmly with a wrench. The nut will not butt against the body flange when the pipe size is at the top end of the fitting tolerance.

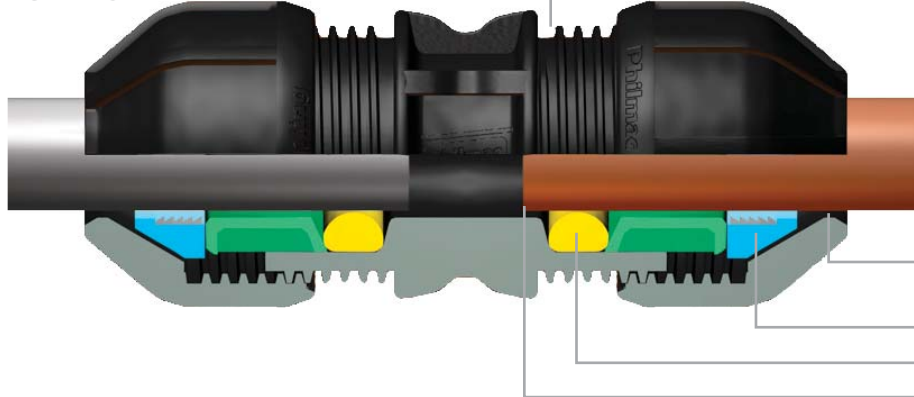


- 5. Fully Installed**
The fitting is fully installed when the nut cannot be tightened any further with reasonable force.

HOW IT WORKS

PRINCIPLES OF OPERATION – UTC® COMPRESSION FITTINGS

FULLY OPEN



Fitting is pre-assembled in the ready-to-use open position with 3 threads showing.

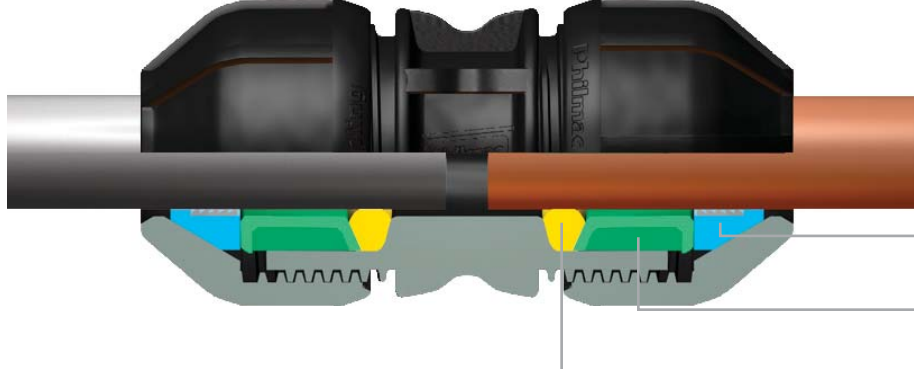
Clearance between the pipe and fitting allows for easy insertion of the pipe.

Split ring is in a relaxed position.

Seal is in a relaxed position.

Pipe is inserted up to the flange on the fitting.

FULLY CLOSED

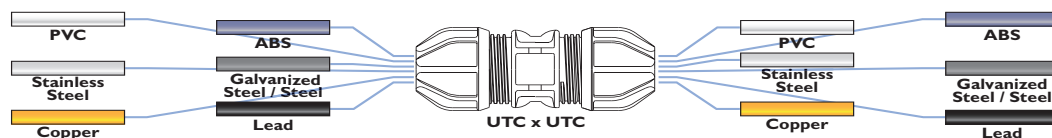


Nut is tightened with a wrench firmly to ensure proper installation. Some threads may be exposed, depending on the size of pipe inserted into the fitting.

Split ring with the stainless grippers bites into the pipe, providing end load resistance.

Thrust sleeve transfers pressure to the seal ring.

Seal ring compression is achieved by exploiting the mechanical advantage of the thread.



UTC® SIZING CHART

The following chart provides a convenient means of identifying the appropriate UTC® fitting. UTC® fittings are available in sizes B, C, D, E, F, and G. Product may best be identified by the millimeter markings on the nuts.

- Recommendations are based on the variation in average diameter permitted by standard. Out of roundness effects are not considered. Call for pipes not listed.
- The UTC® is pressure rated 200psi at 73°F and 150psi at 100°F.
- **CAUTION: Philmac does not recommend or warrant the use of UTC® Compression Fittings "inside the building" or for "hot water" applications.**

UTC® SELECTION RECOMMENDATIONS

Pipe Materials ^d	Standards	Nominal Pipe Size						
		1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
Copper (Type K, L, & M)	ASTM B88	na	na	B	C	D	E	na
CTS PE or PEX	ASTM D2737 / F876	na	na	B	C	D	E	na
PVC (IPS-OD)	ASTM D2241 / D1785	B	na	B^a & C	C^a & D	E	F	G
ABS (IPS-OD)	ASTM D1527/ D2661/ F628	B	na	B^a & C	C^a & D	E	F	G
Galvanized Steel/Steel (IPS-OD)	ASTM A53	B	na	B^a & C	C^a & D	E	F	G
Stainless Steel ^c	ASTM A312 / A358 / A376	B	na	B^a & C	C^a & D	E	F	G
PE IPS-OD (SDR)	ASTM D3035 / D2447	B	na	B^a & C	C^a & D	E	F	G
PE SDR 7 (IPS-ID)	ASTM D2239	na	na	C	D	na	na	na
PE SDR 9 (IPS-ID)	ASTM D2239	na	na	B	C	na	na	na
PE SDR 11.5 (IPS-ID)	ASTM D2239	na	na	B	C	E	F^a	na
PE SDR 15 (IPS-ID)	ASTM D2239	na	na	B	C	E	na	G
Lead Strong		na	B	C	D	E	na	na
Extra Strong		B	C	C	D	na	na	na
Double Extra Strong ^b		B	C	C^b & D^b	E	F	na	na

- a. There may be occasions when the pipe is slightly too large for this UTC® size, in which case the coupling can be loaded on pipe disassembled.
- b. If the OD of the 3/4" "Double Extra Strong" lead pipe is larger than 1.34", use a Size D UTC® fitting or shave the pipe to fit a Size C UTC® fitting.
- c. Recommendations assume pipe is standard IPS diameter. Some pipe manufacturers may make pipe to other outside diameter dimensions.
- d. UTC is not recommended for PE-AL-PE and PEX-AL-PEX composite pipes.
- na: not available** - A UTC® fitting for this size pipe is not available.

UTC® FITTINGS AVAILABLE: *see price sheet or call for other configurations.*

UTC® Repair Couplings

SIZE	PIPE OD RANGE		PART No.
	INCHES	MILLIMETERS	
Size B	0.83 - 1.06"	21 - 27 mm	75-608BB
Size C	1.06 - 1.34"	27 - 34 mm	75-608CC
Size D	1.34 - 1.54"	34 - 39 mm	75-608DD
Size E	1.54 - 1.69"	39 - 43 mm	75-608EE
Size F	1.85 - 1.93"	47 - 49 mm	75-608FF
Size G	2.32 - 2.40"	59 - 61 mm	75-608GG

UTC® Reducer Couplings

SIZES	PIPE OD RANGE, LARGE END	PIPE OD RANGE, SMALL END	PART No.
Size C to Size B	1.06 - 1.34" 27 - 34 mm	0.83 - 1.06" 21 - 27 mm	75-617CB
Size D to Size C	1.34 - 1.54" 34 - 39 mm	1.06 - 1.34" 27 - 34 mm	75-617DC
Size E to Size C	1.54 - 1.69" 39 - 43 mm	1.06 - 1.34" 27 - 34 mm	75-617EC
Size F to Size E	1.85 - 1.93" 47 - 49 mm	1.54 - 1.69" 39 - 43 mm	75-617FE

Direct all sales inquiries to:



HARCO Fittings
P.O. Box 10335
Lynchburg, VA 24506-0335
Phone: (434) 845-7094
Fax: (434) 845-8562

Harco Warehouses in:
Winter Haven, FL
Dallas, TX
Phoenix, AZ



PRICE LIST

PHILMAC®UTC® COMPRESSION FITTINGS

Universal Transition Couplings

Repair Coupling (No Stop) Compression x Compression

	Size	Part Number	Pipe Diameter Range		Ctn Qty	List Price
			inches	millimeters		
	B	75-608BB	0.83 - 1.06	21-27	50	\$25.37
	C	75-608CC	1.06 -1.34	27-34	25	\$36.86
	D	75-608DD	1.34 - 1.54	34-39	25	\$46.48
	E	75-608EE	1.54 - 1.69	39-43	20	\$42.19
	F	75-608FF	1.85 - 1.93	47-49	15	\$64.99
	G	75-608GG	2.32 - 2.40	59-61	10	\$80.66

Reducer Coupling Compression x Compression

	Size	Part Number	Pipe Diameter Range		Ctn Qty	List Price
			inches	millimeters		
	BA	75-617BA	0.83 - 1.06 x 0.59 - 0.83	21-27 x 15-21	50	\$27.28
	CB	75-617CB	1.06 -1.34 x 0.83 - 1.06	27-34 x 21-27	35	\$36.33
	DC	75-617DC	1.34 - 1.54 x 1.06 -1.34	34-39 x 27-34	25	\$68.18
	EC	75-617EC	1.54 - 1.69 x 1.06 -1.34	39-43 x 27-34	20	\$42.11
	FE	75-617FE	1.85 - 1.93 x 1.54 - 1.69	47-49 x 39-43	20	\$89.01

Tee Compression x Compression x Compression

	Size	Part Number	Pipe Diameter Range		Ctn Qty	List Price
			inches	millimeters		
	B*	75-612BBB	0.83 - 1.06	21-27	1	\$76.44

*Assembled from Service Tee and Male Adapter

90° Elbow Compression x Compression

	Size	Part Number	Pipe Diameter Range		Ctn Qty	List Price
			inches	millimeters		
	BB	75-618BB	0.83 - 1.06 x 0.83 - 1.06	21-27 x 21-27	40	\$41.24

Male Adapter Compression x MNPT

	Size	Part Number	Pipe Diameter Range		Ctn Qty	List Price
			inches	millimeters		
	B x 3/4"	75-6303B	0.83 - 1.06	21-27	80	\$23.84
	C x 1"	75-6304C	1.06 - 1.34	27-34	50	\$47.74

Service Tee Compression x Compression x FNPT

	Size	Part Number	Pipe Diameter Range		Ctn Qty	List Price
			inches	millimeters		
	B x 3/4"	75-651BB3	0.83 - 1.06 x 0.83 - 1.06	21-27 x 21-27	35	\$52.60

Installation Wrench

	Size	Part Number	Pipe Diameter Range		Ctn Qty	List Price
			inches	millimeters		
	B - C	75-602BC	1.06 -1.34 x 0.83 - 1.06	27-34 x 21-27	1	\$55.00

(Call for other configurations)

CAUTION: Philmac does not recommend or warrant the use of UTC Compression Fittings "inside the building" or in "hot water" applications.

HARRINGTON CORPORATION - PO BOX 10335 - LYNCHBURG, VIRGINIA 24506-0335
PHONE 800-825-7094 - FAX 434-845-8562 - E-MAIL: sales@harcofittings.com - WEB: www.harcofittings.com

UTC® SIZING CHART

The following chart provides a convenient means of identifying the appropriate UTC® fitting. UTC® fittings are available in sizes B, C, D, E, F, and G. Product may best be identified by the millimeter markings on the nuts.

- Recommendations are based on the variation in average diameter permitted by standard. Out of roundness effects are not considered. Call for pipes not listed.
- The UTC® is pressure rated 200psi at 73°F and 150psi at 100°F.

UTC® SELECTION RECOMMENDATIONS

Pipe Materials ^d	Standards	Nominal Pipe Size						
		1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
Copper (Type K, L, & M)	ASTM B88	na	na	B	C	D	E	na
CTS PE or PEX	ASTM D2737 / F876	na	na	B	C	D	E	na
PVC (IPS-OD)	ASTM D2241 / D1785	B	na	B^a & C	C^a & D	E	F	G
ABS (IPS-OD)	ASTM D1527/ D2661/ F628	B	na	B^a & C	C^a & D	E	F	G
Galvanized Steel / Steel (IPS-OD)	ASTM A53	B	na	B^a & C	C^a & D	E	F	G
Stainless Steel ^c	ASTM A312 / A358 / A376	B	na	B^a & C	C^a & D	E	F	G
PE IPS-OD (SDR)	ASTM D3035 / D2447	B	na	B^a & C	C^a & D	E	F	G
PE SDR 7 (IPS-ID)	ASTM D2239	na	na	C	D	na	na	na
PE SDR 9 (IPS-ID)	ASTM D2239	na	na	B	C	na	na	na
PE SDR 11.5 (IPS-ID)	ASTM D2239	na	na	B	C	E	F^a	na
PE SDR 15 (IPS-ID)	ASTM D2239	na	na	B	C	E	na	G
Lead Strong		na	B	C	D	E	na	na
Extra Strong		B	C	C	D	na	na	na
Double Extra Strong ^b		B	C	C^b & D^b	E	F	na	na

- There may be occasions when the pipe is slightly too large for this UTC® size, in which case the coupling can be loaded on pipe disassembled.
- If the OD of the 3/4" "Double Extra Strong" lead pipe is larger than 1.34", use a Size D UTC® fitting or shave the pipe to fit a Size C UTC® fitting.
- Recommendations assume pipe is standard IPS diameter. Some pipe manufacturers may make pipe to other outside diameter dimensions.
- UTC is not recommended for PE-AL-PE and PEX-AL-PEX composite pipes.

na: not available - A UTC® fitting for this size pipe is not available.

3 G™ COMPRESSION FITTINGS

Connect with the Next Generation.

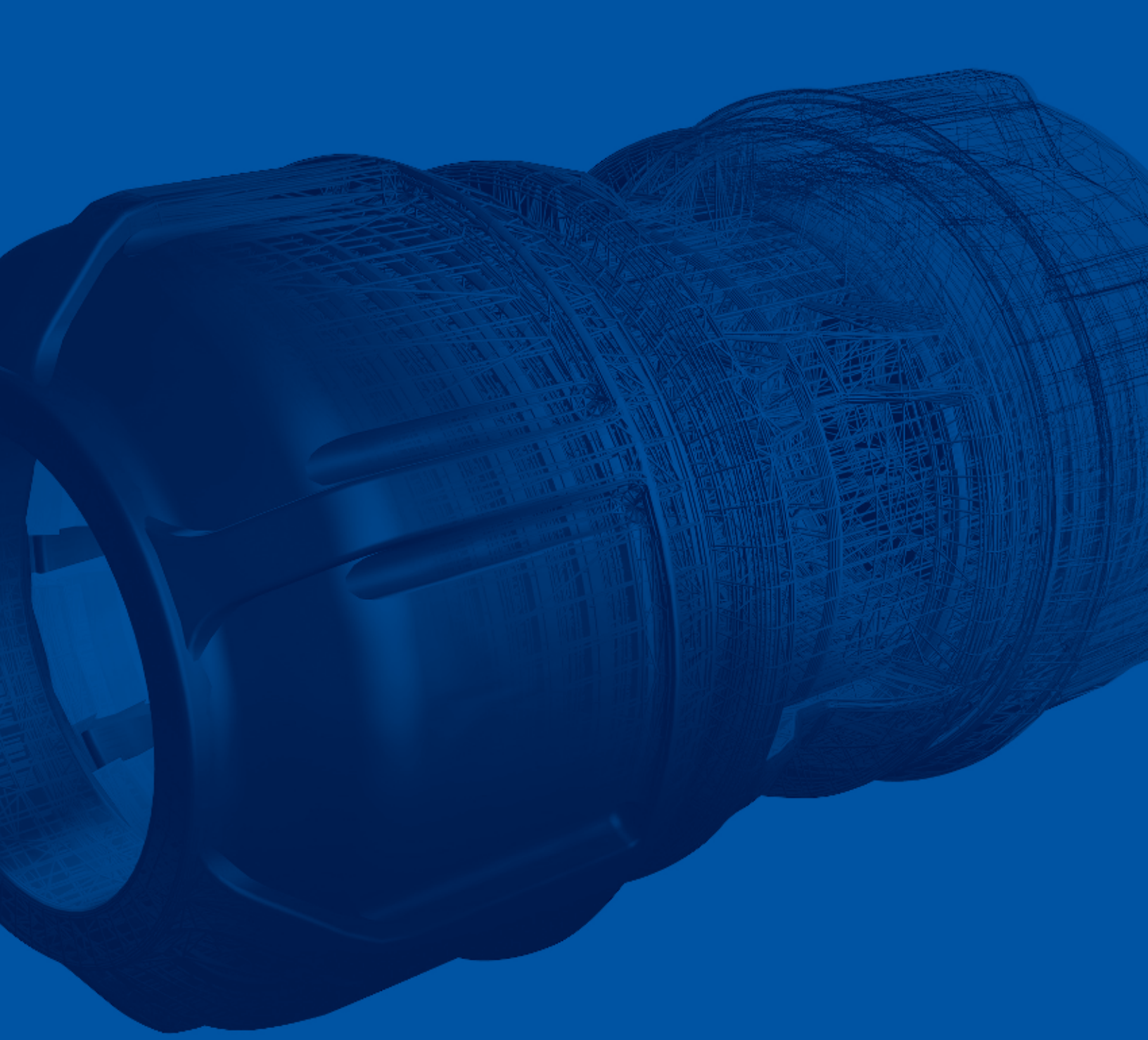


Engineered for Durability

Distributor in the United States for



The connection you can trust.



Philmac is well renowned for quality products and services. Philmac manufactures pipe fittings and valves under a Quality Assurance System assessed and approved to ISO 9001. Philmac has a NATA accredited laboratory and tests fittings and valves to international and national standards. Third party accreditation is carried out by SAI Global.

**INTRODUCING THE
3G™ RANGE OF
COMPRESSION FITTINGS.**

HARCO Fittings is a distributor of Philmac 3G™ fittings for the United States. Philmac is a global leader in the design and manufacture of plastic compression fittings that provide the ultimate in pipe connection flexibility. Australia-based Philmac was founded in 1929 and became part of the Aliaxis Group in Belgium in 2003.

3G™ is not just the new generation of PE pipe fittings – it is the next generation. The culmination of years of exhaustive research and development, utilization of cutting-edge manufacturing technology, and stringent testing, this new range of premium products represents Philmac's most exciting generation of plastic compression fittings.

Incorporating cutting edge technology, Philmac 3G™ fittings are easy to use and provide 230psi rated performance across the range. Importantly, all Philmac 3G™ fittings have been manufactured from high performance, advanced thermoplastic materials so they are resistant to corrosion and have the strength and durability to provide a 50+ year service life.

With the 3G™ range, the Philmac fitting line serves a common platform of fittings for all PE pipe applications in the North American market.

And the entire range of 3G™ fittings is fully approved for potable water, meeting NSF and CSA standards.

HARCO Fittings was founded in 1966 and is based in Lynchburg, Virginia with company warehouses in Winter Haven, Florida; Dallas, Texas; and Phoenix, Arizona. HARCO has developed next generation fittings including first compact DI MJ fittings, and the first injection molded gasketed PVC fittings in the USA for IPS size PVC water pipe, SDR 35 PVC sewer pipe, and C900 PVC water pipe. HARCO has developed numerous pipe fitting and valve innovations for the irrigation industry including swivel connection systems, knuckle restraints, clamshell restraints, and a line of DI isolation valves.



THE 3G RANGE OF PRODUCTS



High performance

- **Made from advanced thermoplastic materials:** 3G™ ID Series compression fittings are manufactured from lightweight high performance thermoplastic materials which, unlike metal fittings, resist corrosion, therefore significantly minimizing maintenance, repairs, and long-term costs. The materials are non-toxic and taint-free and also offer outstanding impact, UV, and chemical resistance.
- **Rated to 230psi:** 3G™ compression fittings are pressure rated to 230psi to meet the needs of high pressure systems.
- **50 year+ design life:** Built to withstand the toughest conditions to ensure longevity and durability, 3G™ compression fittings have a 50 year+ design life.

Complete coverage

- **Wide range:** The new 3G™ compression fitting range is comprehensive and includes straight and reducing joiners, tees, elbows, male and female adaptors and caps ranging from ½" to 2".

APPROVALS

The Philmac 3G™ range of compression fittings is CSA and NSF approved for potable water use.



CAUTION: Philmac does not recommend or warrant the use of 3G™ Compression Fittings “inside the building” or for “hot water” applications.



DIVERSE APPLICATIONS

Philmac products are used in diverse applications, from rural well systems, cottage pumps, municipal water applications, irrigation water supply, and plumbing.



CTS & IPS OD

3G™ compression fittings are not just the new generation of pipe fittings for CTS, IPS OD PE and PEX Pipes – they are the next generation. The culmination of years of exhaustive research and development, utilisation of cutting-edge manufacturing technology and stringent testing, this new range of premium products represents Philmac's most exciting generation of plastic compression fittings.

Featuring Philmac's unique Slide & Tighten™ technology, 3G™ compression fittings for CTS and IPS OD PE Pipes makes installation easy – no insert is required and no force is needed to push the pipe in. And a visual stop reduces the risk of overtightening.

The 3G™ range of plastic compression fittings are the product of Philmac's unrelenting commitment to continuous improvement and a culture based on innovation and ingenuity.

3G™ BENEFITS

Fast and easy installation

- **Slide & Tighten™ technology:** 3G™ compression fittings incorporate all the benefits of Philmac's unique Slide & Tighten™ technology. No pipe preparation is needed and no force is required to push the pipe past the seal, so installation couldn't be faster or easier. Simply insert the pipe into the fitting until the first point of resistance is felt, and then tighten the nut. Assembly is so easy you can even do it under live conditions. Also, there is no need to disassemble the fitting before use because 3G™ compression fittings are supplied pre-assembled and ready to use.
- **Compact design:** The size of the new Philmac 3G™ compression fitting has been kept to a minimum, making the fitting ideal to use in confined areas. In addition to making connections with minimal turns of the nut, the design and size of the fittings means that in installations taking place between two fixed points, the manipulation of the pipe into the fitting becomes easy.
- **Easy disassembly:** The fitting has been designed so the split collet is released as soon as the nut is backed off, making disassembly easy.

Complete security

- **Visual stop:** The flange on the body of the 3G™ compression fitting provides a visual stop to indicate when the nut is fully tightened. This removes any uncertainty from the installation process and eliminates the risk of over-tightening.
- **No loose components:** If the nut is removed there is no danger of losing components, as the collet and seal ring are retained in the body of the fitting. Losing components in the trench becomes a thing of the past.
- **Dynamic sealing method:** The mechanical advantage of the nut thread compresses the seal into position, eliminating resistance when inserting the pipe into the fitting so there is no risk of seal distortion or displacement.
- **Designed to minimize pipe twist:** The fitting has been designed to minimize pipe twist as the nut is tightened. Maximum pipe twist is approximately a quarter turn compared to one and a half turns with many other fittings. Pipe twist can impact on not only the connection you have just made but also on the connection at the other end of the line.

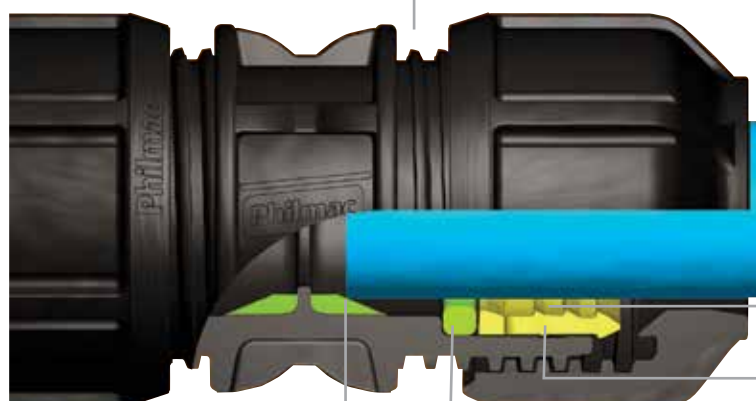
Complete coverage

- **Wide range:** The new 3G™ compression fittings range is comprehensive: straight and reducing joiners, tees, elbows, male and female adaptors and caps ranging from 3/4" to 2".
- **Copper connection kits:** Philmac's all new carborundum gripper design has been introduced into the 3G™ copper connection kit. With no steel components in the gripping mechanism, there is absolutely no risk of electrolysis.



HOW IT WORKS

FULLY OPEN



Fitting is pre-assembled ready to use in the open position with 2 threads showing.

Clearance between the pipe and fitting allows for easy insertion of the pipe.

Split collet, which is in relaxed position.

Seal, which is in relaxed position.

The pipe sits against the tapered wedges which minimizes pipe rotation.

FULLY CLOSED



Split collet bites into the pipe providing end load resistance.

Positive internal stop when nut meets flange of the body.

Nut and then split collet has fully compressed the seal. Seal ring compression is achieved by exploiting the mechanical advantage of the nut thread.

KITEC XPA

3G™ Kitec XPA compression fittings are not just the new generation of PE pipe fittings for Kitec XPA pipes – they are the next generation.

Featuring Philmac's unique Slide & Tighten™ technology, 3G™ Kitec XPA compression fittings make installation easy – no insert is required and no force is needed to push the pipe in. And with an internal seal cap, the fitting provides complete security and protection against corrosion of the Kitec XPA pipe.

The 3G™ Kitec XPA range of plastic compression fittings are the product of Philmac's unrelenting commitment to continuous improvement and a culture based on innovation and ingenuity.

3G™ BENEFITS

Fast and easy installation

- **Slide & Tighten™ technology:** 3G™ Kitec XPA compression fittings incorporate all the benefits of Philmac's unique Slide & Tighten™ technology. No force is required to push the pipe into the seal, so installation couldn't be faster or easier. Simply re-round the pipe, insert it into the fitting until the first point of resistance is felt, and then tighten the nut. Assembly is so easy you can even do it under live conditions. Also there is no need to disassemble the fitting before use because the 3G™ Kitec XPA compression fittings are supplied pre-assembled and ready to use.
- **Compact design:** The size of the new Philmac 3G™ Kitec XPA compression fitting has been kept to a minimum, making the fitting ideal to use in confined areas. In addition to making connections with minimal turns of the nut, the design and size of the fitting means that in installations taking place between two fixed points, the manipulation of the pipe into the fitting becomes easy.
- **Easy disassembly:** The fitting has been designed so the split collet is released as soon as the nut is backed off, making disassembly easy.

Complete security

- **Internal seal cap:** Philmac 3G™ Kitec XPA compression fittings come with a unique internal seal cap. This acts to not only provide superior sealing performance, but also to protect the cut end of the Kitec XPA pipe from exposure to water and therefore corrosion.
- **Visual stop:** The flange on the body of the 3G™ Kitec XPA compression fitting provides a visual stop to indicate when the nut is fully tightened. This removes any uncertainty from the installation process and eliminates the risk of over-tightening.
- **No loose components:** If the nut is removed there is no danger of losing components, as the collet and seal ring are retained in the body of the fitting. Losing components in the trench becomes a thing of the past.
- **Designed to minimize pipe twist:** The fitting has been designed to minimize pipe twist as the nut is tightened. Maximum pipe twist is approximately a half turn compared to one and a half turns with many other fittings. Pipe twist can impact on not only the connection you have just made but also on the connection at the other end of the line.

Complete coverage

- **Wide range:** The new 3G™ Kitec XPA compression fittings range is comprehensive: straight and reducing joiners, elbows and male and female adaptors ranging from ½" to 1".



HOW IT WORKS

FULLY OPEN



Fitting is pre-assembled ready to use in the open position with 2 threads showing.

Clearance between the pipe and fitting allows for easy insertion of the pipe.

Split collet, which is in relaxed position.

Seal, which is in relaxed position.

The pipe sits within the internal seal.

FULLY CLOSED



Split collet bites into the pipe providing end load resistance.

Positive internal stop when nut meets flange of the body.

Nut and then split collet has fully compressed the seal. Seal ring compression is achieved by exploiting the mechanical advantage of the nut thread.

Seal ring is compressed against pipe surface and inside of fitting to provide an effective seal and prevent corrosion.

ID SERIES

3G™ ID Series compression fittings represent the next generation of Philmac fittings for ID Series pipe.

Offering complete flexibility, this one fitting connects to all types of ID Series pipe, thereby eliminating the need to carry dedicated fittings.

Installation is easy with a simple to use insert assembly, and the fitting allows for straightforward disconnection and reconnection.

The 3G™ ID Series plastic compression fitting is the product of Philmac's unrelenting commitment to continuous improvement and a culture based on innovation and ingenuity.

3G™ BENEFITS

Flexibility

- **Universal fitting:** The 3G™ ID Series compression fitting connects to IPS, ID controlled pipe of SDR's 7,9, and 11.5. There is no need for dedicated fittings for different pipe so you can be sure you will always have the right fitting for the job.

Fast and easy installation

- **Insert assembly:** Installation involving double-ended products is made easy with 3G™ ID Series compression fittings, as the installer can simply hammer the insert in separately to each end of the pipe. This is far easier than other fittings which involve difficult manipulation of the barb assembly at one end of the connection.
- **Easy disassembly:** The 3G™ ID Series compression fitting enables the joint to be easily disconnected and reconnected. Simply by loosening the nut and taking the insert out of the body of the fitting, the pipe can be freed. This is a real advantage when the pipe is connected to a pump or other piece of equipment which may require relocation or disconnection.

Complete coverage

- **Wide range:** The new 3G™ compression fitting range is comprehensive and includes straight and reducing joiners, tees, elbows, male and female adaptors and caps ranging from ½" to 2".



HOW IT WORKS

FULLY OPEN



Insert fully installed into the pipe up to the shoulder of the insert.

Split collet is in the relaxed position

Insert with seal ring attached has been pushed back into the fitting body.

FULLY CLOSED



Split collet bites into the pipe providing end load resistance

Seal ring is compressed against the inside face of the fitting to provide a seal.

SUGGESTED SPECIFICATION

Fittings shall be Polypropylene Compression Fittings suitable for use on HDPE pipe. Fittings shall be long term rated for 230 psi complying with ISO 14236 and meet the dimensional and performance requirements of AWWA C800. Fittings shall comply with NSF 61 and shall be "listed" by NSF. Fitting "Bodies" shall be Polypropylene. Fitting "Compression Nuts" shall be Acetal. Joint seal activation shall be accomplished solely by the Compression Nut. Joint "Seals" shall not "interfere" with pipe insertion. No bevelling or lubrication of pipe shall be required. Fitting components shall not require dismantling prior to assembly on to pipe. Fittings shall be "3G" or "UTC" with "Slide & Tighten" capability as manufactured by Philmac Pty Ltd. and represented by The Harrington Corporation (Harco) of Lynchburg, VA (434) 845-7094.

CAUTION: Philmac does not recommend or warrant the use of 3G™ Compression Fittings "inside the building" or for "hot water" applications.

INSTALLATION INSTRUCTIONS FOR 3G CTS & IPS OD FITTINGS



1. Cut Pipe Square

Cut the pipe square. There is no need to prepare the pipe end. Chamfering or lubrication is not required.



2. Ready to Use Position

The fitting is pre-assembled and ready to use, however always ensure the nut is fully relaxed and 2 threads are showing before inserting the pipe.



3. Pipe Insertion

Insert the pipe until the first point of resistance is felt.



4. Nut Tightening

The nut should be tightened by hand and then firmly with a wrench. Tighten the nut all the way to the flange on the body of the fitting.



5. Fully Installed

Fitting is now fully installed.



6. Disassembly

To disassemble the fitting simply loosen the nut using a wrench until 2 threads are showing. Pipe will be released and can simply be pulled out of the fitting.

Note: Philmac recommends the use of PTFE tape on NPT threads to ensure a positive seal.

INSTALLATION INSTRUCTIONS FOR KITEC XPA 3G FITTINGS



1. Cut Pipe Square



2. Re-round Pipe

To ensure that the pipe sits easily in the internal seal, re-round the pipe using the tool supplied. This must be done on the inside and the outside of the pipe.



3. Pipe Insertion

Insert the pipe until the first point of resistance is felt.



4. Nut Tightening

The nut should be tightened by hand and then firmly with a wrench. Tighten the nut all the way to the flange on the body of the fitting.



5. Fully Installed

Fitting is now fully installed and ready to use.



6. Disassembly

To dis-assemble the fitting simply loosen the nut using a wrench until 2 threads are showing. Pipe will be released and can simply be pulled out of the fitting.

Note: Philmac recommends the use of PTFE tape on NPT threads to ensure a positive seal.

INSTALLATION INSTRUCTIONS FOR ID SERIES 3G FITTINGS



1. Cut Pipe Square

Cut the pipe square. There is no need to prepare the pipe end. Chamfering or lubrication is not required.



2. Remove Nut Components

Take nut off body of fitting and remove collet.



3. Place Nut Components on Pipe

Place nut and then collet on the pipe. Ensure the collet is placed with taper facing towards the nut.



4. Place Insert in Pipe

Remove the insert from the fitting and then place in end of pipe.



5. Insert Fully Installed

Tap insert fully (up to the shoulder of the insert) into the pipe using a flat object.



6. Push Insert into Body of Fitting

Push pipe with insert and seal ring assembly into the end of the central fitting. Ensure the seal ring is correctly positioned on the insert.



7. Position Collet and Nut

Slide collet up to insert shoulder and then engage nut on body of fitting and tighten by hand.



8. Tighten Nut with a Wrench

The nut must then be tightened with a wrench.



9. Fully Installed

The fitting is fully installed when the nut cannot be tightened further with reasonable force.

HARCO Fittings

Direct all sales inquiries to:

Main Office

P.O. Box 10335

Lynchburg, VA 24506-0335

Phone: (434) 845-7094

Fax: (434) 845-8562

Harco Warehouses in:

Winter Haven, FL

Dallas, TX

Phoenix, AZ



www.harcofittings.com

PF153-061715

Philmac[®]

an OAliaxis company

www.philmac.com.au

PHILMAC BALL VALVES

SIZES

• 3/4" to 2"

CONFIGURATIONS

- Compression ends
- FNPT ends
- Tee handle
- Curb Stop handle
- Others available

COMPRESSION END OPTIONS

- IPS OD controlled PE
- IPS PVC *with appropriate grip ring*
- IPS SDR PE
- CTS PE
- Universal Transition *limited sizes*

FEATURES

- 200 psi rating
- 2-way flow
- Install in any orientation
- Positive stop open-close
- Visual indication open-close
- Corrosion resistant
- Impact resistant
- UV resistant

MATERIALS

- Ball - Talc filled polypropylene
- Seal Ring - polypropylene
- Body - Glass filled nylon
- Tee Handle- Glass filled nylon
- Curb Stop Handle - Acetal
- Cap - Noryl GTX/GF Nylon
- Stem- Noryl GTX
- Stem screw- 316 SS
- O-rings- Nitrile

CALL FOR OTHER FEATURES AVAILABLE

- MNPT ends
- Locking handles
- Color coded handles
- Other sizes



About Philmac Ball Valves

Philmac ball valves manufactured of advanced thermoplastic materials with self-restraining 3G compression ends featuring "slide and tighten" design are now available from Harco. Available for PE pipes to all standards in sizes up to 2" they can be used with appropriate grip rings on IPS PVC pipe. Threaded ends are also available.

Irrigation systems using PE pipe can be installed without fusion equipment or adapters for conventional valves. This speeds installation, eliminates reliance on specially trained personnel, eliminates the inherent workmanship risk of fusion joints, and eliminates investment in fusion equipment.



THE HARRINGTON CORPORATION
P.O. Box 10335 • Lynchburg, VA 24506-0335
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PF156-112414

HARCO PRICE LIST

PHILMAC[®] IPS-OD Compression Fittings

IPS-OD Fittings for ASTM D3035 and ASTM F714 HDPE Pipe

Coupling w/ Stop Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-30833	100	0.25	\$8.65
	1	75-30844	65	0.46	\$12.67
	1¼	75-30855	35	0.76	\$20.81
	1½	75-30866	24	1.22	\$25.69
	2	75-30888	12	1.82	\$36.79
	3	75-3081212	8	4.80	\$144.65

Repair Coupling (no Stop) Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-30933	70	0.33	\$8.65
	1	75-30944	65	0.46	\$12.67
	1¼	75-30955	35	0.76	\$20.81
	1½	75-30966	24	1.22	\$25.69
	2	75-30988	12	1.82	\$36.79
	3	75-3091212	8	4.80	\$144.65

Reducer Coupling Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	1 x ¾	75-31743	70	0.39	\$15.69
	1¼ x 1	75-31754	40	0.62	\$29.54
	1½ x 1	75-31764	30	0.83	\$36.83
	1½ x 1¼	75-31765	25	0.98	\$44.57
	2 x 1	75-31784	20	1.23	\$48.38
	2 x 1¼	75-31785	20	1.50	\$51.72
	2 x 1½	75-31786	16	1.56	\$63.25

Female Adapter Compression x FNPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ½	75-33232	150	0.18	\$18.98
	¾ x ¾	75-33233	150	0.18	\$10.98
	1 x ½	75-33242	80	0.31	\$19.18
	1 x ¾	75-33243	80	0.31	\$19.18
	1	75-33244	80	0.31	\$11.18
	1¼ x ½	75-33252	50	0.50	\$29.53
	1¼ x ¾	75-33253	50	0.50	\$29.53
	1¼ x 1	75-33254	50	0.50	\$29.53
	1½	75-33255	50	0.50	\$16.53
	1½ x ½	75-33262	35	0.72	\$32.72
	1½ x ¾	75-33263	35	0.72	\$32.72
	1½ x 1	75-33264	35	0.72	\$32.72
	1½ x 1¼	75-33265	35	0.72	\$32.72
	1½	75-33266	35	0.72	\$19.72
	2 x ½	75-33282	20	1.10	\$44.56
	2 x ¾	75-33283	20	1.10	\$44.56
	2 x 1	75-33284	20	1.10	\$44.56
	2 x 1¼	75-33285	20	1.10	\$44.56
	2 x 1½	75-33286	20	1.10	\$44.56
	2	75-33288	20	1.10	\$31.56

NOTE: Reducing threads may be achieved with bushings.

Call for other configurations

CAUTION: Philmac® 3G™ does not recommend or warrant the use of 3G Compression Fittings "inside the building" or for "hot water" applications

HARRINGTON CORPORATION - PO BOX 10335 - LYNCHBURG, VIRGINIA 24506-0335
PHONE 434-845-7094 - FAX 434-845-8562 - E-MAIL: sales@harcofittings.com - WEB: www.harcofittings.com

HARCO PRICE LIST

PHILMAC[®] IPS-OD Compression Fittings

IPS-OD Fittings for ASTM D3035 and ASTM F714 HDPE Pipe

Male Adapter Compression x MNPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-33033	150	0.15	\$6.09
	1 x ¾	75-33043	90	0.25	\$7.90
	1	75-33044	90	0.28	\$7.90
	1¼ x 1	75-33054	55	0.45	\$12.50
	1½	75-33055	55	0.47	\$12.50
	1½	75-33066	35	0.71	\$14.89
	2	75-33088	22	0.98	\$21.12

90° Elbow Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-31833	80	0.27	\$12.65
	1	75-31844	50	0.51	\$12.96
	1¼	75-31855	30	0.85	\$22.93
	1½	75-31866	18	1.30	\$30.41
	2	75-31888	10	2.05	\$40.95
	3	75-3181212	3	26.00	\$154.73

45° Elbow Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	2	75-31988	30	1.70	\$45.66

Service Elbow Compression x FNPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ½	75-32032	150	0.19	\$18.00
	¾ x ¾	75-32033	120	0.19	\$10.00
	1 x ½	75-32042	75	0.32	\$25.88
	1 x ¾	75-32043	75	0.32	\$25.88
	1 x 1	75-32044	75	0.32	\$17.88
	1¼ x ½	75-32052	45	0.56	\$46.51
	1¼ x ¾	75-32053	45	0.56	\$46.51
	1¼ x 1	75-32054	45	0.56	\$46.51
	1¼ x 1¼	75-32055	45	0.56	\$33.51
	1½ x ½	75-32062	30	0.82	\$54.13
	1½ x ¾	75-32063	30	0.82	\$54.13
	1½ x 1	75-32064	30	0.82	\$54.13
	1½ x 1¼	75-32065	30	0.82	\$54.13
	1½ x 1½	75-32066	30	0.82	\$41.13
	2 x ½	75-32082	18	1.29	\$59.74
	2 x ¾	75-32083	18	1.29	\$59.74
	2 x 1	75-32084	18	1.29	\$59.74
	2 x 1¼	75-32085	18	1.29	\$59.74
	2 x 1½	75-32086	18	1.29	\$59.74
	2 x 2	75-32088	18	1.29	\$46.74

NOTE: Reducing threads may be achieved with bushings.

Call for other configurations

CAUTION: Philmac® 3G™ does not recommend or warrant the use of 3G Compression Fittings "inside the building" or for "hot water" applications

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HARCO PRICE LIST

PHILMAC[®] IPS-OD Compression Fittings

IPS-OD Fittings for ASTM D3035 and ASTM F714 HDPE Pipe

Tee Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-312333	50	0.44	\$17.65
	1 x 1	75-312444	30	0.75	\$17.93
	1¼ x 1¼	75-312555	18	1.30	\$31.30
	1½ x 1½	75-312666	12	1.62	\$39.95
	2 x 2	75-312888	8	3.03	\$61.56
	3 x 3	75-312121212	3	26.00	\$240.17

Reducing Tee Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	1 x ¾	75-313443	30	0.65	\$35.28
	1¼ x ¾	75-313553	20	0.93	\$44.94
	1½ x 1	75-313664	16	1.38	\$59.50
	2 x 1	75-313884	10	1.92	\$71.52
	2 x 1½	75-313886	9	2.52	\$91.84

Service Tee Compr x Compr x FNPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾ x ½	75-351332	60	0.36	\$24.37
	¾ x ¾ x ¾	75-351333	60	0.35	\$16.37
	1 x 1 x ½	75-351442	50	0.45	\$18.82
	1 x 1 x ¾	75-351443	45	0.52	\$18.82
	1 x 1 x 1	75-351444	40	0.64	\$18.82
	1¼ x 1¼ x ½	75-351552	20	1.12	\$38.12
	1¼ x 1¼ x ¾	75-351553	20	1.17	\$38.12
	1¼ x 1¼ x 1	75-351554	20	1.01	\$38.12
	1¼ x 1¼ x 1¼	75-351555	20	1.01	\$25.12
	1½ x 1½ x ½	75-351662	20	1.14	\$31.13
	1½ x 1½ x ¾	75-351663	18	1.18	\$31.13
	1½ x 1½ x 1	75-351664	15	1.44	\$44.13
	1½ x 1½ x 1¼	75-351665	15	1.44	\$44.13
	1½ x 1½ x 1½	75-351666	15	1.44	\$31.13
	2 x 2 x ½	75-351882	9	2.21	\$48.75
	2 x 2 x ¾	75-351883	9	2.21	\$48.75
	2 x 2 x 1	75-351884	9	2.21	\$48.75
	2 x 2 x 1¼	75-351885	9	2.21	\$48.75
	2 x 2 x 1½	75-351886	9	2.21	\$48.75
	2 x 2 x 2	75-351888	9	2.20	\$35.75

NOTE: Reducing threads may be achieved with bushings.

End Cap Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-3493	160	0.16	\$8.05
	1	75-3494	100	0.27	\$10.26
	1¼	75-3495	55	0.45	\$15.23
	1½	75-3496	35	0.69	\$21.21
	2	75-3498	20	1.08	\$29.46
	3	75-34912	4	15.00	\$116.97

Call for other configurations

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HARCO PRICE LIST

PHILMAC[®] IPS-OD Compression Fittings

IPS-OD Fittings for ASTM D3035 and ASTM F714 HDPE Pipe

ACME Service Tee Compression x ACME 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	2 x 1½	75-353886	8	1.40	\$28.34

ACME Service Elbow Compression x ACME 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	2 x 1½	75-32386	11	0.90	\$26.00

ACME Service Adapter Compression x ACME 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	2 x 1½	75-33386	20	0.70	\$24.84

Blanking Plugs Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	3	75-6983	250	0.08	\$3.10
	4	75-6984	180	0.10	\$3.68
	5	75-6985	150	0.10	\$4.33
	6	75-6986	100	0.10	\$4.75
	7	75-6988	80	0.20	\$6.32

NOTE:

- Size 3: fits ¾" IPS-OD, ¾" IPS-ID and 1" CTS
- Size 4: fits 1" IPS-OD, 1" IPS-ID and 1¼" CTS
- Size 5: fits 1¼" IPS-OD, 1¼" IPS-ID and 1½" CTS
- Size 6: fits 1½" IPS-OD and 1½" IPS-ID
- Size 7: fits 2" IPS-ID

Call for other configurations

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HARCO PRICE LIST

PHILMAC[®] IPS-OD Compression Fittings

IPS-OD Fittings for ASTM D3035 and ASTM F714 HDPE Pipe

Copper Tube Adapter Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-6943	150	0.09	\$10.23
	1	75-6944	100	0.14	\$12.13

NOTE: Goes into same size IPS-OD and IPS-ID fittings. Goes into one size larger CTS fittings.

CTS Adapter Kits Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-6963	400	0.10	\$3.37
	1	75-6964	250	0.10	\$5.22
	1¼	75-6965	150	0.20	\$8.90
	1½	75-6966	80	0.30	\$10.83
	2	75-6968	50	0.40	\$12.21

NOTE: Goes into one size smaller IPS-OD and IPS-ID fittings. CTS 2" Adapter can only be used in 2" CTS fittings; it cannot be used to convert an IPS-OD and IPS-ID fitting into a CTS fitting.

IPS-ID Adapter Kits Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-6873	220	0.11	\$8.89
	1	75-6874	140	0.18	\$10.77
	1¼	75-6875	70	0.31	\$11.62
	1½	75-6876	40	0.45	\$19.40
	2	75-6878	30	0.70	\$20.15

IPS-OD Joint Kits Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-6953	250	0.10	\$3.33
	1	75-6954	150	0.20	\$5.50
	1¼	75-6955	80	0.20	\$9.37
	1½	75-6956	50	0.30	\$11.40
	2	75-6958	35	0.50	\$12.59

PVC Collet Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-6893	300	0.02	\$2.88
	1	75-6894	240	0.03	\$3.36
	1¼	75-6895	200	0.03	\$5.29
	1½	75-6896	150	0.06	\$8.01
	2	75-6898	100	0.09	\$9.93

Installation Wrench 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	1	75-3024	6	0.30	\$52.00
	1½	75-3026	6	0.30	\$52.00
	2	75-3028	6	0.30	\$52.00

Call for other configurations

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Philmac Ball Valve

CONFIGURATION / SIZE	Part #	Ctn Qty	Unit Wt (Lbs)	List Price
Valves w/ Tee Handle				
PE IPS-OD				
Compression x Compression				
3/4"	76-30103	33		\$56.67
1"	76-30104	25		\$59.70
1 1/4"	76-30105	14		\$76.63
1 1/2"	76-30106	10		\$98.87
* 2"	76-30108			\$138.64
PE IPS-ID				
Compression x Compression				
3/4"	76-20103			\$70.25
1"	76-20104			\$73.80
1 1/4"	76-20105			\$82.60
1 1/2"	76-20106			\$120.21
* 2"	76-20108			\$133.94
PE CTS				
Compression x Compression				
1"	76-10104			\$60.48
1 1/4"	76-10105			\$68.80
1 1/2"	76-10106			\$80.51
* 2"	76-10108			\$127.90
FNPT x FNPT				
1"	76-70304	60		\$47.20
1 1/4"	76-70305	35		\$58.61
2"	76-70308	20		\$82.16
UTC x UTC				
* B	76-601BB			\$117.12
* C	76-601CC			\$158.38
* C x B	76-601CB			\$137.75
UTC x FNPT				
* B x 1	76-605B4			\$82.16
* C x 1	76-605C4			\$102.79
Valves w/ Curb Stop Handle				
PE IPS-OD				
Compression x Compression				
3/4"	76-30203			\$87.12
1 1/4"	76-30205	13		\$172.75
1 1/2"	76-30206	9		\$205.39
PE IPS-ID				
Compression x Compression				
3/4"	76-20203			\$100.70
1 1/4"	76-20205			\$178.71
1 1/2"	76-20206			\$226.73
PE CTS				
Compression x Compression				
3/4"	76-10203	25		\$90.48
1"	76-10204	25		\$90.92
1 1/2"	76-10206			\$176.63
Compression x MaleAWWA				
3/4"	76-10403	30		\$114.84

* Assembled from threaded valve and male adapter.

CALL FOR OTHER CONFIGURATIONS

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PRICE LIST

PHILMAC® 3G™ Compression Fittings

CTS-OD Fittings for ASTM D2737 PE and F876 PEX Water Service Pipe

Coupling w/ Stop Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-10833	150	0.20	\$8.72
	1 x 1	75-10844	90	0.26	\$10.94
	1¼ x 1¼	75-10855	65	0.45	\$16.00
	1½ x 1½	75-10866	35	0.73	\$26.25
	2 x 2	75-10888	24	1.14	\$32.45

Repair Coupling (no stop) Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-10933	150	0.20	\$8.72
	1 x 1	75-10944	90	0.26	\$10.94
	1¼ x 1¼	75-10955	65	0.45	\$16.00
	1½ x 1½	75-10966	35	0.73	\$26.25
	2 x 2	75-10988	24	1.14	\$32.45

Reducer Coupling Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	1 x ¾	75-11743	120	0.23	\$9.83
	1¼ x 1	75-11754	70	0.39	\$13.29
	1½ x 1¼	75-11765	40	0.84	\$26.06

Male Adapter Compression x MIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-13033	240	0.12	\$6.33
	1 x ¾	75-13043	150	0.16	\$7.70
	1 x 1	75-13044	150	0.17	\$7.95
	1¼ x 1	75-13054	90	0.28	\$9.98
	1¼ x 1¼	75-13055	90	0.29	\$10.96
	1½ x 1¼	75-13065	55	0.44	\$15.81
	1½ x 1½	75-13066	55	0.45	\$16.06
	2 x 1½	75-13086	35	0.66	\$18.80
	2 x 2	75-13088	32	0.67	\$19.06

Female Adapter Compression x FIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-13233	220	0.13	\$11.37
	1 x ¾	75-13243	150	0.18	\$12.01
	1 x 1	75-13244	130	0.18	\$12.18
	1¼ x 1	75-13254	80	0.29	\$15.19
	1¼ x 1¼	75-13255	75	0.29	\$25.78
	1½ x 1¼	75-13265	50	0.45	\$24.27
	1½ x 1½	75-13266	50	0.47	\$35.42
	2 x 2	75-13288	35	0.73	\$47.21

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PRICE LIST

PHILMAC® 3G™ Compression Fittings

CTS-OD Fittings for ASTM D2737 PE and F876 PEX Water Service Pipe

90 Degree Elbow Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-11833	140	0.21	\$9.14
	1 x 1	75-11844	80	0.29	\$10.85
	1¼ x 1¼	75-11855	50	0.50	\$16.34
	1½ x 1½	75-11866	30	0.80	\$28.95
	2 x 2	75-11888	18	1.21	\$38.39

90 Degree Elbow Compression x FIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-12033	190	0.14	\$13.08
	1 x ¾	75-12043	120	0.18	\$15.94
	1 x 1	75-12044	110	0.21	\$14.02
	1¼ x 1	75-12054	75	0.31	\$16.43
	1¼ x 1¼	75-12055	70	0.33	\$24.84
	1½ x 1¼	75-12065	45	0.50	\$25.89
	1½ x 1½	75-12066	45	0.52	\$25.42

Tee Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾ x ¾	75-112333	90	0.31	\$12.08
	1 x 1 x 1	75-112444	50	0.43	\$14.64
	1¼ x 1¼ x 1¼	75-112555	30	0.73	\$22.69
	1½ x 1½ x 1½	75-112666	18	1.19	\$39.54

Service Tee Compr x Compr x FIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾ x ¾	75-151333	110	0.24	\$18.84
	1 x 1 x ¾	75-151443	60	0.33	\$21.92
	1 x 1 x 1	75-151444	60	0.35	\$17.52
	1¼ x 1¼ x 1	75-151554	40	0.55	\$34.33
	1¼ x 1¼ x 1¼	75-151555	35	0.57	\$29.76
	1½ x 1½ x 1¼	75-151665	20	0.92	\$44.56
	1½ x 1½ x 1½	75-151666	20	0.98	\$44.69

End Cap Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-1493	250	0.11	\$6.11
	1	75-1494	160	0.15	\$7.69
	1¼	75-1495	100	0.25	\$10.89
	1½	75-1496	55	0.42	\$12.52

CTS x Kitec/XPA/Qline Coupling Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	½ x ½	75-45922	240		\$14.82
	¾ x ¾	75-45933	120		\$15.65
	1 x 1	75-45944	70		\$22.93

Copper Tube Adapter Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-6943	150	0.09	\$10.23
	1	75-6944	100	0.14	\$12.13

NOTE: For Copper Tube Adapter use in next larger size CTS compression end.

(Call for other configurations)

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PRICE LIST

PHILMAC[®] 3G[™] Compression Fittings

IPS-ID (SIDR) Fittings for ASTM D2239 HDPE Pipe

(For SIDR PE Pipe; SIDR's 11.5, 9, & 7 Only)

Coupling w/ Stop Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-20833	80		\$12.34
	1 x 1	75-20844	40		\$16.68
	1¼ x 1¼	75-20855	25		\$29.02
	1½ x 1½	75-20866	15		\$32.82
	2 x 2	75-20888	10		\$43.80

Reducer Coupling Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	1 x ¾	75-21743	60		\$16.42
	1¼ x 1	75-21754	40		\$31.64
	1½ x 1¼	75-21765	20		\$35.73
	2 x 1	75-21784	15		\$40.29
	2 x 1¼	75-21785	12		\$40.65
	2 x 1½	75-21786	12		\$41.66

Male Adapter Compression x MIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-23033	130		\$8.26
	1 x 1	75-23044	70		\$10.19
	1¼ x 1¼	75-23055	50		\$17.02
	1½ x 1½	75-23066	30		\$18.83
	2 x 2	75-23088	18		\$21.19

Female Adapter Compression x FIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-23233	120		\$12.30
	1 x 1	75-23244	60		\$15.08
	1¼ x 1¼	75-23255	50		\$24.95
	1½ x 1½	75-23266	35		\$28.80
	2 x 2	75-23288	18		\$26.48

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PRICE LIST

PHILMAC® 3G™ Compression Fittings

IPS-ID (SIDR) Fittings for ASTM D2239 HDPE Pipe

90 Degree Elbow Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-21833	70		\$12.26
	1 x 1	75-21844	40		\$17.00
	1¼ x 1¼	75-21855	30		\$31.54
	1½ x 1½	75-21866	14		\$70.44
	2 x 2	75-21888	8		\$52.41

90 Degree Elbow Compression x FIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾	75-22033	210		\$15.99
	1 x 1	75-22044	55		\$16.24
	1¼ x 1¼	75-22055	35		\$24.23
	1½ x 1½	75-22066	30		\$33.04
	2 x 2	75-22088	18		\$37.85

Tee Compression x Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾ x ¾	75-212333	40		\$16.85
	1 x 1 x1	75-212444	25		\$23.79
	1¼ x 1¼ x 1¼	75-212555	20		\$43.68
	1½ x 1½ x 1½	75-212666	12		\$50.97
	2 x 2x 1½	75-212886			\$54.07
	2 x 2 x 2	75-212888			\$55.27

Service Tee Compr x Compr x FIPT 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾ x ¾ x ¾	75-251333	60		\$22.63
	1 x 1 x1	75-251444	25		\$33.87
	1¼ x 1¼ x 1¼	75-251555			\$45.34
	1½ x 1½ x 1½	75-251666			\$51.35
	2 x 2 x 2	75-251888			\$55.27

End Cap Compression 	SIZE	PART NUMBER	CTN QTY	WT EACH	LIST PRICE
	¾	75-2493	130		\$6.61
	1	75-2494	70		\$9.83
	1¼	75-2495	50		\$15.77
	1½	75-2496	35		\$18.37
	2	75-2498	20		\$19.63

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ACME SERVICE FITTINGS FOR HDPE LATERALS

Compression x Acme



FEATURES

- 1½" Female Acme Outlets
- Full size fittings
- All plastic
- Internal restraint & seal
- Rated 230psi

BENEFITS

- Strength and reliability
- No fusion required
- Horizontal orientation of branch
- No holes cut in pipe
- No metal screws

CONFIGURATIONS

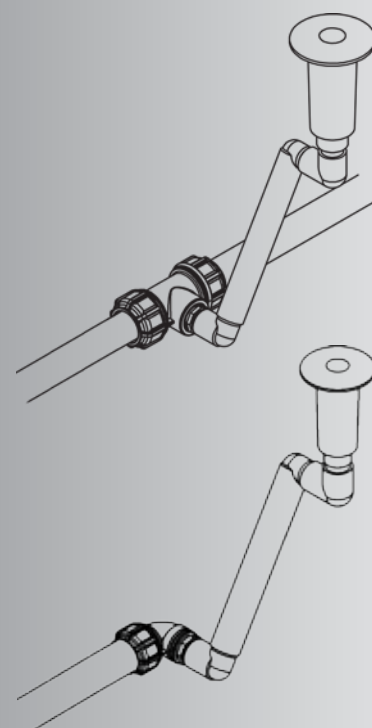
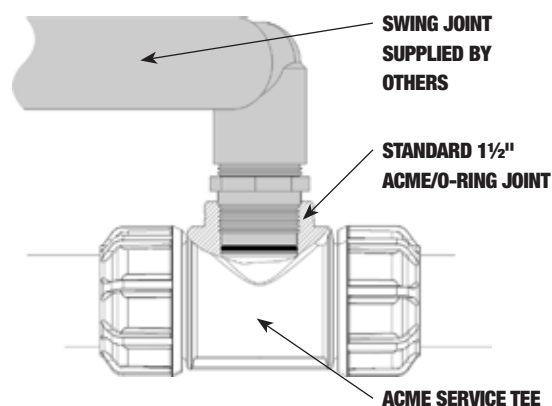
- Service Tee
- Service Elbow
- Service Adapter

SIZES

2" x 1½"

Looking for something more robust than PVC mechanical clamp saddles?

Available now are ACME Service Tees, Service Ells, and Service Adapters for 2" HDPE laterals in golf irrigation systems. Make the critical connection of the lateral to the swing joint serving the irrigation head with a full size fitting, branches directed horizontally, no holes drilled in pipe, and no metal screws to tighten. Having the industry standard 1½" Female Acme outlet for connection to swing joints, this polypropylene compression fitting provides for easy installation without fusion. Being full sized fittings, they will have better long-term strength and reliability than the saddles previously used.



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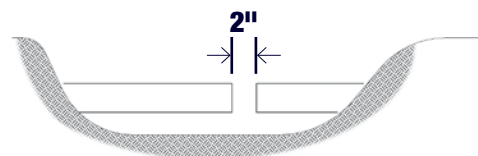
PF150-092211

ACME SERVICE FITTINGS FOR HDPE LATERALS

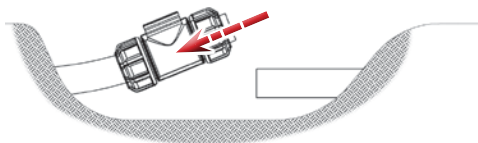
Compression x Acme

Tee Installation

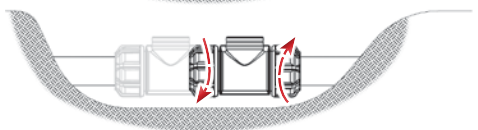
After "pulling lateral," excavate to expose pipe at required location.



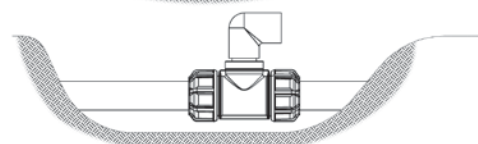
Cut 2" gap in pipe at desired position to serve branch of tee. Cuts should be square. Remove dirt, debris, shavings, and burrs from ends of pipes. Knock rawed edges off pipe at cut.



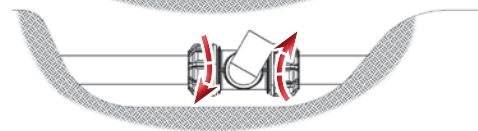
Lift one end of lateral and "load" service tee as shown.



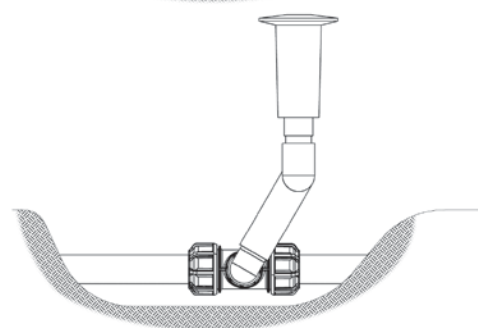
Align pipe ends. Pull service tee over joint. Center branch over gap. **HAND TIGHTEN NUTS.**



Confirming branch is centered over pipe gap, install swing joint inlet assembly into branch of service tee, threaded full "in."



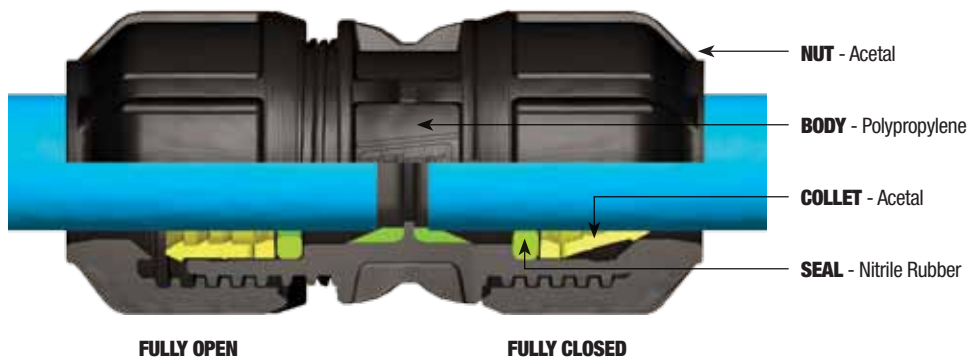
Rotate service tee to position branch horizontally and **FULLY TIGHTEN NUTS WITH WRENCH.** "Back off" swing joint inlet so that ell is pointing up and can be rotated to final position when the swing joint is installed.



Install the rest of the swing joint and irrigation head.

COMPRESSION x ACME SERVICE FITTINGS

SIZE	DESCRIPTION	PART #	WT
2 x 1½	ACME SERVICE TEE	75-353886	2.0
2 x 1½	ACME SERVICE ELL	75-32386	1.2
2 x 1½	ACME SERVICE ADAPTER	75-33386	1.0



MATERIALS OF CONSTRUCTION

Body: Polypropylene

Nut: Acetal

Collet: Acetal

Seal: Nitrile Rubber

SUGGESTED SPECIFICATION

Service Fittings for 2" laterals serving irrigation heads shall be polypropylene compression fittings in the form of tees, ells, or adapters with 1½" Female Acme outlets. Pressure Rating shall be 230psi. Installation shall not require disassembly of the fitting, the handling of any loose parts, or the beveling and lubrication of pipe. All service outlets shall be oriented horizontally. Fittings shall be as manufactured by Philmac Pty Ltd. and The Harrington Corporation (Harco) of Lynchburg, VA.

CAUTION

Philmac does not recommend or warrant the use of 3G™ Compression Fittings "inside the building" or for "hot water" applications.



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PF150-092211

HDPE FITTINGS

HDPE Fittings from HARCO	138
HDPE Price List	140



HDPE Fittings from HARCO



HARCO offers fittings for HDPE pipe starting at 1/2" through 36"+. Both IPS and DIPS available as well as FM fittings. HARCO has developed a set of sources with long and proven experience in the manufacture of pipe fittings for HDPE pipe. We offer special fittings for irrigation applications utilizing our Swivel and Lateral Isolation Valve Products.



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PF148-121709



**Philmac Universal
Transition Couplings**
3/4" - 2"



**Philmac Polypropylene
Compression Fittings**
3/4" - 2"



Molded Butt Fusion Fittings
1/2" - 12"



**Electrofusion Saddles
and Couplings**
3/4" - 32"



**Molded Socket
Fusion Fittings**
1/2" - 4"



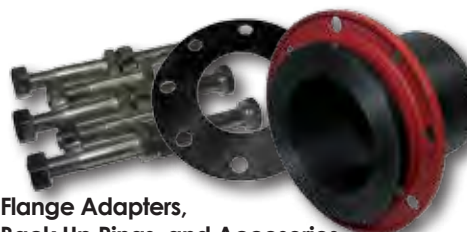
**MJ Adapters,
MJ Bell Adapters,
Accessories, and Restraints**
3" - 24"+



Fabricated Butt Fusion Fittings
3" - 36"+



Transition Fittings
1/2" - 6"+



**Flange Adapters,
Back Up Rings, and Accessories**
2" - 36"+



Stainless Steel Stiffeners
1 1/2" - 20"+



**Polyethylene
Ball Valves**
1/2" - 12"

HARCO PRICE LIST

IPS HDPE Fittings



ENGINEERED FOR DURABILITY



HARCO PRICE LIST

HDPE Fittings

Category	Pages	Discount Category
IPS Fabricated Butt Fusion Fittings		
Three-Segment Tees.....	4 - 6	A
Branch Saddle Reducing Tees.....	6 - 11	A
Three-Segment 90° Bends.....	12 - 14	A
Two-Segment 45° Bends.....	15 - 17	A
Two-Segment 22½° Bends.....	18 - 20	A
Swage Reducers.....	21	A
Wyes.....	22	A
Crosses.....	22	A
IPS Molded Butt Fusion Fittings		
Tees.....	23 - 24	B
90° Bends.....	24 - 25	B
45° Bends.....	25 - 26	B
Reducers.....	26 - 27	B
Caps.....	28	B
Wyes.....	29	B
IPS Transition Fittings, Adapters, and Stiffeners		
316 Stainless Steel Transition Fittings, Male Thread.....	30	C
Brass Transition Fittings, Male Thread.....	30	C
MJ Adapters with Stiffener.....	31	C
MJ Adapter Accessories.....	32	C
MJ Bell Adapters.....	32	C
Wedge Style Restraints for PVC.....	33	C
Flange Adapters.....	33 - 34	C
Ductile Iron Backup Rings.....	35 - 36	C
Stainless Steel Backup Rings.....	37	C
Flange Accessory Kits.....	38 - 39	C
Flange Accessory Kits, Stainless Steel.....	39 - 40	C
Stiffeners.....	41	C
Transitions: Butt Fusion x Spigot.....	41	C
Thrust Anchors.....	42	C
IPS Molded Socket Fusion Fittings		
Tees.....	42	D
Reducers.....	43	D
90° Bends.....	44	D
45° Bends.....	44	D
Couplings.....	45	D
Caps.....	45	D

Call for other configurations

HARCO PRICE LIST

HDPE Fittings

Category	Pages	Discount Category
IPS Molded Electrofusion Fittings and Related Adapters		
Couplings.....	46	E
Tees.....	46	E
90° Bends.....	47	E
45° Bends.....	47	E
Reducers.....	47	E
Coupling Caps.....	47	E
Swivel Saddles.....	48	E
Service Saddles.....	49 - 50	E
Branch Saddles.....	51	E
Flex Restraint.....	52	E
Flex Restraint Selection Chart.....	52	E
Female Acme Saddle.....	53	E
Butt Fusion x Female Acme Elbow.....	53	E
Miscellaneous Equipment.....	53	E
IPS Valves for HDPE Applications		
Ball Valves, Full Bore, Wrench Operated.....	54	F
Ball Valves, Full Bore, Lever Operated.....	54	F
Ball Valves, Full Bore, Gear Operated.....	54	F
Ball Valves, Full Bore, Wrench Operated, Natural Water.....	55	F
Ball Valves, Full Bore, Lever Operated, Natural Water.....	55	F
Gate Valves with PE Ends.....	56	F

1. Chlorine disinfectants present in potable water and reclaimed water in the right circumstances have reduced the life of PE piping due to accelerated depletion of the antioxidant package in the PE compound used to make the pipe and fittings. The PE industry is working on guidance for users to consider this effect in their system design. Monitor the Plastic Pipe Institute website (www.plasticpipe.org) for continuing developments.

2. Elevated temperatures and temperature changes can have significant effects on the behavior and performance and thus the design of a PE piping system. These circumstances are often present in above ground applications including the use of PE pipe in casing pipe. These applications are often characterized by long runs that can amplify effects and make necessary the consideration of Poisson's effect. Elevated temperature requires reduction of the effective pressure rating according to the PE industry recommended design procedure possibly resulting in the choice of a different DR. It also should be understood that elevated temperature reduces the "rating life" of PE pipe and fittings. This latter effect is particularly important at extreme temperatures such as those experienced in hot climates and/or due to direct sunlight. Directional fittings used in these applications take the brunt of the effects and should be structurally isolated. Consult the Plastic Pipe Institute website (www.plasticpipe.org) for details and guidance.

3. Elevated velocities require reduction of the effective pressure rating according to the PE industry recommended design procedure possibly resulting in the choice of a different DR. For instance, when velocities routinely exceed 6.3 feet per second in DR13.5 piping the pressure rating should be discounted. This can occur during daytime supplemental watering when flow management is overridden and multiple irrigation heads are operated simultaneously. Consult the Plastic Pipe Institute website (www.plasticpipe.org) for details and guidance.

4. Take note of the guidance at the bottom of each page and within each header of the fitting of interest.

Call for other configurations

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Tee

Three-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
8 x 8	17	17	65-38100808	32	\$148.73
	11	13.5	65-32100808	32	\$188.34
	11	11	65-31100808	32	\$169.44
10 x 10	17	17	65-38101010	22	\$236.21
	11	17	65-34101010	32	\$311.71
	11	15.5	65-33101010	32	\$311.71
	11	13.5	65-32101010	32	\$311.71
	11	11	65-31101010	32	\$269.10
	9	13.5	65-30101010	38	\$352.82
	9	11	65-29101010	38	\$352.82
	9	9	65-28101010	38	\$310.22
	7	11	65-27101010	48	\$405.15
	7	9	65-26101010	48	\$405.15
	7	7	65-25101010	48	\$363.29
12 x 12	17	17	65-38101212	37	\$266.86
	11	17	65-34101212	55	\$439.53
	11	15.5	65-33101212	55	\$439.53
	11	13.5	65-32101212	55	\$439.53
	11	11	65-31101212	55	\$381.98
	9	13.5	65-30101212	66	\$494.85
	9	11	65-29101212	66	\$494.85
	9	9	65-28101212	66	\$437.29
	7	11	65-27101212	82	\$568.10
	7	9	65-26101212	82	\$568.10
	7	7	65-25101212	82	\$510.55
14 x 14	17	17	65-38101414	46	\$423.09
	11	17	65-34101414	69	\$570.35
	11	15.5	65-33101414	69	\$570.35
	11	13.5	65-32101414	69	\$570.35
	11	11	65-31101414	69	\$493.35
	9	13.5	65-30101414	82	\$616.69
	9	11	65-29101414	82	\$616.69
	9	9	65-28101414	82	\$539.70
	7	11	65-27101414	102	\$743.77
	7	9	65-26101414	102	\$743.77
	7	7	65-25101414	102	\$666.77

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Tee

Three-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
16 x 16	17	17	65-38101616	76	\$524.75
	11	17	65-34101616	113	\$771.42
	11	15.5	65-33101616	113	\$771.42
	11	13.5	65-32101616	113	\$771.42
	11	11	65-31101616	113	\$645.10
	9	13.5	65-30101616	135	\$834.21
	9	11	65-29101616	135	\$834.21
	9	9	65-28101616	135	\$707.89
	7	11	65-27101616	167	\$1,007.63
	7	9	65-26101616	167	\$1,007.63
	7	7	65-25101616	167	\$880.56
18 x 18	17	17	65-38101818	100	\$693.68
	11	17	65-34101818	149	\$977.73
	11	15.5	65-33101818	149	\$977.73
	11	13.5	65-32101818	149	\$977.73
	11	11	65-31101818	149	\$843.18
	9	13.5	65-30101818	178	\$1,067.43
	9	11	65-29101818	178	\$1,067.43
	9	9	65-28101818	178	\$932.88
	7	11	65-27101818	221	\$1,244.59
	7	9	65-26101818	221	\$1,244.59
	7	7	65-25101818	221	\$1,110.04
20 x 20	17	17	65-38102020	140	\$843.18
	11	17	65-34102020	209	\$1,206.47
	11	15.5	65-33102020	209	\$1,206.47
	11	13.5	65-32102020	209	\$1,206.47
	11	11	65-31102020	209	\$1,033.05
	9	13.5	65-30102020	249	\$1,326.82
	9	11	65-29102020	249	\$1,326.82
	9	9	65-28102020	249	\$1,153.40
	7	11	65-27102020	309	\$1,563.77
	7	9	65-26102020	309	\$1,563.77
	7	7	65-25102020	309	\$1,390.35

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Tee

Three-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
22 x 22	17	17	65-38102222	178	\$1,045.76
	11	17	65-34102222	262	\$1,531.63
	11	15.5	65-33102222	262	\$1,531.63
	11	13.5	65-32102222	262	\$1,531.63
	11	11	65-31102222	262	\$1,326.82
	9	13.5	65-30102222	312	\$1,698.32
	9	11	65-29102222	312	\$1,698.32
	9	9	65-28102222	312	\$1,493.51
	7	11	65-27102222	390	\$2,022.74
	7	9	65-26102222	390	\$2,022.74
	7	7	65-25102222	390	\$1,817.18
24 x 24	17	17	65-38102424	216	\$1,389.61
	11	17	65-34102424	322	\$1,883.70
	11	15.5	65-33102424	322	\$1,883.70
	11	13.5	65-32102424	322	\$1,883.70
	11	11	65-31102424	322	\$1,644.50
	9	13.5	65-30102424	385	\$2,175.98
	9	11	65-29102424	385	\$2,175.98
	9	9	65-28102424	385	\$1,936.78
	7	11	65-27102424	481	\$2,572.15
	7	9	65-26102424	481	\$2,572.15
	7	7	65-25102424	481	\$2,332.20

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Branch Saddle Reducing Tee

Fabricated with pipe and sidewall fused branch saddle

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
4 x 3	11	17	65-34120403	12	\$239.42
	11	13.5	65-32120403	11	\$215.43
	11	11	65-31120403	11	\$207.43
	9	9	65-28120403	10	\$210.53
8 x 3	11	17	65-34120803	23	\$274.51
	11	13.5	65-32120803	20	\$249.26
	11	11	65-31120803	20	\$234.26
	9	9	65-28120803	20	\$241.49

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black**Standards:** AWWA C906

IPS Branch Saddle Reducing Tee

Fabricated with pipe and sidewall fused branch saddle

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
10 x 3	11	17	65-34121003	31	\$296.18
	11	13.5	65-32121003	27	\$269.90
	11	11	65-31121003	27	\$254.90
	9	9	65-28121003	27	\$264.19
10 x 4	11	17	65-34121004	45	\$383.90
	11	13.5	65-32121004	39	\$363.82
	11	11	65-31121004	39	\$348.82
	9	9	65-28121004	39	\$369.46
10 x 6	17	17	65-38121006	54	\$433.44
	11	13.5	65-32121006	47	\$460.82
	11	11	65-31121006	47	\$445.82
	9	9	65-28121006	47	\$460.27
12 x 3	17	17	65-38121203	46	\$288.96
	11	13.5	65-32121203	39	\$307.06
	11	11	65-31121203	39	\$292.06
	9	9	65-28121203	28	\$309.60
12 x 4	17	17	65-38121204	61	\$345.72
	11	13.5	65-32121204	53	\$367.94
	11	11	65-31121204	53	\$352.94
	9	9	65-28121204	39	\$371.52
12 x 6	17	17	65-38121206	71	\$477.82
	11	13.5	65-32121206	61	\$504.17
	11	11	65-31121206	61	\$489.17
	9	9	65-28121206	45	\$509.81
12 x 8	17	17	65-38121208	100	\$722.40
	11	13.5	65-32121208	89	\$786.94
	11	11	65-31121208	89	\$771.94
	9	9	65-28121208	69	\$787.42
14 x 3	17	17	65-38121403	54	\$318.89
	11	13.5	65-32121403	46	\$341.72
	11	11	65-31121403	46	\$321.98
	9	9	65-28121403	32	\$345.72
14 x 4	17	17	65-38121404	69	\$382.87
	11	13.5	65-32121404	60	\$508.03
	11	11	65-31121404	60	\$388.03
	9	9	65-28121404	45	\$415.90

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Branch Saddle Reducing Tee

Fabricated with pipe and sidewall fused branch saddle

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
14 x 6	17	17	65-38121406	80	\$524.26
	11	13.5	65-32121406	69	\$651.48
	11	11	65-31121406	69	\$531.48
	9	9	65-28121406	50	\$559.34
14 x 8	17	17	65-38121408	111	\$752.33
	11	13.5	65-32121408	97	\$951.79
	11	11	65-31121408	97	\$831.79
	9	9	65-28121408	75	\$866.88
14 x 10	17	17	65-38121410	111	\$970.08
	11	13.5	65-32121410	97	\$1,217.02
	11	11	65-31121410	97	\$1,097.02
	9	9	65-28121410	75	\$1,134.17
16 x 3	17	17	65-38121603	68	\$371.52
	11	13.5	65-32121603	58	\$498.74
	11	11	65-31121603	58	\$378.74
	9	9	65-28121603	40	\$415.90
16 x 4	17	17	65-38121604	85	\$442.73
	11	13.5	65-32121604	73	\$572.02
	11	11	65-31121604	73	\$452.02
	9	9	65-28121604	53	\$489.17
16 x 6	17	17	65-38121606	97	\$600.62
	11	13.5	65-32121606	83	\$726.82
	11	11	65-31121606	83	\$606.82
	9	9	65-28121606	60	\$648.10
16 x 8	17	17	65-38121608	129	\$816.31
	11	13.5	65-32121608	113	\$1,031.26
	11	11	65-31121608	113	\$911.26
	9	9	65-28121608	85	\$982.46
16 x 10	17	17	65-38121610	129	\$1,044.38
	11	13.5	65-32121610	113	\$1,293.38
	11	11	65-31121610	113	\$1,173.38
	9	9	65-28121610	85	\$1,226.02
16 x 12	17	17	65-38121612	129	\$1,307.54
	11	13.5	65-32121612	113	\$1,452.31
	11	11	65-31121612	113	\$1,332.31
	9	9	65-28121612	85	\$1,391.14

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Branch Saddle Reducing Tee

Fabricated with pipe and sidewall fused branch saddle

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
18 x 3	17	17	65-38121803	84	\$417.96
	11	13.5	65-32121803	71	\$543.12
	11	11	65-31121803	71	\$423.12
	9	9	65-28121803	49	\$467.50
18 x 4	17	17	65-38121804	102	\$501.55
	11	13.5	65-32121804	88	\$624.65
	11	11	65-31121804	88	\$504.65
	9	9	65-28121804	63	\$557.28
18 x 6	17	17	65-38121806	117	\$653.26
	11	13.5	65-32121806	99	\$782.54
	11	11	65-31121806	99	\$662.54
	9	9	65-28121806	71	\$713.11
18 x 8	17	17	65-38121808	149	\$898.87
	11	13.5	65-32121808	129	\$1,085.95
	11	11	65-31121808	129	\$965.95
	9	9	65-28121808	97	\$1,026.84
18 x 10	17	17	65-38121810	149	\$1,145.52
	11	13.5	65-32121810	129	\$1,358.40
	11	11	65-31121810	129	\$1,238.40
	9	9	65-28121810	97	\$1,302.38
18 x 12	17	17	65-38121812	149	\$1,364.30
	11	13.5	65-32121812	129	\$1,518.36
	11	11	65-31121812	129	\$1,398.36
	9	9	65-28121812	97	\$1,468.54
20 x 3	17	17	65-38122003	59	\$522.19
	11	13.5	65-32122003	86	\$687.36
	11	11	65-31122003	86	\$527.35
	9	9	65-28122003	101	\$591.34
20 x 4	17	17	65-38122004	74	\$593.40
	11	13.5	65-32122004	104	\$761.66
	11	11	65-31122004	104	\$601.66
	9	9	65-28122004	121	\$668.74
20 x 6	17	17	65-38122006	83	\$755.42
	11	13.5	65-32122006	118	\$926.78
	11	11	65-31122006	118	\$766.78
	9	9	65-28122006	138	\$836.95

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Branch Saddle Reducing Tee

Fabricated with pipe and sidewall fused branch saddle

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
20 x 8	17	17	65-38122008	110	\$1,002.07
	11	13.5	65-32122008	149	\$1,239.47
	11	11	65-31122008	149	\$1,079.47
	9	9	65-28122008	172	\$1,158.94
20 x 10	17	17	65-38122010	110	\$1,247.69
	11	13.5	65-32122010	149	\$1,513.98
	11	11	65-31122010	149	\$1,353.98
	9	9	65-28122010	172	\$1,442.74
20 x 12	17	17	65-38122012	110	\$1,518.07
	11	13.5	65-32122012	149	\$1,678.07
	11	11	65-31122012	149	\$1,518.07
	9	9	65-28122012	172	\$1,611.98
22 x 3	17	17	65-38122203	69	\$584.11
	11	13.5	65-32122203	102	\$744.43
	11	11	65-31122203	102	\$594.43
	9	9	65-28122203	121	\$670.80
22 x 4	17	17	65-38122204	86	\$663.58
	11	13.5	65-32122204	122	\$841.12
	11	11	65-31122204	122	\$681.12
	9	9	65-28122204	143	\$767.81
22 x 6	17	17	65-38122206	96	\$828.70
	11	13.5	65-32122206	138	\$1,001.08
	11	11	65-31122206	138	\$841.08
	9	9	65-28122206	162	\$928.80
22 x 8	17	17	65-38122208	124	\$1,076.38
	11	13.5	65-32122208	170	\$1,321.00
	11	11	65-31122208	170	\$1,161.00
	9	9	65-28122208	198	\$1,258.01
22 x 10	17	17	65-38122210	124	\$1,381.85
	11	13.5	65-32122210	170	\$1,602.74
	11	11	65-31122210	170	\$1,442.74
	9	9	65-28122210	198	\$1,544.90
22 x 12	17	17	65-38122212	124	\$1,574.83
	11	13.5	65-32122212	170	\$1,769.92
	11	11	65-31122212	170	\$1,609.92
	9	9	65-28122212	198	\$1,725.50

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Branch Saddle Reducing Tee

Fabricated with pipe and sidewall fused branch saddle

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
22 x 14	17	17	65-38122214	197	\$2,068.13
	11	13.5	65-32122214	261	\$2,149.80
	11	11	65-31122214	261	\$2,089.80
	9	9	65-28122214	299	\$2,220.86
24 x 3	17	17	65-38122403	82	\$655.32
	11	13.5	65-32122403	120	\$828.74
	11	11	65-31122403	120	\$668.74
	9	9	65-28122403	142	\$851.40
24 x 4	17	17	65-38122404	99	\$743.04
	11	13.5	65-32122404	141	\$912.33
	11	11	65-31122404	141	\$752.33
	9	9	65-28122404	166	\$849.34
24 x 6	17	17	65-38122406	111	\$918.48
	11	13.5	65-32122406	159	\$1,085.70
	11	11	65-31122406	159	\$925.70
	9	9	65-28122406	188	\$1,026.84
24 x 8	17	17	65-38122408	139	\$1,151.71
	11	13.5	65-32122408	194	\$1,412.85
	11	11	65-31122408	194	\$1,252.85
	9	9	65-28122408	225	\$1,368.43
24 x 10	17	17	65-38122410	139	\$1,498.46
	11	13.5	65-32122410	194	\$1,695.62
	11	11	65-31122410	194	\$1,535.62
	9	9	65-28122410	225	\$1,659.46
24 x 12	17	17	65-38122412	139	\$1,679.06
	11	13.5	65-32122412	194	\$1,873.12
	11	11	65-31122412	194	\$1,713.12
	9	9	65-28122412	225	\$1,845.22
24 x 14	17	17	65-38122414	215	\$2,161.01
	11	13.5	65-32122414	289	\$2,359.19
	11	11	65-31122414	289	\$2,199.19
	9	9	65-28122414	332	\$2,346.77

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black**Standards:** AWWA C906

IPS 90° Bend

Three-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
8	17	17	65-382008	25	\$129.14
	11	13.5	65-322008	25	\$183.49
	11	11	65-312008	25	\$155.79
	9	11	65-292008	30	\$197.34
	9	9	65-282008	30	\$197.34
10	17	17	65-382010	21	\$179.26
	11	17	65-342010	31	\$256.54
	11	15.5	65-332010	31	\$256.54
	11	13.5	65-322010	31	\$256.54
	11	11	65-312010	31	\$216.26
	9	13.5	65-302010	37	\$272.17
	9	11	65-292010	37	\$272.17
	9	9	65-282010	37	\$232.71
	7	11	65-272010	43	\$303.41
	7	9	65-262010	43	\$303.41
	7	7	65-252010	43	\$262.31
12	17	17	65-382012	34	\$222.01
	11	17	65-342012	51	\$324.80
	11	15.5	65-332012	51	\$324.80
	11	13.5	65-322012	51	\$324.80
	11	11	65-312012	51	\$281.22
	9	13.5	65-302012	61	\$352.75
	9	11	65-292012	61	\$352.75
	9	9	65-282012	61	\$307.53
	7	11	65-272012	72	\$384.81
	7	9	65-262012	72	\$384.81
	7	7	65-252012	72	\$364.27
14	17	17	65-382014	42	\$277.93
	11	17	65-342014	62	\$424.28
	11	15.5	65-332014	62	\$424.28
	11	13.5	65-322014	62	\$424.28
	11	11	65-312014	62	\$341.24
	9	13.5	65-302014	75	\$468.69
	9	11	65-292014	75	\$468.69
	9	9	65-282014	75	\$386.46
	7	11	65-272014	89	\$518.02
	7	9	65-262014	89	\$518.02
	7	7	65-252014	89	\$434.15

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 90° Bend

Three-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
16	17	17	65-382016	56	\$354.40
	11	17	65-342016	84	\$534.47
	11	15.5	65-332016	84	\$534.47
	11	13.5	65-322016	84	\$534.47
	11	11	65-312016	84	\$447.30
	9	13.5	65-302016	100	\$591.21
	9	11	65-292016	100	\$591.21
	9	9	65-282016	100	\$489.25
	7	11	65-272016	120	\$662.74
	7	9	65-262016	120	\$662.74
	7	7	65-252016	120	\$564.07
18	17	17	65-382018	76	\$430.05
	11	17	65-342018	113	\$662.74
	11	15.5	65-332018	113	\$662.74
	11	13.5	65-322018	113	\$662.74
	11	11	65-312018	113	\$558.32
	9	13.5	65-302018	135	\$747.43
	9	11	65-292018	135	\$747.43
	9	9	65-282018	135	\$634.78
	7	11	65-272018	161	\$853.50
	7	9	65-262018	161	\$853.50
	7	7	65-252018	161	\$740.03
20	17	17	65-382020	98	\$534.47
	11	17	65-342020	147	\$853.50
	11	15.5	65-332020	147	\$853.50
	11	13.5	65-322020	147	\$853.50
	11	11	65-312020	147	\$719.48
	9	13.5	65-302020	175	\$922.57
	9	11	65-292020	175	\$922.57
	9	9	65-282020	175	\$784.43
	7	11	65-272020	209	\$1,136.36
	7	9	65-262020	209	\$1,136.36
	7	7	65-252020	209	\$998.22

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 90° Bend

Three-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
22	17	17	65-382022	134	\$692.34
	11	17	65-342022	201	\$1,068.93
	11	15.5	65-332022	201	\$1,068.93
	11	13.5	65-322022	201	\$1,068.93
	11	11	65-312022	201	\$905.30
	9	13.5	65-302022	239	\$1,184.04
	9	11	65-292022	239	\$1,184.04
	9	9	65-282022	239	\$1,019.59
	7	11	65-272022	286	\$1,398.65
	7	9	65-262022	286	\$1,398.65
	7	7	65-252022	286	\$1,233.38
24	17	17	65-382024	167	\$809.09
	11	17	65-342024	250	\$1,253.11
	11	15.5	65-332024	250	\$1,253.11
	11	13.5	65-322024	250	\$1,253.11
	11	11	65-312024	250	\$1,057.42
	9	13.5	65-302024	298	\$1,414.27
	9	11	65-292024	298	\$1,414.27
	9	9	65-282024	298	\$1,216.93
	7	11	65-272024	356	\$1,642.86
	7	9	65-262024	356	\$1,642.86
	7	7	65-252024	356	\$1,445.52

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 45° Bend

Two-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
8	17	17	65-382308	12	\$98.23
	11	13.5	65-322308	12	\$134.32
	11	11	65-312308	12	\$109.14
10	17	17	65-382310	12	\$107.64
	11	17	65-342310	16	\$155.48
	11	15.5	65-332310	16	\$155.48
	11	13.5	65-322310	16	\$155.48
	11	11	65-312310	16	\$119.60
	9	13.5	65-302310	18	\$177.16
	9	11	65-292310	18	\$177.16
	9	9	65-282310	18	\$141.28
	7	11	65-272310	22	\$193.61
	7	9	65-262310	22	\$193.61
	7	7	65-252310	22	\$156.23
12	17	17	65-382312	21	\$130.82
	11	17	65-342312	32	\$207.81
	11	15.5	65-332312	32	\$207.81
	11	13.5	65-322312	32	\$207.81
	11	11	65-312312	32	\$165.95
	9	13.5	65-302312	38	\$219.77
	9	11	65-292312	38	\$219.77
	9	9	65-282312	38	\$177.91
	7	11	65-272312	45	\$250.42
	7	9	65-262312	45	\$250.42
	7	7	65-252312	45	\$209.30
14	17	17	65-382314	27	\$164.45
	11	17	65-342314	40	\$277.33
	11	15.5	65-332314	40	\$277.33
	11	13.5	65-322314	40	\$277.33
	11	11	65-312314	40	\$202.58
	9	13.5	65-302314	48	\$298.26
	9	11	65-292314	48	\$298.26
	9	9	65-282314	48	\$222.76
	7	11	65-272314	58	\$331.89
	7	9	65-262314	58	\$331.89
	7	7	65-252314	58	\$256.40

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 45° Bend

Two-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
16	17	17	65-382316	37	\$213.04
	11	17	65-342316	55	\$354.32
	11	15.5	65-332316	55	\$354.32
	11	13.5	65-322316	55	\$354.32
	11	11	65-312316	55	\$263.12
	9	13.5	65-302316	66	\$388.70
	9	11	65-292316	66	\$388.70
	9	9	65-282316	66	\$295.27
	7	11	65-272316	79	\$429.82
	7	9	65-262316	79	\$429.82
	7	7	65-252316	79	\$337.87
18	17	17	65-382318	47	\$251.16
	11	17	65-342318	70	\$433.55
	11	15.5	65-332318	70	\$433.55
	11	13.5	65-322318	70	\$433.55
	11	11	65-312318	70	\$329.65
	9	13.5	65-302318	83	\$479.90
	9	11	65-292318	83	\$479.90
	9	9	65-282318	83	\$313.21
	7	11	65-272318	100	\$551.66
	7	9	65-262318	100	\$551.66
	7	7	65-252318	100	\$448.50
20	17	17	65-382320	60	\$309.47
	11	17	65-342320	90	\$544.93
	11	15.5	65-332320	90	\$544.93
	11	13.5	65-322320	90	\$544.93
	11	11	65-312320	90	\$419.35
	9	13.5	65-302320	108	\$589.78
	9	11	65-292320	108	\$589.78
	9	9	65-282320	108	\$465.70
	7	11	65-272320	129	\$711.62
	7	9	65-262320	129	\$711.62
	7	7	65-252320	129	\$587.54

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 45° Bend

Two-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
22	17	17	65-382322	76	\$383.47
	11	17	65-342322	114	\$654.07
	11	15.5	65-332322	114	\$654.07
	11	13.5	65-322322	114	\$654.07
	11	11	65-312322	114	\$503.82
	9	13.5	65-302322	136	\$716.86
	9	11	65-292322	136	\$716.86
	9	9	65-282322	136	\$566.61
	7	11	65-272322	162	\$837.20
	7	9	65-262322	162	\$837.20
	7	7	65-252322	162	\$688.45
24	17	17	65-382324	94	\$446.26
	11	17	65-342324	141	\$722.84
	11	15.5	65-332324	141	\$722.84
	11	13.5	65-322324	141	\$722.84
	11	11	65-312324	141	\$573.34
	9	13.5	65-302324	168	\$849.91
	9	11	65-292324	168	\$849.91
	9	9	65-282324	168	\$679.48
	7	11	65-272324	201	\$1,002.40
	7	9	65-262324	201	\$1,002.40
	7	7	65-252324	201	\$824.50

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 22½° Bend

Two-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3	11	17	65-342603	1	\$73.56
	11	15.5	65-332603	1	\$73.56
	11	13.5	65-322603	1	\$73.56
	11	11	65-312603	1	\$49.34
	9	11	65-292603	1	\$78.94
	9	9	65-282603	1	\$53.82
	7	9	65-262603	2	\$81.64
	7	7	65-252603	2	\$56.52
4	11	17	65-342604	2	\$81.64
	11	15.5	65-332604	2	\$81.64
	11	13.5	65-322604	2	\$81.64
	11	11	65-312604	2	\$56.52
	9	11	65-292604	3	\$84.32
	9	9	65-282604	3	\$59.21
	7	9	65-262604	3	\$86.11
	7	7	65-252604	3	\$61.90
6	17	17	65-382606	6	\$82.52
	11	17	65-342606	6	\$113.03
	11	15.5	65-332606	6	\$113.03
	11	13.5	65-322606	6	\$113.03
	11	11	65-312606	6	\$82.52
	9	11	65-292606	7	\$115.72
	9	9	65-282606	7	\$85.22
	7	9	65-262606	7	\$121.10
	7	7	65-252606	7	\$89.70
8	17	17	65-382608	10	\$87.91
	11	17	65-342608	10	\$129.17
	11	15.5	65-332608	10	\$129.17
	11	13.5	65-322608	10	\$129.17
	11	11	65-312608	10	\$95.09
	9	11	65-292608	12	\$134.56
	9	9	65-282608	12	\$100.46
	7	9	65-262608	15	\$147.11
	7	7	65-252608	15	\$113.03

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 22½° Bend

Two-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
10	17	17	65-382610	11	\$107.64
	11	17	65-342610	17	\$155.48
	11	15.5	65-332610	17	\$155.48
	11	13.5	65-322610	17	\$155.48
	11	11	65-312610	17	\$119.60
	9	11	65-292610	20	\$177.16
	9	9	65-282610	20	\$141.28
	7	9	65-262610	24	\$193.61
	7	7	65-252610	24	\$156.23
12	17	17	65-382612	19	\$130.82
	11	17	65-342612	28	\$207.81
	11	15.5	65-332612	28	\$207.81
	11	13.5	65-322612	28	\$207.81
	11	11	65-312612	28	\$165.95
	9	11	65-292612	34	\$219.77
	9	9	65-282612	34	\$177.91
	7	9	65-262612	42	\$250.42
	7	7	65-252612	42	\$209.30
14	17	17	65-382614	23	\$164.45
	11	17	65-342614	35	\$277.33
	11	15.5	65-332614	35	\$277.33
	11	13.5	65-322614	35	\$277.33
	11	11	65-312614	35	\$202.58
	9	11	65-292614	41	\$298.26
	9	9	65-282614	41	\$222.76
	7	9	65-262614	51	\$331.89
	7	7	65-252614	51	\$256.40
16	17	17	65-382616	31	\$213.04
	11	17	65-342616	46	\$354.32
	11	15.5	65-332616	46	\$354.32
	11	13.5	65-322616	46	\$354.32
	11	11	65-312616	46	\$263.12
	9	11	65-292616	55	\$388.70
	9	9	65-282616	55	\$295.27
	7	9	65-262616	66	\$429.82
	7	7	65-252616	66	\$337.87

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS 22½° Bend

Two-Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
18	17	17	65-382618	41	\$251.16
	11	17	65-342618	60	\$433.55
	11	15.5	65-332618	60	\$433.55
	11	13.5	65-322618	60	\$433.55
	11	11	65-312618	60	\$329.65
	9	11	65-292618	71	\$479.90
	9	9	65-282618	71	\$313.21
	7	9	65-262618	85	\$551.66
	7	7	65-252618	85	\$448.50
20	17	17	65-382620	51	\$309.47
	11	17	65-342620	75	\$544.93
	11	15.5	65-332620	75	\$544.93
	11	13.5	65-322620	75	\$544.93
	11	11	65-312620	75	\$419.35
	9	11	65-292620	90	\$589.78
	9	9	65-282620	90	\$465.70
	7	9	65-262620	108	\$711.62
	7	7	65-252620	108	\$587.54
22	17	17	65-382622	63	\$383.47
	11	17	65-342622	93	\$654.07
	11	15.5	65-332622	93	\$654.07
	11	13.5	65-322622	93	\$654.07
	11	11	65-312622	93	\$503.82
	9	11	65-292622	111	\$716.86
	9	9	65-282622	111	\$566.61
	7	9	65-262622	133	\$837.20
	7	7	65-252622	133	\$688.45
24	17	17	65-382624	76	\$446.26
	11	17	65-342624	113	\$722.84
	11	15.5	65-332624	113	\$722.84
	11	13.5	65-322624	113	\$722.84
	11	11	65-312624	113	\$573.34
	9	11	65-292624	135	\$849.91
	9	9	65-282624	135	\$679.48
	7	9	65-262624	161	\$1,002.40
	7	7	65-252624	161	\$824.50

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate fittings from pipe that is at least one standard DR thicker than the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: AWWA C906



IPS Swage Reducer

For pressure application the convention is to fabricate from pipe of the same DR

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
10 x 8	9	9	65-28151008	19	\$204.34
12 x 8	9	9	65-28151208	28	\$333.75
12 x 10	9	9	65-28151210	28	\$259.96
14 x 10	17	17	65-38151410	20	\$363.68
	11	15.5	65-33151410	30	\$403.68
	11	13.5	65-32151410	30	\$403.68
	11	11	65-31151410	30	\$363.68
	9	9	65-28151410	35	\$426.00
14 x 12	17	17	65-38151412	23	\$363.68
	11	15.5	65-33151412	33	\$403.68
	11	13.5	65-32151412	33	\$403.68
	11	11	65-31151412	33	\$363.68
	9	9	65-28151412	39	\$407.00
16 x 14	17	17	65-38151614	29	\$426.40
	11	15.5	65-33151614	42	\$466.40
	11	13.5	65-32151614	42	\$466.40
	11	11	65-31151614	42	\$426.40
	9	9	65-28151614	50	\$502.00
18 x 14	17	17	65-38151814	33	\$574.06
	11	15.5	65-33151814	49	\$618.06
	11	13.5	65-32151814	49	\$618.06
	11	11	65-31151814	49	\$574.06
	9	9	65-28151814	59	\$895.67
18 x 16	17	17	65-38151816	37	\$559.11
	11	15.5	65-33151816	54	\$603.11
	11	13.5	65-32151816	54	\$603.11
	11	11	65-31151816	54	\$559.11
	9	9	65-28151816	65	\$663.79
20 x 18	17	17	65-38152018	51	\$748.10
	11	15.5	65-33152018	75	\$840.35
	11	13.5	65-32152018	75	\$840.35
	11	11	65-31152018	75	\$778.75
	9	9	65-28152018	89	\$860.48
22 x 20	17	17	65-38152220	62	\$1,129.52
	11	15.5	65-33152220	92	\$1,096.90
	11	13.5	65-32152220	92	\$1,096.90
	11	11	65-31152220	92	\$1,035.30
	9	9	65-28152220	109	\$1,038.71
24 x 22	17	17	65-38152422	74	\$1,201.04
	11	15.5	65-33152422	110	\$1,262.65
	11	13.5	65-32152422	110	\$1,262.65
	11	11	65-31152422	110	\$1,201.04
	9	9	65-28152422	138	\$1,320.24

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate swage reducers from pipe whose DR is no greater than that of the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Fabricated Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black



IPS Wye

Three Segment, Fabricated

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	11	65-31010202		\$144.16
3	17	17	65-38010303		\$144.16
	11	11	65-31010303	4.8	\$144.16
4	17	17	65-38010404		\$148.40
	11	11	65-31010404	6.7	\$148.40
6	17	17	65-38010606		\$174.26
	11	11	65-31010606	20.8	\$184.44
8	17	17	65-38010808		\$153.28
	11	11	65-31010808	43.1	\$153.28
10	17	17	65-38011010		\$338.35
	11	11	65-31011010	74	\$398.14
12	17	17	65-38011212		\$429.94
	11	11	65-31011212	101	\$518.98

Material: Dual Rated 4710/3608 HDPE Resin, Black

Standards: AWWA C906



IPS Cross

For pressure application the convention is to fabricate with pipe 2 DR's thicker

NOMINAL SIZE	BODY DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	17	17	65-38400202		\$74.62
	11	11	65-31400202		\$93.28
3	17	17	65-38400303		\$93.28
	11	11	65-31400303		\$116.60
4	17	17	65-38400404		\$150.95
	11	11	65-31400404		\$188.69
6	17	17	65-38400606		\$172.99
	11	11	65-31400606		\$216.24
8	17	17	65-38400808		\$290.02
	11	11	65-31400808		\$362.52
10	17	17	65-38401010		\$345.98
	11	11	65-31401010		\$432.48
12	17	17	65-38401212		\$500.32
	11	11	65-31401212		\$625.40

The "Body DR" is the DR of the pipe from which the fitting is made. The "End DR" is the DR of the ends of the fitting. The convention of the PE industry in the case of pressure applications is to fabricate crosses from pipe whose DR is two standard DR's thicker than that of the DR of the pipe to which it is fused. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to machine the ends of the fittings to match the DR of the pipe.

Call for other configurations

Discount Category A

IPS Molded Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS Tee, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3/4	11	11	66-3110BB	0.1	\$8.39
1	11	11	66-3110CC	0.1	\$9.50
1 1/4	11	11	66-3110DD	0.3	\$9.86
1 1/2	11	13.5	66-3210EE	0.5	\$25.51
	11	11	66-3110EE	0.5	\$17.51
2 x 1 1/4	11	11	66-311002D	1.2	\$20.92
2	17	17	66-38100202	1.2	\$10.49
	11	13.5	66-32100202	1.2	\$14.09
	11	11	66-31100202	1.2	\$10.49
	9	9	66-28100202	1.4	\$12.98
3 x 1 1/4	11	11	66-311003D	1.8	\$35.20
3 x 2	11	13.5	66-32100302	1.8	\$74.37
	11	11	66-31100302	1.8	\$70.87
3 x 2 x 2	11	13.5	66-3210030202	2.5	\$101.20
	11	11	66-3110030202	2.5	\$93.20
3	17	17	66-38100303	1.8	\$17.16
	11	13.5	66-32100303	1.8	\$22.63
	11	11	66-31100303	1.8	\$19.03
	9	9	66-28100303	2.1	\$25.88
4 x 1 1/4	11	11	66-311004D	5.6	\$48.00
4 x 2	11	13.5	66-32100402	5.6	\$77.12
	11	11	66-31100402	5.6	\$69.12
4	17	17	66-38100404	5.6	\$27.06
	11	13.5	66-32100404	5.6	\$38.14
	11	11	66-31100404	5.6	\$30.14
	9	9	66-28100404		\$45.00
6 x 2	11	13.5	66-32100602		\$177.99
	11	11	66-31100602		\$169.99
6 x 3	11	13.5	66-32100603		\$156.15
	11	11	66-31100603		\$148.15
6 x 4	11	13.5	66-32100604		\$147.15
	11	11	66-31100604		\$139.15
6	17	17	66-38100606	8.7	\$67.10
	11	13.5	66-32100606	8.7	\$79.80
	11	11	66-31100606	8.7	\$74.80
	9	9	66-28100606		\$105.00
8 x 4	11	13.5	66-32100804		\$411.09
	11	11	66-31100804		\$396.09

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category B

IPS Molded Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS Tee, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
8 x 6	11	13.5	66-32100806		\$349.80
	11	11	66-31100806		\$334.80
8	17	17	66-38100808	20.2	\$198.08
	11	13.5	66-32100808	20.2	\$257.89
	11	11	66-31100808	20.2	\$220.09
10	17	17	66-38101010	42.6	\$487.75
	11	13.5	66-32101010	42.6	\$560.25
	11	11	66-31101010	42.6	\$550.25
12	17	17	66-38101212	67.0	\$777.50
	11	13.5	66-32101212	67.0	\$827.50
	11	11	66-31101212	67.0	\$812.50

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS 90° Bend, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
¾	11	11	66-3119B	0.1	\$8.07
1	11	11	66-3119C	0.1	\$8.48
1¼	11	11	66-3119D	0.3	\$7.96
1½	11	13.5	66-3219E	0.5	\$10.19
	11	11	66-3119E	0.5	\$7.19
2	17	17	66-381902	0.8	\$8.31
	11	13.5	66-321902	0.8	\$11.31
	11	11	66-311902	0.8	\$8.31
	9	9	66-281902	0.8	\$9.58
3	17	17	66-381903	2.1	\$16.40
	11	13.5	66-321903	2.1	\$23.26
	11	11	66-311903	2.1	\$18.26
	9	9	66-281903	2.1	\$23.25
4	17	17	66-381904	4.1	\$19.25
	11	13.5	66-321904	4.1	\$26.34
	11	11	66-311904	4.1	\$21.34
	9	9	66-281904	4.1	\$30.63

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category B

IPS Molded Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS 90° Bend, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
6	17	17	66-381906	8.3	\$56.54
	11	13.5	66-321906	8.3	\$65.74
	11	11	66-311906	8.3	\$60.74
	9	9	66-281906	10.1	\$75.38
8	17	17	66-381908	19.6	\$165.31
	11	13.5	66-321908	19.6	\$193.69
	11	11	66-311908	19.6	\$183.69
10	17	17	66-381910	27.1	\$418.00
	11	13.5	66-321910	27.1	\$468.45
	11	11	66-311910	27.1	\$458.45
12	17	17	66-381912	41.1	\$487.50
	11	13.5	66-321912	41.1	\$535.00
	11	11	66-311912	41.1	\$525.00

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS 45° Bend, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
¾	11	11	66-3122B	0.1	\$12.37
1	11	11	66-3122C	0.1	\$12.37
1¼	11	11	66-3122D	0.1	\$12.70
1½	11	13.5	66-3222E	0.2	\$18.45
	11	11	66-3122E	0.2	\$15.45
2	17	17	66-382202	0.4	\$10.80
	11	13.5	66-322202	0.4	\$13.80
	11	11	66-312202	0.4	\$10.80
	9	9	66-282202	0.6	\$11.63
3	17	17	66-382203	1.9	\$16.28
	11	13.5	66-322203	1.9	\$23.26
	11	11	66-312203	1.9	\$18.26
	9	9	66-282203	3.2	\$42.50

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category B

IPS Molded Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS 45° Bend, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
4	17	17	66-382204	3.5	\$19.14
	11	13.5	66-322204	3.5	\$26.34
	11	11	66-312204	3.5	\$21.34
	9	9	66-282204	3.5	\$46.25
6	17	17	66-382206	11.0	\$56.54
	11	13.5	66-322206	11.0	\$65.74
	11	11	66-312206	11.0	\$60.74
	9	9	66-282206	12.4	\$78.13
8	17	17	66-382208	19.0	\$165.33
	11	13.5	66-322208	19.0	\$208.89
	11	11	66-312208	19.0	\$183.69
10	17	17	66-382210	21.3	\$453.33
	11	13.5	66-322210	21.3	\$517.41
	11	11	66-312210	21.3	\$489.01
12	17	17	66-382212	31.8	\$487.50
	11	13.5	66-322212	31.8	\$570.00
	11	11	66-312212	31.8	\$560.00

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS Reducer, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
1 x ¾	11	11	66-3115CB	0.1	\$10.31
1¼ x 1	11	11	66-3115DC	0.1	\$10.31
1½ x 1	11	11	66-3115EC	0.3	\$13.34
1½ x 1¼	11	11	66-3115ED	0.3	\$15.20
2 x 1	11	11	66-311502C	0.3	\$8.74
2 x 1¼	11	11	66-311502D	0.4	\$8.03
2 x 1½	11	13.5	66-321502E		\$14.42
	11	11	66-311502E	0.3	\$11.42

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category B

IPS Molded Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS Reducer, Butt Fusion Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3 x 2	17	17	66-38150302	0.7	\$11.84
	11	13.5	66-32150302	0.7	\$14.84
	11	11	66-31150302	0.7	\$11.84
	9	9	66-28150302	0.8	\$18.13
4 x 2	17	17	66-38150402	1.2	\$18.98
	11	13.5	66-32150402	1.2	\$21.98
	11	11	66-31150402	1.2	\$18.98
	9	9	66-28150402	1.3	\$21.50
4 x 3	17	17	66-38150403	1.3	\$18.98
	11	13.5	66-32150403	1.3	\$21.98
	11	11	66-31150403	1.3	\$18.98
	9	9	66-28150403	1.5	\$25.25
6 x 3	17	17	66-38150603	2.2	\$53.35
	11	13.5	66-32150603	3.2	\$57.35
	11	11	66-31150603	3.2	\$53.35
6 x 4	17	17	66-38150604	3.9	\$41.50
	11	13.5	66-32150604	3.9	\$48.35
	11	11	66-31150604	3.9	\$44.35
	9	9	66-28150604	5.1	\$52.63
8 x 4	11	13.5	66-32150804	7.0	\$156.15
	11	11	66-31150804	7.0	\$146.15
8 x 6	17	17	66-38150806	7.2	\$72.80
	11	13.5	66-32150806	7.2	\$87.80
	11	11	66-31150806	7.2	\$77.80
10 x 8	17	17	66-38151008	3.0	\$117.48
	11	13.5	66-32151008	3.0	\$127.48
	11	11	66-31151008	3.0	\$117.48
12 x 6	17	17	66-38151206	19.0	\$163.08
	11	13.5	66-32151206	19.0	\$173.08
	11	11	66-31151206	19.0	\$163.08
12 x 8	17	17	66-38151208	19.0	\$162.34
	11	13.5	66-32151208	19.0	\$172.34
	11	11	66-31151208	19.0	\$162.34
12 x 10	17	17	66-38151210	6.0	\$155.63
	11	13.5	66-32151210	6.0	\$166.25
	11	11	66-31151210	6.0	\$156.25

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category B

IPS Molded Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS Cap, Butt Fusion

Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
¾	11	11	66-3149B	0.03	\$2.78
1	11	11	66-3149C	0.04	\$4.87
1¼	11	11	66-3149D	0.1	\$5.19
1½	11	13.5	66-3249E	0.1	\$7.52
	11	11	66-3149E	0.1	\$5.52
2	17	17	66-384902	0.2	\$4.30
	11	13.5	66-324902	0.2	\$5.22
	11	11	66-314902	0.2	\$4.02
	9	9	66-284902	0.2	\$4.75
3	17	17	66-384903	0.5	\$7.95
	11	13.5	66-324903	0.5	\$10.44
	11	11	66-314903	0.5	\$7.44
	9	9	66-284903	0.5	\$8.93
4	17	17	66-384904	0.9	\$17.65
	11	13.5	66-324904	0.9	\$19.65
	11	11	66-314904	0.9	\$17.65
	9	9	66-284904	0.9	\$21.25
6	17	17	66-384906	2.2	\$45.88
	11	13.5	66-324906	2.2	\$47.88
	11	11	66-314906	2.2	\$45.88
	9	9	66-284906	2.2	\$51.13
8	17	17	66-384908	7.2	\$68.13
	11	13.5	66-324908	7.2	\$70.63
	11	11	66-314908	7.2	\$65.63
10	17	17	66-384910	9.0	\$312.22
	11	13.5	66-324910	9.0	\$317.22
	11	11	66-314910	9.0	\$312.22
12	17	17	66-384912	11.0	\$417.88
	11	13.5	66-324912	11.0	\$422.88
	11	11	66-314912	11.0	\$417.88

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category B

IPS Molded Butt Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS Wye, Butt Fusion Molded

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	11	66-31010202		\$60.00

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category B

IPS Transition Fittings & Adapters

Material: Dual Rated 4710/3608 HDPE Resin, Black; 316 SS



IPS 316 Stainless Steel Transition

MNPT x Butt Fusion; configuration may vary.

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
1	9	9	65-2832C	0.5	\$43.33
	11	11	65-3132C	0.5	\$41.33
1¼	9	9	65-2832D	0.6	\$52.70
	11	11	65-3132D	0.6	\$50.70
1½	9	9	65-2832E	1	\$61.63
	11	11	65-3132E	1	\$56.63
	11	13.5	65-3232E	1	\$58.63
2	9	9	65-283202	1.5	\$60.75
	11	11	65-313202	1.5	\$58.75
	11	13.5	65-323202	1.5	\$60.75
3	9	9	65-283203	3	\$122.70
	11	11	65-313203	3	\$119.70
	11	13.5	65-323203	3	\$121.70
4	9	9	65-283204	4	\$131.45
	11	11	65-313204	4	\$128.45
	11	13.5	65-323204	4	\$130.45

Material: Dual Rated 4710/3608 HDPE Resin, Black; Red Brass



IPS Brass Transition Fitting

MNPT x Butt Fusion; configuration may vary.

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
1	9	9	65-2835C	0.5	\$42.18
	11	11	65-3135C	0.5	\$41.18
1¼	9	9	65-2835D	0.6	\$46.30
	11	11	65-3135D	0.6	\$45.30
1½	9	9	65-2835E	1	\$53.25
	11	11	65-3135E	1	\$51.25
	11	13.5	65-3235E	1	\$53.25
2	9	9	65-283502	1.5	\$67.12
	11	11	65-313502	1.5	\$65.12
	11	13.5	65-323502	1.5	\$67.12
3	9	9	65-283503	3	\$125.53
	11	11	65-313503	3	\$119.53
	11	13.5	65-323503	3	\$121.53
4	9	9	65-283504	4	\$162.26
	11	11	65-313504	4	\$156.26
	11	13.5	65-323504	4	\$158.26

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Material: Dual Rated 4710/3608 HDPE Resin, Black; 304 SS
Standards: AWWA C906



IPS MJ Adapter with Stiffener

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3	9	9	65-284203	5	\$163.31
	11	11	65-314203	5	\$163.31
	11	13.5	65-324203	5	\$174.01
4	9	9	65-284204	6	\$144.56
	11	11	65-314204	6	\$144.56
	11	13.5	65-324204	6	\$155.66
6	9	9	65-284206	9	\$194.47
	11	11	65-314206	9	\$194.47
	11	13.5	65-324206	9	\$206.88
8	9	9	65-284208	12	\$208.28
	11	11	65-314208	12	\$208.28
	11	13.5	65-324208	12	\$221.64
10	9	9	65-284210	20	\$242.99
	11	11	65-314210	20	\$242.99
	11	13.5	65-324210	20	\$258.05
12	9	9	65-284212	37	\$317.39
	11	11	65-314212	37	\$317.39
	11	13.5	65-324212	37	\$337.73
14	11	11	65-314214	50	\$765.74
	11	13.5	65-324214	50	\$791.39
16	11	11	65-314216	67	\$936.09
	11	13.5	65-324216	67	\$965.97
18	11	11	65-314218		\$977.32
	11	13.5	65-324218		\$1,057.32
24	11	11	65-314224		\$1,510.16
	11	13.5	65-324224		\$1,610.06

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

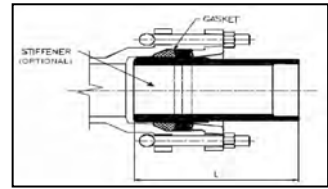
Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

IPS MJ Adapter Accessories

Includes Gland, T-Bolt & Nut, Transition Gasket



NOMINAL SIZE	PART NUMBER	WEIGHT EACH	LIST PRICE
3	65-904403	8	\$40.08
4	65-904404	9	\$34.40
6	65-904406	3	\$48.73
8	65-904408	16	\$56.94
10	65-904410	21	\$88.86
12	65-904412	26	\$94.60
14	65-904414	57	\$192.06
16	65-904416	71	\$240.80
18	65-904418		\$307.96
24	65-904424		\$529.75

Material: Dual Rated 4710/3608 HDPE Resin, Black

IPS MJ Bell x PE Butt Fusion Adapter

Includes components shown. Restraint & gasket not included.

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3	11	11	65-314303	1.5	\$282.45
	11	13.5	65-324303	1.5	\$284.87
4	11	11	65-314304	4.3	\$327.05
	11	13.5	65-324304	4.3	\$327.05
6	11	11	65-314306	7.5	\$431.11
	11	13.5	65-324306	7.5	\$433.53
8	11	11	65-314308	13.6	\$475.71
	11	13.5	65-324308	13.6	\$481.76
10	11	11	65-314310	19	\$660.04
	11	13.5	65-324310	19	\$666.09
12	11	11	65-314312	27.2	\$758.16
	11	13.5	65-324312	27.2	\$764.21

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Wedge Style Restraint for IPS PVC Pipe

For use w/ MJ Bell Adapter. Includes MJ Transition Gasket



NOMINAL SIZE	PART NUMBER	WEIGHT EACH	LIST PRICE
3	65-904503	7	\$68.08
4	65-904504	8	\$68.08
6	65-904506	12	\$84.84
8	65-904508	19	\$116.26
10	65-904510	24	\$202.15
12	65-904512	28	\$212.62

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F2880, AWWA C906



IPS Flange Adapter

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	9	9	65-286002	0.5	\$20.00
	11	11	65-316002	0.5	\$15.12
	11	13.5	65-326002	0.5	\$25.22
	17	17	65-386002	.5	\$14.50
3	9	9	65-286003	1	\$23.33
	11	11	65-316003	1	\$18.43
	11	13.5	65-326003	1	\$28.52
	17	17	65-386003	1	\$18.43
4	9	9	65-286004	1	\$24.00
	11	11	65-316004	2	\$23.48
	11	13.5	65-326004	2	\$33.94
	17	17	65-386004	2	\$23.48
6	9	9	65-286006	1	\$42.75
	11	11	65-316006	4	\$37.08
	11	13.5	65-326006	4	\$49.51
	17	17	65-386006	4	\$37.08
8	9	9	65-286008	1	\$70.00
	11	11	65-316008	7	\$51.65
	11	13.5	65-326008	7	\$64.25
	17	17	65-386008	7	\$51.65
10	9	9	65-286010	1	\$120.00
	11	11	65-316010	11	\$90.91
	11	13.5	65-326010	11	\$105.11
	17	17	65-386010	11	\$90.91

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F2880, AWWA C906



IPS Flange Adapter

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
12	9	9	65-286012	1	\$217.50
	11	11	65-316012	19	\$142.52
	11	13.5	65-326012	19	\$161.71
	17	17	65-386012	19	\$142.52
14	9	9	65-286014	1	\$300.00
	11	11	65-316014	25	\$226.16
	11	13.5	65-326014	25	\$250.35
	17	17	65-386014	25	\$226.16
16	9	9	65-286016	1	\$416.67
	11	11	65-316016	35	\$288.77
	11	13.5	65-326016	35	\$317.95
	17	17	65-386016	35	\$288.77
18	9	9	65-286018	1	\$450.00
	11	11	65-316018	42	\$359.04
	11	13.5	65-326018	42	\$393.23
	17	17	65-386018	42	\$359.04
20	9	9	65-286020	1	\$600.00
	11	11	65-316020	53	\$577.53
	11	13.5	65-326020	53	\$616.72
	17	17	65-386020	53	\$577.53
22	11	11	65-316022	65	\$601.81
	11	13.5	65-326022	65	\$645.99
	17	17	65-386022	65	\$601.81
24	9	9	65-286024	1	\$766.67
	11	11	65-316024	90	\$678.47
	11	13.5	65-326024	90	\$727.66
	17	17	65-386024	90	\$678.47

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Material: Ductile Iron
Standards: ASTM A536



IPS Ductile Iron Backup Ring

Shop Coated, (Class 125/150 pattern)

NOMINAL SIZE	DR	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	4	65-077702	1.5	\$8.60
3	7	4	65-017703	2.5	\$15.61
	11	4	65-077703	2.5	\$11.06
4	7	8	65-017704	3.5	\$19.63
	11	8	65-077704	3.5	\$13.50
6	7	8	65-017706	4.5	\$25.26
	11	8	65-077706	4.5	\$17.47
8	7	8	65-017708	8	\$40.51
	11	8	65-077708	8	\$30.41
10	7	12	65-017710	12	\$61.46
	11	12	65-077710	12	\$38.89
12	7	12	65-017712	20	\$102.23
	11	12	65-077712	20	\$68.81
14	7	12	65-017714	30	\$143.53
	11	12	65-077714	30	\$101.00
16	7	16	65-017716	40	\$182.21
	11	16	65-077716	40	\$137.41
18	11	16	65-077718	45	\$151.86
20	11	20	65-077720	55	\$201.40
22	11	20	65-077722	65	\$280.60
24	11	20	65-077724	80	\$293.69

NOTE: Coatings are subject to damage during shipping, handling, and installation including the tightening of bolts and nuts. Coating damage will negate any corrosion protection. These parts are shipped with protective wrapping. Purchaser and user are responsible for the soundness of the coating. Credit for returns will be considered for the value of the uncoated product only.

The Back Up Ring DR indicates the minimum DR of the piping system the Back Up Ring will support structurally.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Material: Ductile Iron
Standards: ASTM A536



IPS Ductile Iron Backup Ring

Fusion Bond Epoxy Coated, (Class 125/150 pattern)

NOMINAL SIZE	DR	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	4	65-077702F	1.5	\$11.18
3	7	4	65-017703F	2.5	\$20.30
	11	4	65-077703F	2.5	\$14.38
4	7	8	65-017704F	3.5	\$25.52
	11	8	65-077704F	3.5	\$17.55
6	7	8	65-017706F	4.5	\$32.84
	11	8	65-077706F	4.5	\$22.71
8	7	8	65-017708F	8	\$52.67
	11	8	65-077708F	8	\$39.53
10	7	12	65-017710F	12	\$79.90
	11	12	65-077710F	12	\$50.56
12	7	12	65-017712F	20	\$132.90
	11	12	65-077712F	20	\$89.45
14	7	12	65-017714F	30	\$186.59
	11	12	65-077714F	30	\$131.31
16	7	16	65-017716F	40	\$236.87
	11	16	65-077716F	40	\$178.64
18	11	16	65-077718F	45	\$197.42
20	11	20	65-077720F	55	\$261.81
22	11	20	65-077722F	65	\$364.77
24	11	20	65-077724F	80	\$381.79

NOTE: Coatings are subject to damage during shipping, handling, and installation including the tightening of bolts and nuts. Coating damage will negate any corrosion protection. These parts are shipped with protective wrapping. Purchaser and user are responsible for the soundness of the coating. Credit for returns will be considered for the value of the uncoated product only.

The Back Up Ring DR indicates the minimum DR of the piping system the Back Up Ring will support structurally.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Material: 316 Stainless Steel

IPS Stainless Steel Backup Ring

(Class 125/150 pattern)

NOMINAL SIZE	DR	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
2	7	4	65-017902		\$77.60
	11	4	65-077902		\$66.67
3	7	4	65-017903		\$149.87
	13.5	4	65-357903		\$129.07
4	7	8	65-017904		\$169.87
	13.5	8	65-357904		\$157.87
6	7	8	65-017906		\$239.47
	13.5	8	65-357906		\$214.67
8	7	8	65-017908		\$411.20
	13.5	8	65-357908		\$370.00
10	7	12	65-017910		\$592.32
	13.5	12	65-357910		\$529.60
12	7	12	65-017912		\$1,263.44
	13.5	12	65-357912		\$930.40
14	7	12	65-017914		\$1,403.17
	11	12	65-077914		\$1,262.85
16	7	16	65-017916		\$2,093.33
	11	16	65-077916		\$1,846.11
18	7	16	65-017918		\$2,619.20
	11	16	65-077918		\$2,141.63
20	7	20	65-017920		\$2,933.33
	11	20	65-077920		\$2,588.59
24	7	20	65-017924		\$4,760.00
	11	20	65-077924		\$4,209.20

NOTE: This table is correct. The items shown with DR11 versions do not have DR 13.5 versions. The items shown with DR13.5 versions do not have DR 11 versions. These back up rings may be used with any DR of flange adapter. The higher DR will be the limiting component in the joint.

The Back Up Ring DR indicates the minimum DR of the piping system the Back Up Ring will support structurally.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Includes: Grade 5, Zinc Coated Bolts & Nuts, and 1/8" Neoprene Gaskets



Flange Accessory Kit

For HDPE Flange x HDPE Flange (Class 125/150 pattern)

NOMINAL SIZE	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
2	4	65-077002	1.2	\$22.39
3	4	65-077003	1.4	\$22.39
4	8	65-077004	3.2	\$23.84
6	8	65-077006	5.2	\$34.11
8	8	65-077008	5.6	\$46.20
10	12	65-077010	13.8	\$110.80
12	12	65-077012	16.2	\$133.80
14	12	65-077014	21.6	\$215.75
16	16	65-077016	30.4	\$333.75
18	16	65-077018	42.4	\$573.00
20	20	65-077020	55.0	\$725.30
22	20	65-077022	81.0	\$850.00
24	20	65-077024	81.0	\$919.45

Includes: Grade 5, Zinc Coated Bolts & Nuts, and 1/8" Neoprene Gaskets



Flange Accessory Kit

For HDPE Flange x HARCO Flange (Class 125/150 pattern)

NOMINAL SIZE	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
3	4	65-077103	1.4	\$22.39
4	8	65-077104	3.2	\$23.84
6	8	65-077106	5.2	\$34.11
8	8	65-077108	5.6	\$35.71
10	12	65-077110	13.8	\$82.86
12	12	65-077112	16.2	\$85.64

Bolts in these accessory kits are sized to work with DR11 Flange Adapters and ductile iron DR11 Back Up Rings supplied by Harco. Flange Adapters and Back Up Rings made by others, other DR's, and Back Up Rings made of other materials may or may not work properly. This is because of the potential for different feature lengths in the components and their stack up relative to the length of the bolts and the positioning of the bolt thread length. A bolt can be too long in that the thread section is out of position.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Includes: Grade 5, Zinc Coated Bolts & Nuts, and 1/8" Neoprene Gaskets



Flange Accessory Kit

For HDPE Flange x Iron/Steel Flange (Class 125/150 pattern)

NOMINAL SIZE	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
2	4	65-077202	1.2	\$22.39
3	4	65-077203	1.4	\$22.39
4	8	65-077204	3.2	\$23.84
6	8	65-077206	5.2	\$34.11
8	8	65-077208	5.6	\$42.60
10	12	65-077210	13.8	\$98.80
12	12	65-077212	16.2	\$109.20
14	12	65-077214	21.6	\$152.75
16	16	65-077216	30.4	\$233.75
18	16	65-077218	42.4	\$429.00
20	20	65-077220	55.0	\$575.30
24	20	65-077224	81.0	\$789.45

Includes: 316 Stainless Steel Bolts & Nuts, and 1/8" Neoprene Gaskets



Flange Accessory Kit, Stainless Steel

For HDPE Flange x HDPE Flange (Class 125/150 pattern)

NOMINAL SIZE	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
2	4	65-076602	1.2	\$28.40
3	4	65-076603	1.4	\$34.30
4	8	65-076604	3.2	\$71.00
6	8	65-076606	5.2	\$99.85
8	8	65-076608	5.6	\$112.20
10	12	65-076610	13.8	\$361.60
12	12	65-076612	16.2	\$429.60
14	12	65-076614	21.6	\$610.55
16	16	65-076616	30.4	\$2,108.15
18	16	65-076618	42.4	\$1,964.20
20	20	65-076620	55.0	\$2,514.30
24	20	65-076624	81.0	\$3,402.45

Bolts in these accessory kits are sized to work with DR11 Flange Adapters and ductile iron DR11 Back Up Rings supplied by Harco. Flange Adapters and Back Up Rings made by others, other DR's, and Back Up Rings made of other materials may or may not work properly. This is because of the potential for different feature lengths in the components and their stack up relative to the length of the bolts and the positioning of the bolt thread length. A bolt can be too long in that the thread section is out of position.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Includes: 316 Stainless Steel Bolts & Nuts, and 1/8" Neoprene Gaskets



Flange Accessory Kit, Stainless Steel

For HDPE Flange x HARCO Flange (Class 125/150 pattern)

NOMINAL SIZE	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
3	4	65-076903	1.4	\$29.50
4	8	65-076904	3.2	\$55.00
6	8	65-076906	5.2	\$91.05
8	8	65-076908	5.6	\$95.40
10	12	65-076910	13.8	\$271.60
12	12	65-076912	16.2	\$279.00

Includes: 316 Stainless Steel Bolts & Nuts, and 1/8" Neoprene Gaskets



Flange Accessory Kit, Stainless Steel

For HDPE Flange x Iron/Steel Flange (Class 125/150 pattern)

NOMINAL SIZE	BOLT QTY	PART NUMBER	WEIGHT EACH	LIST PRICE
2	4	65-076502	1.2	\$27.20
3	4	65-076503	1.4	\$29.50
4	8	65-076504	3.2	\$64.60
6	8	65-076506	5.2	\$91.05
8	8	65-076508	5.6	\$104.20
10	12	65-076510	13.8	\$274.60
12	12	65-076512	16.2	\$357.60
14	12	65-076514	21.6	\$488.15
16	16	65-076516	30.4	\$658.55
18	16	65-076518	42.4	\$1,884.20
20	20	65-076520	55.0	\$2,394.30
24	20	65-076524	81.0	\$2,577.45

Bolts in these accessory kits are sized to work with DR11 Flange Adapters and ductile iron DR11 Back Up Rings supplied by Harco. Flange Adapters and Back Up Rings made by others, other DR's, and Back Up Rings made of other materials may or may not work properly. This is because of the potential for different feature lengths in the components and their stack up relative to the length of the bolts and the positioning of the bolt thread length. A bolt can be too long in that the thread section is out of position.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Material: 304 SS

IPS Stiffener

For Use with HARCO Ductile Iron Fittings and Valves

See DI-IPS Price Sheet for larger sizes



NOMINAL SIZE	DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	9	65-90480902	0.2	\$16.75
	11	65-90481102	0.2	\$16.75
	13.5	65-90481302	0.2	\$16.75
	15.5	65-90481502	0.2	\$16.75
	17	65-90481702	0.2	\$16.75
3	9	65-90480903	0.3	\$28.15
	11	65-90481103	0.3	\$28.15
	13.5	65-90481303	0.3	\$28.15
	15.5	65-90481503	0.3	\$28.15
	17	65-90481703	0.3	\$28.15
4	9	65-90480904	0.3	\$47.32
	11	65-90481104	0.3	\$47.32
	13.5	65-90481304	0.3	\$47.32
	15.5	65-90481504	0.3	\$47.32
	17	65-90481704	0.3	\$47.32

Material: Dual Rated 4710/3608 HDPE Resin, Black

IPS Transition: Spigot with Stiffener x Butt Fusion

For use with HARCO Ductile Iron Fittings & Valves



NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	9	9	65-28340214	0.9	\$24.01
	11	11	65-31340214	0.9	\$24.01
	11	13.5	65-32340214	0.9	\$24.01
	17	17	65-38340214	0.9	\$24.01
2 x 3	9	9	65-2834020314	1.6	\$80.28
	11	11	65-3134020314	1.6	\$70.28
	11	13.5	65-3234020314	1.6	\$71.48
3	9	9	65-28340314	1.9	\$38.01
	11	11	65-31340314	1.9	\$38.01
	11	13.5	65-32340314	1.9	\$38.01
	17	17	65-38340314	1.9	\$38.01

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category C

IPS Transition Fittings & Adapters

Material: Dual Rated 4710/3608 HDPE Resin, Black



IPS Thrust Anchor

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3	11	11	65-317403		\$135.68
	11	13.5	65-327403		\$140.68
4	11	11	65-317404		\$132.85
	11	13.5	65-327404		\$137.85
6	11	11	65-317406		\$203.52
	11	13.5	65-327406		\$208.52
8	11	11	65-317408		\$305.28
	11	13.5	65-327408		\$315.28
10	11	11	65-317410		\$412.69
	11	13.5	65-327410		\$422.69
12	11	11	65-317412		\$573.25
	11	13.5	65-327412		\$583.25

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category C

IPS Socket Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D2683, AWWA C906



IPS Tee, Socket Fusion Molded

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3/4	11	69-3110BB	0.1	\$2.85
1	11	69-3110CC	0.2	\$3.62
1 1/4 x 3/4 x 3/4	11	69-3110DBB	0.5	\$9.34
1 1/4 x 3/4 x 1	11	69-3110DBC		\$9.34
1 1/4 x 3/4 x 1 1/4	11	69-3110DBD		\$9.34
1 1/4 x 1 x 3/4	11	69-3110DCB	0.5	\$13.08
1 1/4 x 3/4	11	69-3110DB		\$8.92
1 1/4 x 1 x 1	11	69-3110DCC	0.5	\$9.34
1 1/4 x 1 1/4 x 1	11	69-3110DC	0.4	\$8.92
1 1/4 x 1 x 1 1/4	11	69-3110DCD		\$9.34
1 1/4	11	69-3110DD	0.4	\$5.07
1 1/2 x 3/4 x 3/4	11	69-3110EBB	0.7	\$11.87
1 1/2 x 3/4 x 1	11	69-3110EBC		\$11.87
1 1/2 x 3/4 x 1 1/4	11	69-3110EBD		\$11.87
1 1/2 x 3/4 x 1 1/2	11	69-3110EBE		\$11.87
1 1/2 x 1 x 3/4	11	69-3110ECB		\$11.87
1 1/2 x 1 x 1	11	69-3110ECC	0.7	\$11.87
1 1/2 x 1 x 1 1/4	11	69-3110ECD		\$11.87
1 1/2 x 1 x 1 1/2	11	69-3110ECE	1.6	\$11.87
1 1/2 x 3/4	11	69-3110EDB		\$11.87
1 1/2 x 1 1/4 x 1	11	69-3110EDC		\$11.87
1 1/2 x 1 1/4 x 1 1/4	11	69-3110EDD	0.6	\$11.87
1 1/2 x 1 1/4 x 1 1/2	11	69-3110EDE		\$11.87
1 1/2 x 3/4	11	69-3110EB		\$11.53
1 1/2 x 1	11	69-3110EC	0.6	\$11.53
1 1/2 x 1 1/4	11	69-3110ED	0.6	\$11.53
1 1/2	11	69-3110EE	1.2	\$9.88
2 x 1 1/4 x 3/4	11	69-311002DB	1.3	\$12.95
2 x 1 1/4 x 1	11	69-311002DC	1.3	\$12.95
2 x 1 1/4 x 1 1/4	11	69-311002DD	1.2	\$12.95
2 x 1 1/2 x 3/4	11	69-311002EB	1.3	\$12.95
2 x 1 1/2 x 1	11	69-311002EC	1.3	\$12.95
2 x 1 1/2 x 1 1/4	11	69-311002ED		\$12.95
2 x 3/4	11	69-31100202B	1.3	\$12.61
2 x 1	11	69-311002C		\$12.61
2 x 1 1/4	11	69-311002D		\$12.61
2	11	69-31100202	1.2	\$10.23
3	11	69-31100303	3.9	\$49.38
4	11	69-31100404		\$90.93

The DR of the socket fusion fitting is the minimum DR of the piping system the fitting will support structurally. Some items can support lower DR's. Call for details.

Call for other configurations

Discount Category D

IPS Socket Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D2683, AWWA C906



IPS Reducer, Socket Fusion

Molded

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
1 x ¾	11	69-3115CB	0.1	\$5.07
1¼ x ¾	11	69-3115DB	0.2	\$8.94
1¼ x 1	11	69-3115DC	0.2	\$8.52
1½ x ¾	11	69-3115EB	0.2	\$10.74
1½ x 1	11	69-3115EC	0.2	\$10.45
1½ x 1¼	11	69-3115ED	0.2	\$10.23
2 x ¾	11	69-311502B	0.4	\$9.66
2 x 1	11	69-311502C	0.3	\$9.66
2 x 1¼	11	69-311502D	0.4	\$9.66
2 x 1½	11	69-311502E		\$10.68
3 x 2	11	69-31150302		\$16.83
4 x 2	11	69-31150402		\$31.60
4 x 3	11	69-31150403		\$34.55

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D2683, AWWA C906



IPS 90° Bend, Socket Fusion

Molded

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
¾	11	69-3119B	0.1	\$3.42
1	11	69-3119C	0.2	\$4.55
1¼	11	69-3119D	0.3	\$4.55
1½	11	69-3119E		\$7.84
2	11	69-311902	0.9	\$7.67
3	11	69-311903	3.1	\$30.45
4	11	69-311904		\$151.98

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D2683, AWWA C906



IPS 45° Bend, Socket Fusion

Molded

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	69-312202	0.4	\$12.78
3	11	69-312203	1.9	\$30.45

The DR of the socket fusion fitting is the minimum DR of the piping system the fitting will support structurally. Some items can support lower DR's. Call for details.

Call for other configurations

Discount Category D

IPS Socket Fusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D2683, AWWA C906



IPS Coupling, Socket Fusion

Molded

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3/4	11	69-3109B		\$1.66
1	11	69-3109C		\$1.66
1 1/4	11	69-3109D	0.1	\$2.03
1 1/2	11	69-3109E	0.2	\$2.39
2	11	69-310902	0.3	\$2.45
3	11	69-310903	0.3	\$20.80
4	11	69-310904	1.9	\$29.50

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D2683, AWWA C906



IPS Cap, Socket Fusion

Molded

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3/4	11	69-3149B	0.1	\$2.56
1	11	69-3149C	0.1	\$3.42
1 1/4	11	69-3149D	0.1	\$3.75
1 1/2	11	69-3149E		\$3.87
2	11	69-314902	0.4	\$3.86
3	11	69-314903	1.0	\$32.45
4	11	69-314904	2.2	\$58.18

The DR of the socket fusion fitting is the minimum DR of the piping system the fitting will support structurally. Some items can support lower DR's. Call for details.

Call for other configurations

Discount Category D

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Coupling DR11, Electrofusion

Diameters 3/4"- 1 1/2" for pipe DR11. Diameters 2"-24" for pipe DR11 to 17.

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3/4	11	70-09B	0.1	\$11.82
1	11	70-09C	0.2	\$12.35
1 1/4	11	70-09D	0.25	\$13.42
1 1/2	11	70-09E	0.4	\$15.83
2	11	70-0902	0.6	\$14.42
3	11	70-0903	1.2	\$26.74
4	11	70-0904	2	\$45.10
6	11	70-0906	4.2	\$115.50
8	11	70-0908	5	\$158.40
10	11	70-0910	15	\$290.40
12	11	70-0912	25	\$436.70
14	11	70-0914	37	\$543.40
16	11	70-0916	41	\$671.00
18	11	70-0918	63	\$1,720.00
20	11	70-0920	72	\$1,911.12
24	11	70-0924	100	\$3,057.78

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Coupling DR17, Electrofusion

For pipe DR's 11 to 21

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
8	17	70-350908	5	\$129.96
10	17	70-350910	15	\$257.14

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Tee, Electrofusion

For pipe DR 11

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	70-100202	1	\$52.94

Do not use the electrofusion fitting on pipe with DR's outside the range of the DR's indicated.

Call for other configurations

Discount Category E

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS 90° Bend, Electrofusion

For pipe DR's 11 to 17

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	70-1902	1	\$62.32
3	11	70-1903	1	\$95.02
4	11	70-1904	1	\$160.40

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS 45° Bend, Electrofusion

For pipe DR's 11 to 17

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	70-2202		\$62.34

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Reducer, Electrofusion

For pipe DR 11

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
3 x 2	11	70-150302		\$61.08

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Coupling Cap, Electrofusion

For pipe DR's 11 to 17

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	70-4902		\$27.32
3	11	70-4903		\$60.51

Do not use the electrofusion fitting on pipe with DR's outside the range of the DR's indicated.

Call for other configurations

Discount Category E

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Electrofusion Swivel Saddle

With DI outlet; For pipe DR's 7 to 17

Straps not shown

NOMINAL SIZE	FITTING DR	INSTALL	PART NUMBER	WEIGHT EACH	LIST PRICE
3	11	Straps	70-5303	5	\$109.94
4	11	Straps	70-5304	5	\$123.75
6	11	Straps	70-5306	5	\$140.95
8	11	Straps	70-5308	5	\$159.96
10	11	Straps	70-5310	5	\$171.96
12	11	Straps	70-5312	5	\$185.76
14 - 24	11	Top Loader	70-5314	5	\$287.00

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Electrofusion Swivel Saddle

With Stainless Steel outlet; For pipe DR's 7 to 17

Straps not shown

NOMINAL SIZE	FITTING DR	INSTALL	PART NUMBER	WEIGHT EACH	LIST PRICE
3	11	Straps	70-5303S	5.0	\$189.94
4	11	Straps	70-5304S	5.0	\$203.75
6	11	Straps	70-5306S	5.0	\$220.95
8	11	Straps	70-5308S	5.0	\$239.96
10	11	Straps	70-5310S	5.0	\$251.96
12	11	Straps	70-5312S	5.0	\$265.76
14-24	11	Top Loader	70-5314S	5.0	\$367.00

Do not use the electrofusion fitting on pipe with DR's outside the range of the DR's indicated.

Call for other configurations

Discount Category E

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Electrofusion Service Saddle

FNPT with DI outlet; For pipe DR's 7 to 17

Straps not shown

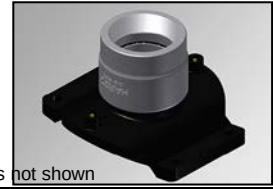
NOMINAL SIZE	FITTING DR	INSTALL	PART NUMBER	WEIGHT EACH	LIST PRICE
2 x ¾	11	Straps	70-540203	4	\$103.68
2 x 1	11	Straps	70-540204	4	\$103.68
2 x 1¼	11	Straps	70-540205	4	\$98.77
2 x 1½	11	Straps	70-540206	4	\$98.77
2 x 2	11	Straps	70-540208	4	\$88.94
3 x 1	11	Straps	70-540304	4	\$124.68
3 x 1½	11	Straps	70-540306	4	\$119.77
3 x 2	11	Straps	70-540308	4	\$109.94
4 x 1	11	Straps	70-540404	4	\$138.49
4 x 1½	11	Straps	70-540406	4	\$133.58
4 x 2	11	Straps	70-540408	4	\$123.75
6 x 1	11	Straps	70-540604	4	\$155.69
6 x 1½	11	Straps	70-540606	4	\$150.78
6 x 2	11	Straps	70-540608	4	\$140.95
8 x 1	11	Straps	70-540804	4	\$174.71
8 x 1½	11	Straps	70-540806	4	\$169.79
8 x 2	11	Straps	70-540808	4	\$159.96
10 x 1	11	Straps	70-541004	4	\$186.70
10 x 1½	11	Straps	70-541006	4	\$181.78
10 x 2	11	Straps	70-541008	4	\$171.96
12 x 1	11	Straps	70-541204	4	\$200.51
12 x 1½	11	Straps	70-541206	4	\$195.59
12 x 2	11	Straps	70-541208	4	\$185.76
14 - 24 x 1	11	Top Loader	70-541404	4	\$301.74
14 - 24 x 1½	11	Top Loader	70-541406	4	\$296.83
14 - 24 x 2	11	Top Loader	70-541408	4	\$287.00

Do not use the electrofusion fitting on pipe with DR's outside the range of the DR's indicated.

Call for other configurations

Discount Category E

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black**Standards:** ASTM F1055, AWWA C906

IPS Electrofusion Service Saddle

FNPT with Stainless Steel outlet; For pipe DR's 7 to 17

Straps not shown

NOMINAL SIZE	FITTING DR	INSTALL	PART NUMBER	WEIGHT EACH	LIST PRICE
2 x ¾	11	Straps	70-540203S	4	\$133.68
2 x 1	11	Straps	70-540204S	4	\$133.68
2 x 1¼	11	Straps	70-540205S	4	\$128.77
2 x 1½	11	Straps	70-540206S	4	\$128.77
2 x 2	11	Straps	70-540208S	4	\$118.94
3 x 1	11	Straps	70-540304S	4	\$154.68
3 x 1½	11	Straps	70-540306S	4	\$149.77
3 x 2	11	Straps	70-540308S	4	\$139.94
4 x 1	11	Straps	70-540404S	4	\$168.49
4 x 1½	11	Straps	70-540406S	4	\$163.58
4 x 2	11	Straps	70-540408S	4	\$153.75
6 x 1	11	Straps	70-540604S	4	\$185.69
6 x 1 ½	11	Straps	70-540606S	4	\$180.78
6 x 2	11	Straps	70-540608S	4	\$170.95
8 x 1	11	Straps	70-540804S	4	\$204.71
8 x 1½	11	Straps	70-540806S	4	\$199.79
8 x 2	11	Straps	70-540808S	4	\$189.96
10 x 1	11	Straps	70-541004S	4	\$216.70
10 x 1½	11	Straps	70-541006S	4	\$211.78
10 x 2	11	Straps	70-541008S	4	\$201.96
12 x 1	11	Straps	70-541204S	4	\$230.51
12 x 1½	11	Straps	70-541206S	4	\$225.59
12 x 2	11	Straps	70-541208S	4	\$215.76
14 - 24 x 1	11	Top Loader	70-541404S	4	\$331.74
14 - 24 x 1½	11	Top Loader	70-541406S	4	\$326.83
14 - 24 x 2	11	Top Loader	70-541408S	4	\$317.00

Do not use the electrofusion fitting on pipe with DR's outside the range of the DR's indicated.

Call for other configurations**Discount Category E**

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Electrofusion Branch Saddle

EF x BF; For pipe DR's 7 to 17

Straps not shown

NOMINAL SIZE	FITTING DR	INSTALL	PART NUMBER	WEIGHT EACH	LIST PRICE
2 x 2	11	Straps	70-560202	1.2	\$55.14
3 x 2	11	Straps	70-560302	1.2	\$55.14
4 x 2	11	Straps	70-560402	1.2	\$68.95
4 x 3	11	Straps	70-560403	2.2	\$152.00
6 x 2	11	Straps	70-560602	2.2	\$86.15
6 x 3	11	Straps	70-560603	1.2	\$173.33
6 x 4	11	Straps	70-560604	3.3	\$192.99
8 x 2	11	Straps	70-560802	1.2	\$105.17
8 x 3	11	Straps	70-560803	2.2	\$181.33
8 x 4	11	Straps	70-560804	3.3	\$206.77
8 x 6	11	Straps	70-560806	3.3	\$571.43
10 x 2	11	Straps	70-561002	1.3	\$117.16
10 x 3	11	Straps	70-561003	3.5	\$192.00
10 x 4	11	Straps	70-561004	3.7	\$237.78
10 x 6	11	Straps	70-561006	3.7	\$642.86
12 x 2	11	Straps	70-561202	1.3	\$130.97
12 x 3	11	Straps	70-561203	3.5	\$208.00
12 x 4	11	Straps	70-561204	3.7	\$268.82
12 x 6	11	Straps	70-561206	6.1	\$666.67
14 - 24 x 2	11	Top Loader	70-561402	1.3	\$232.20
14 x 6	11	Straps	70-561406	6.1	\$742.86
16 x 6	11	Straps	70-561606	6.1	\$771.43
18 x 6	11	Straps	70-561806	6.1	\$814.29
20 x 6	11	Straps	70-562006	6.1	\$857.14
24 x 6	11	Straps	70-562406	6.1	\$1,200.00

Do not use the electrofusion fitting on pipe with DR's outside the range of the DR's indicated.

Call for other configurations

Discount Category E

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black

Flex Restraint

Diameters 6" to 48"

NOMINAL SIZE	FITTING DR	PART NUMBER	WEIGHT EACH	LIST PRICE
All	NA	70-660663		\$128.57

NOTE: Use "Flex Restraint Selection Chart" below

DIAMETER	Number of restraints Needed							MAX
	DR9	DR11	DR15	DR17	DR24	DR26	DR32.5	
6	2	2	2	2	2	2	2	3
8	2	2	2	2	2	2	2	4
10	3	2	2	2	2	2	2	5
12	4	3	2	2	2	2	2	6
14	4	4	3	3	2	2	2	7
16	5	5	4	3	2	2	2	8
18	7	6	4	4	3	3	2	9
20	8	7	5	5	4	3	3	10
22	10	8	6	6	4	4	3	11
24	11	10	7	7	5	5	4	12
26	13	11	9	8	6	5	4	13

READ CAREFULLY: This chart identifies the number of flex restraints "Needed" to develop the full capacity of the pipe at rated pressure. Note the right hand column identifies the maximum number of flex restraints that can be installed about the circumference of the pipe. Call for larger diameters.

*Call for other configurations***Discount Category E**

IPS Electrofusion Fittings

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM F1055, AWWA C906



IPS Electrofusion x Female Acme Saddle

For pipe DR's 7 to 17

Straps not shown

NOMINAL SIZE	FITTING DR	INSTALL	PART NUMBER	WEIGHT EACH	LIST PRICE
2 x 1½	11	Straps	70-610206		\$57.14
3 x 1½	11	Straps	70-610306		\$65.33
4 x 1½	11	Straps	70-610406		\$71.26
6 x 1½	11	Straps	70-610606		\$125.00

Material: Dual Rated 4710/3608 HDPE Resin, Black
Standards: ASTM D3261, AWWA C906



IPS Butt Fusion x Female Acme Elbow

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2 x 1½	11	11	66-31240206		\$34.29
	11	13.5	66-32240206		\$38.26
3 x 1½	11	11	66-31240306		\$56.72
	11	13.5	66-32240306		\$60.72

Miscellaneous Fusion Equipment

DESCRIPTION	SIZE	PART NUMBER	LIST PRICE
Connector Tips (MxF) (Central Welder to Nupi Fitting)	4.7 x 4 (mm)	70-9101	\$100.00
Connector Tips (MxF) (Nupi Welder to Central Fitting)	4 x 4.7 (mm)	70-9102	\$100.00
Electrofusion Welder		NUPI-EFWM	CALL
Top Loading Tool		NUPI-TOPLOAD	CALL
Socket Fusion Kit		RITMO-R63	CALL
Butt Fusion Machine	1 - 4	RITMO-RAM14	CALL
Butt Fusion Machine	2 - 8	RITMO-RAM28	CALL
Butt Fusion Machine	4 - 14	RITMO-RAM414	CALL

Do not use the electrofusion fitting on pipe with DR's outside the range of the DR's indicated.

Call for other configurations

Discount Category E

IPS Valves for HDPE Applications

Material: Dual Rated 4710/3608 HDPE Resin, Black

IPS Ball Valve, Full Bore Wrench Operated

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	9	13.5	74-325102	3.8	\$229.29
	9	11	74-5102	3.8	\$224.29
	9	9	74-285102	3.8	\$224.29
3	9	13.5	74-325103	8.9	\$402.14
	9	11	74-5103	8.9	\$397.14
	9	9	74-285103	8.9	\$397.14
4	9	13.5	74-325104	19.5	\$693.57
	9	11	74-5104	20	\$688.57
6	9	13.5	74-325106	38	\$1,305.55
	9	11	74-5106	38	\$1,282.14
8	9	13.5	74-325108	98	\$4,102.33
	9	11	74-5108	98	\$4,077.14

Material: Dual Rated 4710/3608 HDPE Resin, Black

IPS Ball Valve, Full Bore Lever Operated

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	9	13.5	74-325102L	3.1	\$269.29
	9	11	74-5102L	3.8	\$264.29
	9	9	74-285102L	3.8	\$264.29

Material: Dual Rated 4710/3608 HDPE Resin, Black

IPS Ball Valve, Full Bore Gear Operated

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
10	9	13.5	74-325210	337	\$9,837.14
	9	11	74-5210	337	\$9,757.14
12	9	13.5	74-325212	305	\$10,137.14
	9	11	74-5212	305	\$10,057.14
14	9	13.5	74-325214		\$18,508.57
	9	11	74-5214		\$18,428.57
16	9	13.5	74-325216		\$19,080.00
	9	11	74-5216		\$19,000.00

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category F

IPS Valves for HDPE Applications

Material: Dual Rated 4710/3608 HDPE Resin, Black

IPS Ball Valve, Full Bore

Wrench Operated, Natural Water (< 3ppm Chlorine)

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	9	13.5	74-325402	3.1	\$165.33
	9	11	74-5402	3.1	\$145.13
	9	9	74-285402	3.1	\$145.13
3	9	13.5	74-325403	11.4	\$360.76
	9	11	74-5403	11.4	\$340.56
	9	9	74-285403	11.4	\$340.56
4	9	13.5	74-325404	19.5	\$493.00
	9	11	74-5404	20	\$488.00
6	9	13.5	74-325406	38	\$1,081.33
	9	11	74-5406	38	\$1,061.33
8	9	13.5	74-325408	98	\$2,016.67
	9	11	74-5408	98	\$1,986.67

Material: Dual Rated 4710/3608 HDPE Resin, Black

IPS Ball Valve, Full Bore

Lever Operated, Natural Water (< 3ppm Chlorine)

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	9	13.5	74-325402L	3.1	\$190.13
	9	11	74-5402L	3.8	\$185.13
	9	9	74-285402L	3.8	\$185.13

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

*Call for other configurations***Discount Category F**

IPS Valves for HDPE Applications

Material: Dual Rated 4710/3608 HDPE Resin, Ductile Iron & others
Standards: AWWA C515



IPS Butt Fusion DI Gate Valve

Wrench Operated with PE Ends

NOMINAL SIZE	FITTING DR	END DR	PART NUMBER	WEIGHT EACH	LIST PRICE
2	11	11	74-315502	20	\$805.19
	11	13.5	74-325502	20	\$855.19
3	11	11	74-315503	36	\$1,138.31
	11	13.5	74-325503	36	\$1,188.31
4	11	11	74-315504	56	\$1,260.19
	11	13.5	74-325504	56	\$1,310.19
6	11	11	74-315506	114	\$1,658.31
	11	13.5	74-325506	114	\$1,708.31
8	11	11	74-315508	175	\$2,709.69
	11	13.5	74-325508	175	\$2,759.69
10	11	11	74-315510	227	\$4,682.44
	11	13.5	74-325510	227	\$4,782.44
12	11	11	74-315512	335	\$6,512.19
	11	13.5	74-325512	335	\$6,612.19

The "Fitting DR" is the DR of the base fitting from which the fitting is made. This DR is the DR of the piping system for which the base fitting is appropriate to use. The "End DR" is the DR of the ends of the fitting. If the End DR is larger than the Fitting DR the ends have been machined. The "End DR" governs the "rating" of the fitting. Best practice to maximize the life of the fusion between the pipe and the fitting and to reduce the variables present in the fusion process is to match the DR of the ends of the fittings to the DR of the pipe to which it is fused.

Call for other configurations

Discount Category F

HARCO PRICE LIST

IPS HDPE Fittings

Conditions of Sale

RETURNS: All returned merchandise must have authorization from Harco. Returned merchandise will only be accepted within one (1) year of the date of invoice. Merchandise must be in new and marketable condition. Freight charges on authorized returns must be prepaid and a restocking charge will be made except for returns resulting from shipping errors on our part or material proven to be defective.

CLAIMS: All claims for damage or shortage in transit shall be handled with the carrier by the consignee.

GUARANTEE: The Harrington Corporation (Seller) guarantees to credit against invoice price or, at its option, to furnish, but not to install, replacement parts of like kind, F.O.B. its plant, Lynchburg, Virginia, any item of its manufacture proved to be defective in material or workmanship within one (1) year from date of shipment provided Buyer (or Purchaser) gives immediate written notice of such alleged defect and, if required, returns defective item to Seller's plant freight prepaid. Items or components not of Seller's manufacture are not included in the foregoing guarantee but are subject only to any warranty of their respective manufacturers. Seller shall not be liable for the cost of any repairs or work done or materials used by the Buyer because of defective or non-conforming items, unless authorized in writing by Seller. IN NO EVENT SHALL SELLER BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY BREACH OF THIS GUARANTEE unless applicable federal or state law forbids exclusion of incidental or consequential damages.

WARRANTY: EXCEPT FOR THE ABOVE "GUARANTEE," SELLER MAKES NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE AS TO PRODUCTS SOLD BY US, UNLESS APPLICABLE FEDERAL OR STATE LAW FORBIDS SUCH DISCLAIMER OF WARRANTIES. NO WAIVER, ALTERATION, OR MODIFICATION OF THIS DISCLAIMER OF WARRANTIES SHALL BE VALID UNLESS MADE IN WRITING AND SIGNED BY AN EXECUTIVE OFFICER OF SELLER.

PRICES: Subject to change without notice. Possession of price sheets does not constitute an obligation to sell and orders may be refused without cause.

SUITABILITY: The presence of corrosive soils or carried water may require the use of protective measures such as polyethylene encasement and/or coatings.



Warehouses in Virginia, Florida, Texas, Arizona and Wisconsin



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